**INTRODUCTION**

Higher education students require knowledge, skills and values to succeed and transition to work and life. Their education is to equip them to participate effectively in a growing knowledge-based economy. It is also necessary for students to learn a wide array of essential transferrable skills for success in today’s world. Open Educational Resources (OER) are increasingly becoming more accessible and their affordances are being exploited for effective teaching and learning. The OER movement has revolutionised higher education academic practices. The University of Swaziland (UNISWA) has embarked upon innovations through OER that are aimed at transforming teaching and learning in such a way that students are more likely to attain their intended learning outcomes or to acquire required functional and critical thinking skills.

**SIGNIFICANCE OF THE STUDY**

This paper seeks to inform Educational Planners on how OER policy directions can guide academic practices during the implementation of OER-based programmes for enhancement of the quality of teaching and learning.

**OBJECTIVES OF THE STUDY**

The intended objectives of this paper are to:

(i) analyse the contextual factors that are critical for mounting an OER-based professional educational leadership programme

(ii) examine opportunities and challenges during the process of developing an Institutional OER Policy;

(iii) discuss the extent to which new OER policy directions can guide academic practices during the implementation of an OER-based professional programme to enhance the quality of Open and Distance Learning.

**METHODOLOGY**

Both primary and secondary data were collected for this study. The primary data were collected from some of the UNISWA management and lecturers who had been already exposed to OER. A structured questionnaire was administered to 30 workshop participants and 25 (83%) of the questionnaires were returned. The questionnaire contained questions on: (1) basic demographics, (2) awareness of the term OER and OER Policy directions as an outcome of attending the OER workshops organised by the UNISWA, (3) the contextual factors that are to be considered for re-designing courses that can be offered as part of an OER-based Educational Leadership Programme, (4) Staff attitudes and experiences towards integrating OER into academic practices, (5) issues and challenges of integrating OER, and (6) suggestions of respondents on how new OER policy directions can guide academic practices during the implementation of an OER-based programme for the enhancement of the quality of teaching and learning. Staff attitudes and experiences were evaluated using a 5-point Likert Scale where: 1 indicated ‘Strongly Disagree’ and 5 represented
‘Strongly Agree’. Some questions were open-ended. The main limitation of the study was that the survey sample was small.

**CONTEXTUAL BACKGROUND**

The University of Swaziland (UNISWA) is the only public higher education institution in Swaziland, which is a small country having a population of around 1.2 million by 2015. Since achieving University status in 1982, UNISWA has developed in accordance with a stated aim of assisting national development. In order to be responsive to an overflow of national demands for university education, UNISWA established the Institute of Distance Education (IDE) in 1994. The mandate of the IDE is to offer higher educational programmes, through distance education mode, for the benefit of all those who have been deprived of the opportunity to enter through the mainstream education route. The IDE motto is “Taking the University education and professional programmes to the people rather than the people coming to the University.” However, over the years, UNISWA has faced very acute funding constraints. According to the UNISWA Financial Report (2015-2016), UNISWA continues to face financial challenges which limit the extent to which the institution can execute its mandate of producing highly skilled human capital. For example, the operational budget for all departments has remained static for the past five years which has incapacitated departments due to the meagre resources (ibid). A case in point is that in the fiscal year 2015/16, UNISWA approached the Government of Swaziland for supplementary funding of E165 million to cater for a shortfall in the operations budget yet due to budgetary constraints, the Government approved only E80 million. In an effort to mitigate such financial challenges, UNISWA has devised a turn-around strategy, which entails exploring options to widen access to quality but affordable higher education for all eligible learners, through OER-based academic programmes.

