Botswana Open
University

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STRATEGY FOR TECHNOLOGY-ENHANCED LEARNING, TEACHING, ASSESSMENT AND STUDENT SUPPORT (STELTASS)

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DEFINITION OF TERMS

Assistive Technology: any item, piece of equipment, software programme or product system that is used to increase, maintain or improve the functional capabilities of people with disabilities.

Blended Learning: The provision of structured learning opportunities using a combination of off-line and online learning environment with different levels of digital technologies and face to face interactions.

Distance education: A mode of education provision based primarily on a set of learning and teaching strategies (or educational methods) that are used to overcome spatial distance between teachers and students.

Free and Open Source Software (FOSS): Software that is freely available at no cost.

Learning management system (LMS): A multi-user software program for online learning and teaching for providing programmes and courses to students.

Learning Analytics: The measurement, collection, analysis and reporting of data about students and their contexts, for purposes of understanding and optimizing learning and the environments in which it occurs.

Massive Open Online Course (MOOC): An online course aimed at unlimited participation and open access via the World Wide Web. Currently most institutions do not award credit for completing MOOCs; however, many award a non-formal certificate of completion on payment of a fee. Often payment is required for student support and assessment.

Online Learning: The predominant use of the Internet or Intranet to learn. Students have to be connected to the Internet or Intranet to access and engage in learning activities, with learning materials, assessment and interact with peers and teachers.

Open and Distance Learning (ODL): The use of distance education methods to support the realisation of open learning purposes and principles.

Open Educational Resources (OER): "Teaching, Learning and Research materials in any medium, digital or otherwise, that reside in the public domain or have been released under an Open License that permits no cost access, use, adaptation and re-distribution by others with no or limited restrictions. Open licensing is built within the existing framework of intellectual property rights as defined by the relevant international conventions and respects the authorship of the work". *Paris OER Declaration (UNESCO, 2012, p.1)*

Open Learning: An educational approach which combines the removal of barriers to access, the principles of learning based on student-centeredness, lifelong learning,

flexibility of learning provision, and the recognition for credit of prior learning experience.

Technology-Enhanced Learning (TEL): (also referred to as e-learning). It involves the use of digital devices (computers, tablets and mobile devices) to provide, access or interact with digital learning activities and materials, interact with peers and lecturers, participate in discussions and do assessment

1   INTRODUCTION

In a rapidly changing world, where the education landscape is becoming increasingly globally competitive in nature, it is necessary that Botswana Open University (BOU) produces an up-to-date long-term strategy on digitisation of learning, teaching, assessment and learner support. This strategy will, among other things, ensure that the University provides a supportive environment by offering students with a technologically responsive educational experience that equips them with knowledge, skills and experiences to flourish in a complex world. The University, being an ODL institution, currently uses a blended learning approach to facilitate delivery of its programmes, that is, combining face-to-face tutorials and online learning. Its intention is to promote the use of technology in all its processes and services across the institution with the aim of becoming a "digital flagship" for technology-mediated programmes and services in Botswana.

To achieve this, the University needs to provide a contemporary and integrated technological environment, which sustains and strengthens its ability to realise its strategic objectives. The University's Centre for Instructional Technology (CIT), in conjunction with the Department of Information Technology (DIT) will provide an environment, which will support students, researchers and academics by providing an empowering platform for knowledge creation and exchange. The success and effectiveness of the Strategy to deliver on its mandate is highly reliant upon commitment of the University to provide appropriate infrastructure, skilled human resource, effective processes and adequate funding. Infrastructure and pedagogy are the foundations on which technology-enhanced learning is built because they address the existing culture, governing principles, processes, and structures that will contribute towards the institution's online learning success. Supporting the entire infrastructure driven by pedagogical concepts, is the University's fundamental vision for conveying educational technology services to facilitate technology-enhanced learning and teaching processes to take place effectively. Staff involved in technology-enhanced instruction will be provided with the necessary professional development initiatives that will enable proper implementation and management of online learning.