**Contextual factors considered while planning to offer an OER-based programme**

There has been a rapid rise in enrolments with no concomitant rise in resources at UNISWA. Like other higher education institutions in a developing country context, UNISWA is structurally under-funded. As a result, lecturers are often required to do more with fewer resources. As such the resource constraints restrict attraction and retention of quality academic staff. Further there is inadequate budget allocation for conference attendance and subscription of professional journals (UNISWA Strategic Plan: 2016-2021). There are too few or outmoded learning resources but even when the resources or textbooks are available, they are often too expensive to consider, yet OER are usually free to be used. There is also under investment in curriculum and learning materials design which ultimately makes teaching approaches not to be well developed. As a result, to redress many of the challenges, the following two compelling reasons for mounting OER based professional development programmes are: (i) lowering the cost of offering the programmes through enhancing the quality of learning materials; and (ii) expanding access to innovative and on-demand academic and professional programmes.

Currently IDE only offers undergraduate academic and professional programmes. Yet there is a growing demand for professional programmes at post-graduate degree level. The availability of OER which were created for a Master in Educational Leadership programme can enable IDE to offer its first post-graduate programme. An enabling environment is now also available following the creation of a digital resource gateway for lecturers, students and other UNISWA staff to access educational resources such as academic journals articles, open courseware, open textbooks and other reference material.
A growing number of UNISWA staff facilitates teaching and learning with their students through a Moodle Learning Management System (LMS). It is also envisaged that mobile learning platforms will be explored, which will further improve access to teaching and learning resources and processes for both staff and students. All these developments collectively contribute towards providing an enabling environment for an OER based programme. However, since most UNISWA academic staff teach both conventional and distance education courses, they tend to be overloaded with competing academic responsibilities. As a result, some are not able to allocate their overstretched resources to create learning resources.

Integration of OER into the Institutional Academic Practices

To be responsive to the demands of a growing knowledge-based society, one of the most recent UNISWA initiatives was an institutional capacity building programme aimed at the promotion and use of OER among academic staff and managers. OER have emerged as one of the most innovative teaching and learning resources as well as a cost-effective mechanism to improve the quality of educational offerings, by optimising the use of available resources (CEMCA, 2014). According to the Commonwealth of Learning (COL), OER have a potential of turning around the prevailing digital divide into digital dividends. Through the IDE, UNISWA has initiated effort towards offering a Master in Educational Leadership programme through a wide array of existing OER. The OER were developed by a consortium of institutions which are part of the Virtual University for Small States of the Commonwealth (VUSSC) Project under the COL. Through a dedicated OER based programme, the IDE at UNISWA intends to institutionalise OER with the intention of strategically and seamlessly integrating OER into the institutional academic practices. Through this innovation, UNISWA will follow other educational institutions that have created their own repositories for the benefit of students in a bid to increase access to quality education through resource based learning approaches.

As the OER movement has gained momentum, so has the definition of OER which has expanded to embrace the benefits of providing opportunities for knowledge transfer and to facilitate the sharing of best practices. The concept of OER has grown since the first MIT initiative and has met with initial success, wherein many educational institutions have begun to offer educational programmes through OER based courses to meet diverse educational needs. However, an absence of an enabling institutional learning policy and strategy that foregrounds OER tends to hinder much progress with OER. Yet enablers such as policies and strategies can contribute towards clear articulation of new policy directions at many institutions.

In an effort to expand the frontiers of knowledge among students through OER, the IDE, with the support of the COL, organised a series of workshops to sensitize academic staff on the potential benefits of OER-based programmes to widen access to higher education. Effort has been made towards an enabling environment at UNISWA, to formulate an institutional OER Policy. With the support of the COL, an expert was commissioned to lead a local UNISWA team to develop the OER Policy. Through a policy development workshop which was convened in March, 2016, the process was begun and the draft policy is now in final drafting stage. A small committee has been appointed to finalise the draft of the UNISWA OER Policy. The policy covers: (i) vision, mission, need, rationale, scope and policy objectives to be specified in the OER Policy; (ii) quality assurance; (iii) licensing; (iv) related policies, like the UNISWA ICT policy; as well as (v) monitoring and implementation of the OER policy. The final validated version of the OER Policy is expected by November/December 2016.
STUDY RESULTS AND DISCUSSION

Staff Demographics

A total of 30 faculty members, including management, and Ministry of Education and Training officials participated in capacity building sessions on embedding OER into academic practices and OER policy development. About forty (40) questionnaires were distributed during one of the workshops and about five (5) afterwards to individual academic staff members. Filled in questionnaires were received from 25 respondents. The analysis was made for the same. The profile of the survey respondents was that 14 (61%) were female and the rest 9 (39%) were male. Full-time lecturers were 16 (70%), while part-time lecturers were 7 (30%). Among all the respondents 14 (61%) of them had Master’s degrees and the rest 9 (39%) had Ph.D degrees. Out of the total number of respondents, 9 (39%) had less than 5 years teaching experience, while 8 (35%) had less than 10 years, then 5 (22%) had less than 20 years of teaching experience and with 1 who had more than 20 years.

Awareness of OER and New OER Policy Directions

In response to the question on awareness of OER and new OER policy directions, all (100%) of respondents indicated that they were partially aware of OER and new OER policy directions. Out of the total number of respondents, 16 (70%) indicated that they became aware of OER by attending workshops/conferences. Then a total of 4 respondents indicated that they were exposed to OER by locating some of the OER through websites/repositories, whereas 2 indicated that they became aware of the availability of OER through sharing of sample OER with friends/colleagues. Only 1 respondent indicated that exposure to OER was through short courses. The above analysis indicates that though there has been increasing awareness on the role of OER in enhancing academic practices, OER practices are still at an emergent phase in UNISWA.

Regarding the usefulness of the workshops, 18 (78%) mentioned that the workshops were useful and that they benefitted from capacity building on how to search and locate OER. Further, all the respondents indicated that they learnt about the culture of sharing and the collaborative editing of educational resources. As a result, they wished to attend more workshops or conferences on OER or open courseware in the future to enhance their knowledge, skills and exchange of ideas on transforming their academic practices through OER. However, some of the respondents expressed their reservations about repurposing OER as one of the difficult and challenging tasks in a bid to make the OER to be responsive to the needs of learners/students. Such findings indicate the need for follow-up capacity building sessions that can equip academic staff with skills on integrating OER into academic practices and particularly on repurposing the OER for improved pedagogy.

Responses on potential benefits from OER-based programmes

The survey responses indicated that out of 23 respondents, 14 (61%) were involved in developing learning materials wherein they had trialled repurposing and adapting existing OER for their courses. The rest 9 (39%) indicated that they were not involved in developing any learning materials. Nevertheless, all the respondents indicated potential benefits that can accrue from the use of OER for internal efficiency. The benefits cited by respondents in order of preference were as follows: (i) as OER created culture of sharing, it can enhance the quality of learning materials that are under development; (ii) as the OER changed the role of learner, teacher and the Institution, it can provide examples of well-developed learning materials, which is self-instructional, self-directed and self-learning; (iii) as there is no printing of course material, OER can lower the cost of offering a programme(s) or courses; (iv) OER can widen access to higher education for a large number of prospective students and promote divergent thinking; and (v) on the whole, the OER can enhance an institutional reputation.

Currently, since UNISWA is in the process of formulating an institutional OER policy, such an initiative will provide an enabling environment towards offering new OER based programmes such as
the one in educational leadership. For example, the OER policy will specify the recommended Creative Commons licenses alongside other core issues.

**Staff attitudes and experiences with OER**

The analysis of Table-1 illustrates data pertaining to respondents’ attitudes toward OER policy and their experiences with OER. A 5 point Likert Scale was used to determine academic staff attitudes and opinions. During data analysis the mean, standard deviation and co-efficient of variation were calculated in order to probe the extent to which the responses were either consistent or inconsistent.