2   RATIONALE

In carrying out its mandate, the University will focus on facilitating lifelong learning for all by using available technology to improve access, learner success and flexibility in education. Given the stated focus of the University expressed in the *BOU Strategic Plan 2019-2023*, there is need for a purposeful plan for the development and implementation of online learning, teaching, assessment and student support at BOU. This Strategy is about

learning success and hence its ownership is primarily in the Schools, with support from CIT, DIT and a centrally supported ICT infrastructure. This Strategy is cognisant of the University's Vision and the *BOU 2036 Strategic Framework*. It supports the University's *Strategic Plan 2019-23* particularly with regard to quality, flexible delivery and enhancement of the student learning experience. It also articulates with the ODL principle of enabling the provision of accessible, flexible and diverse learning opportunities.

The Strategy is meant to enhance the range of appropriate pedagogic uses of technology by staff and students and to support the delivery of blended learning, teaching, assessment and to realise other strategic outcomes associated with student support. The Strategy intends to ensure that academic, technical and support staff development keeps abreast with changes in educational technologies. Hence, it will facilitate the effective creation of high quality online materials and resources in support of a conducive learning and teaching environment. The Strategy aims to support this initiative guided by its programme development and delivery support strategies, along with national policies and strategies such as the National ICT Policy (*Maitlamo*). This will require the provision of all the necessary infrastructure and development of skills of all players to enable them to participate in the development and implementation of online learning initiatives. It will also require provision of strong technical support and the forging of partnerships with relevant stakeholders to constantly build capacity.

3 AIMS

The main aim of this Strategy is to create an enabling environment for the University to:

3.1 Develop capacity for provision of online learning, teaching, assessment and related learner support

3.2 Support institutional strategies in technology mediated learning and teaching, and inform online learning developments in departments

3.3 Promote creativity and innovation in delivery of flexible learning and teaching

3.4 Support and promote use of modern technologies in assessment and learner support

3.5 Support monitoring, evaluation and quality assurance

3.6 Engage in research on learning technologies and their application in learning and teaching

3.7 Harness technology to facilitate learning and teaching and enable the University to reach students nation-wide, and beyond the borders of Botswana.

4 OBJECTIVES

The objectives of the Strategy are to enable the University to:

4.1 Facilitate development and delivery of e-learning content to increase accessibility to all learners including those in special circumstances.

4.2 Improve the quality of education and raise educational standards through innovative, creative and critical thinking and learning skills development.

4.3 Facilitate development and delivery of interactive multimedia resources to support learner-centredness.

4.4 Facilitate implementation of an appropriate and sustainable integrated blended learning framework.

4.5 Suit the needs of a diverse learner population by extending and opening opportunities for flexible life-long learning while closing the digital divide.

4.6 Facilitate research on the use of technology mediated learning products

and services through innovative practices to optimise opportunities for delivering high quality programmes.

4.7 Enable development of multimedia resources as well as embedding e-learning in learning and teaching.

4.8 Establish appropriate and sustainable infrastructure and support for online resource development and delivery within divisions.

4.9 Promote co-operation in the use of educational technology through participation in local and international educational technology events.

4.10 Promote the development, use and integration of OERs and FOSS in learning and teaching materials.

5 STRATEGIC THEMES

Given the aforementioned aims and objectives, the University has adopted a thematic approach to strategy formulation and implementation and has identified the following thematic areas to be individually targeted to achieve the required outcomes:

5.1 Programmes

This section addresses the effective integration of technology into the design and development of blended courses and programmes. BOU is confident that the effective pedagogical integration of educational technologies is fundamental to the ODL mission of the institution. The quality of the teaching goes beyond the lecturers' and tutors' experience in the usual lecture method of learning and teaching. It encompasses the various ways in which course material is designed and supported by contemporary digital technologies, including providing accessibility and inclusiveness for learners with disabilities, with the assessments acting both as a measure of achievement i.e. "assessment of learning" and strongly influencing the student's learning i.e. "assessment for learning".

An appropriate, high quality and up to date blended programme design including good quality interactive learning and teaching resource material will result in a high quality learning experience for all students. Good blended programme design includes use of learning analytics, internationalising as well as contextualising the content, incorporating work placements within programmes, involving employers and promoting information literacy based on research. In order for programme and course design to meet the desired level of quality

standards, BOU aspires to provide, effective technology-enhanced learning by:

5.1.1   Designing programmes where blended learning approaches are embedded in overall course design and are directly linked to learning outcomes;

5.1.2   Ensuring online learning technologies and related teaching approaches are chosen to match the desired program and course learning outcomes and support student learning and engagement.