**Table-1: Staff responses toward OER policy and their use of open educational resources**

<table>
<thead>
<tr>
<th>Statements</th>
<th>SA =5</th>
<th>A =4</th>
<th>UD =3</th>
<th>DA =2</th>
<th>SDA =1</th>
<th>Total</th>
<th>Mean</th>
<th>SD</th>
<th>CV %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Most OER and open courseware are good quality teaching and learning</td>
<td>6 (26)</td>
<td>12 (52)</td>
<td>5 (22)</td>
<td>0</td>
<td>0</td>
<td>23 (100)</td>
<td>4.04</td>
<td>0.23</td>
<td>8</td>
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<td>materials</td>
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<tr>
<td>2. I easily access research publications through open access journals</td>
<td>0</td>
<td>14 (61)</td>
<td>5 (22)</td>
<td>3 (13)</td>
<td>1 (4)</td>
<td>23 (100)</td>
<td>3.39</td>
<td>0.76</td>
<td>25</td>
</tr>
<tr>
<td>3. I believe that the quality of learning materials can be enhanced through</td>
<td>11 (48)</td>
<td>12 (52)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>23 (100)</td>
<td>4.48</td>
<td>0.06</td>
<td>2</td>
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<td>OER or open courseware</td>
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<td>4. An Institutional OER policy can contribute towards a strengthening of</td>
<td>17 (74)</td>
<td>4 (17)</td>
<td>2 (9)</td>
<td>0</td>
<td>0</td>
<td>23 (100)</td>
<td>4.65</td>
<td>0.4</td>
<td>5</td>
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<td>academic programmes by enabling students to access many open resources such</td>
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<td>as open textbooks</td>
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<td>5. I have difficulty in locating relevant OER or open courseware</td>
<td>1 (4)</td>
<td>7 (31)</td>
<td>2 (9)</td>
<td>10 (43)</td>
<td>3 (13)</td>
<td>23 (100)</td>
<td>2.69</td>
<td>2.31</td>
<td>77</td>
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<td>6. Educational materials that are publicly funded are to be made freely</td>
<td>12 (52)</td>
<td>7 (31)</td>
<td>4 (17)</td>
<td>0</td>
<td>0</td>
<td>23 (100)</td>
<td>4.35</td>
<td>0.57</td>
<td>11</td>
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<td>available to all</td>
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<tr>
<td>7. Some educational materials must not have any copyright restrictions and</td>
<td>9 (39)</td>
<td>9 (26)</td>
<td>3 (9)</td>
<td>1 (17)</td>
<td>1 (9)</td>
<td>23 (100)</td>
<td>4.43</td>
<td>1.17</td>
<td>39</td>
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<tr>
<td>they are to be released as OER or open courseware</td>
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</table>

Source: Primary data.

Note-1: The figures in brackets are percentages.

Table1 reveals that there is variance in the responses in the case of statement 5, where the standard deviation is large, recording at 2.31 and covariance at 77%. It indicates that the data has a great deal of variability with respect to the mean, and there is no general consensus among the respondents. Whereas 35% of respondents indicated difficulty in locating relevant OER, 56% indicated that there was no difficulty in locating relevant OER. From such variation in responses, it can be deduced that some of the UNISWA academic staff members require on-going technical support to locate course specific OER. Similarly 39% variability in responses is registered in the case of statement 7, where 26% of the respondents were in disagreement that some educational materials must not have any
copyright restrictions and are to be released as OER or open courseware. This was followed by statement 2, where the variability in responses was registered at 25%. In the case of statements 1, 3, 4 and 6 the opinions among respondents were consistent and their variability was minimal, registering at 8%, 2%, 5% and 11% respectively. On the whole, the analysis results indicated a generally positive attitude towards OER by academic staff through their expressed opinions that most OER and open courseware are of good quality and that the quality of learning can be enhanced through OER and open courseware. Further, the respondents indicated that an institutional OER policy can contribute toward the strengthening of academic programmes by enabling students to access a wide array of open courseware and open textbooks.

ISSUES AND CHALLENGES OF INTEGRATING OER INTO ACADEMIC PRACTICES

The following are some of the issues and challenges that were mentioned by the respondents. One of the issues pertains to the challenge of developing quality OER, which was cited as a challenging task by 90% of the respondents. Further, the respondents indicated the following additional challenges.