5.1.3   Regularly reviewing the blended learning approaches used in courses across the whole programme for applicability, relevance and best practice in relation to student needs and desired learning outcomes.

5.1.4   Ensuring courses use appropriate mode(s) of technology to enable effective learning, assessment, engagement and student support for optimum results.

The main responsibility of the University is to continually and dynamically evolve what is learnt, how it is learnt, the modes of teaching, and how knowledge, skills and values develop towards mastery and the desired graduate attributes. The University aims to achieve this by shifting towards more authentic active learning and more interactive teaching methods. It will augment lectures and tutorials with active content to become increasingly enquiry-based and interactive by:

5.1.5   Applying the evidential rigour of our research practice to inform teaching methods

5.1.6   Creating educationally productive environments for both students and staff to use as they integrate their knowledge into practical discipline mastery and expertise,

5.1.7   Actively seeking feedback from students and tutors that leads to learning attainment,

5.1.8   Adopting an educational culture of partnership and collaboration as a diverse academic community,

5.1.9   Improving the ways in which students are include and inspired

5.1.10 Refining and redefining how the University develops and uses physical and digital learning environments.

This will establish an inclusive culture in which students are partners and where diversity and collaboration facilitates a world-class educational experience. To achieve this, BOU will focus on prioritising the design, review and redesign of programmes as expressed in the *Academic Programmes Review and Development Policy*, taking into account both the evolutionary programme growth and disruptive developments in digital technologies.

5.2 Learning and Teaching

There are always new technology-enabled approaches to learning and teaching emerging in higher education, which will enable the University to implement new pedagogical approaches with the potential to impact positively on BOU's learning environment, and ultimately on the learning success of the students. Technology offers the University significant potential and opportunities to enhance the way in which it designs, delivers and supports the learning experience of individual students.

BOU will increase support for its Learning Management System(s) (LMS) to create an enhanced online learning environment to facilitate effective digital use for delivery, assessment, feedback and submission platforms for better student support. The adoption of the LMS will be consistent across disciplines to provide uniformity for the students in their blended learning experiences, and provide excellent learning support for students while providing staff with the flexibility and impetus to innovate. This will enable the University to:

5.2.1 Facilitate the sharing of blended and online educational resources within the University. Provide guidance and support for academics on the creation of sharable and reusable learning objects that facilitate interdisciplinary learning and disseminate good practice. The *Open Educational Resources Policy* provides a clear framework for sharing such resources within and external to the University.

5.2.2 Expand the use of digital technologies to support blended learning. Provide staff development opportunities and guidance in distance learning provision, learning and teaching methods and techniques as well as technical know-how. Provide a framework for sharing good practice and expertise in this area.

5.2.3 Provide guidance to students and teachers on managing their 'digital identity' through the use of digital portfolios, learning analytics and discussing how digital technologies can enhance

their blended learning. Embed the appropriate use of technology into their discipline-specific learning and teaching and provide opportunities and support to enable them to develop new digital skills.

5.2.4   Establish the use of digital technologies to encourage and enable staff to share good practice both within the University and externally.

5.2.5   Create an international digital presence using various open education channels, such as YouTube. This will showcase excellent lectures as well as providing material of interest to potential students and will help to define the distinctive BOU digital flagship brand. The University will explore and evaluate Massive Open On-line Courses (MOOCs) for re-purposing for its requirements as part of implementing the Open Educational Resources Policy.

5.2.6   Develop technology-rich physical and digital learning environments that enable students to work collaboratively and independently as appropriate.

5.2.7   Provide flexibility while at the same time providing a robust, reliable, consistent, predictable experience for teaching staff that support a range of learning preferences.

5.2.8   Support the use of Bring Your Own Devices (BOYD) mobile technologies for learning and teaching to increase flexibility and accessibility.