1. National and Institutional OER Policy
   Not having a national and institutional OER policy as a strong barrier to OER development. According to UNESCO (2011), academic policy makers and government officials have a unique opportunity to improve learning outcomes, reduce costs and improve the quality of teaching by facilitating effective sharing and use of OER in policies. In the case of UNISWA effort is underway to influence change to redress such challenges through the formulation of the institutional OER Policy.

2. Location of OER Repositories
   Locating relevant OER repositories and OER search engines to filter relevant resources is another challenging task. For example, some academic staff tends to lack requisite skills to locate and repurpose OER. Table-1 indicates that only 56% of respondents agreed that they did not have difficulty in locating relevant OER or Open Courseware and the rest had difficulty in locating OER. It means that many staff members were not familiar with searches for OER. Therefore, it is important on the part of the Institution to provide training to the staff for capacity building prior to the delivery of the proposed postgraduate programme.

3. Lack of exposure to technical intellectual property procedural requirements
   OER can pose a challenge to academic staff most of whom were not familiar with copyright issues and Creative Commons licenses. Out of 23 respondents, 15 (65%) mentioned that they lacked understanding of Creative Commons licenses. Lack of understanding of copyright and open licensing can be a barrier to offering an OER based programme. This finding is confirmed by Sliwowski (2014) who argued that explanation of open licenses battles with false perceptions and fears regarding potential profits and losses. Hylén (2006) identifies similar challenges that might stifle progress on the uptake of OER. They include lack of awareness among academics regarding copyright issues; how to assure quality in open content; and how to sustain OER initiatives. Therefore UNISWA has to be purposeful in managing potential tensions through amenable technical and legal frameworks.

4. Other challenges
   Other challenges indicated by respondents in order of preference were: (i) lack of time for investing in OER searches and/or development; (ii) lack of technical ICT skills; (iii) lack of advanced search skills to locate course specific OER (iv) lack of administration support; (v) lack of reward/incentive/recognition for integrating OER into academic practices; (vi) quality assurance of OER and open courseware; (vii) integration of OER into blended learning approaches; (viii) initial investment on the uptake of OER; and evaluation and monitoring of OER-based programmes.
SUGGESTIONS ON MITIGATING CHALLENGES

The respondents made a few suggestions aimed at improving the uptake of OER through systemic interventions such as an OER based educational programme to be mounted within an enabling institutional OER policy environment. Some of the specific suggestions are (i) The need for training on course design and development of OER-based programmes or professional development on developing OER. (ii) The UNISWA OER Policy should specify new policy directions on copyright and open license issues, as well as make a provision on incentives for academic staff who are willing to develop or repurpose existing OER (iii) Provision of a separate repository for OER for ease of access by students and academic staff, which are to be referenced in core academic course resource guides, to complement lecture notes, to provide sources of knowledge during the completion of assessment tasks such as assignments, tests and others.

CONCLUSION

This study provided an example of an innovation whose main purpose is to transform academic or pedagogic practices at UNISWA through a planned OER based postgraduate programme. It has covered specific contextual factors to be considered as IDE mounts the proposed postgraduate OER-based educational leadership programme. Overall, there is a positive attitude among the respondents towards the uptake of OER. Some of the respondents based their attitudes on their positive experiences as a result of locating relevant OER which is likely to enhance the quality of their courses. However, some challenges in integrating OER into academic practices were also discussed and these need to be addressed prior to the implementation of the programme. In the end, the study findings can enable the IDE to better manage the process of mounting the OER based programme. The findings will also be referenced during the finalisation and subsequent revision and re-drafting of the UNISWA institutional OER policy. Finally, by offering an innovative OER based programme at postgraduate level, UNISWA is more likely to deliver on its mandate of being a university of choice, that provides high quality education through the professional development of students by tapping onto a variety of available technologies, modes of programme delivery and resources.

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