5.2.9   Provide professional development for academic staff on the effective use of digital technologies to provide an interactive and active approach to learning.

5.2.10 Facilitate formal recognition of skills in Technology-Enhanced Learning for academics and the rewarding the use of such skills.

5.2.11 Provide a supported integrated digital environment for the University's public facing learning materials and resources, supporting the University's digital identity and presence with clearly understood approval and review mechanisms and support for staff involved in online material and learning resources production.

5.2.12 Support processes that enable provision of digital-delivery, digital-assessment, digital-submission and digital-feedback thus creating a rich digital-resourced learning environments.

5.2.13 Provide a suite of educational technologies to support blended and online learning including staff development for staff who undertake teaching these courses.

5.2.14 Create flexible teaching environments equipped with appropriate technology to enhance and support the consistent delivery of an excellent and innovative learning and teaching experience.

5.2.15 A STELTASS steering group comprised of colleagues across the institution to monitor progress and provide strategic direction. The committee will be a sub-committee of the Academic Policy, Program and Quality Assurance Committee (APPQAC), to which it will submit regular reports.

5.2.16 A facilitated network of e-learning academic champions in departments /Schools and professional support services who understand the requirements and can work with the CIT to develop appropriate support structures.

To meet these aims there needs to be University structures defining support responsibilities at Headquarters and at Regional Campus level, fully trained and effective staff and sufficient financial and technology resources to facilitate effective implementation. The University will put in place effective monitoring and evaluation technologies and mechanisms including a framework for auditing, monitoring and evaluating the effectiveness of blended and online learning, including base-line standards, to feed into professional learning and support strategies.

5.3 Assessment

Assessment is the systematic collection and analysis of information to improve and measure learning. It involves testing/evaluating student performance and providing feedback to students for grading purposes. Assessment online must be based on the same principles as all other modes of assessment within the University and must seek to achieve the same goals. Assessment in the blended learning environment will therefore be governed by the *BOU Student Assessment Handbook, 2017*. This will ensure that students being assessed online are

subjected to standard distance education assessments at the required competency level and standard.

Best practice recommendations for the assessment of students learning in an online environment include:

5.3.1   Use of a wide range of assessment modes including tutor-marked assignments, class tests, quizzes, online forums, portfolios, coursework or practical based examinations.

5.3.2   Assessment criteria communicated at the start of the course.

5.3.3   Regular review of intended learning outcomes to ensure clarity, utility, and appropriateness

5.3.4   Timely assessment at regular intervals to increase feedback such that students can immediately use to improve their learning.

5.3.5   A record of performance for each assessed activity must interface and integrate seamlessly with the learner management system (LMS).

5.3.6   The assurance that rigorous monitoring/proctoring policies are in place during the assessment of learner learning.

5.3.7   Academic integrity will be assured through the use of appropriate verification methods, both online and otherwise. All assignments will be submitted digitally and, where necessary, verified through the University's anti-plagiarism software.

5.3.8   Assessment strategies to be integral to the learning experience, enabling students to assess their progress, identify areas and activities for review, and re-establish immediate learning or learning goals.

5.3.9   Inclusion of regular formative assessment to provide feedback to students, with appropriate summative assessment that counts towards the final grade. Both formative and summative assessment is to be aligned with the learning objectives and learning outcomes.

5.3.10 Peer review and peer assessment may be used to engage the students as partners in the learning and teaching process, as well as within group work and group assessments.

5.3.11 Collaborative and independent assessment to be to be assessed as appropriate to achieve relevant learning objectives and learning outcomes within specific disciplines.

Effective online assessment assures the student that they are measured, judged and graded only on the achievement of the communicated course outcomes.

5.4 Evaluation

Evaluation reviews whether the course itself is effective for student learning and whether it is producing the expected and intended outcomes of the objectives. Evaluation leads to improvement in the programme and its delivery. Evaluation typically considers matters like:

a)   course planning

b)   course information

c)   orientation to learning

d)   course content

e)   multimedia

f)   learning activities

g)   assessment

h)   user-friendly design

i)   evaluation and continuous improvement, and

j)   follow up.

Courses will be evaluated in a timely fashion at regular intervals – and at least at the end of every course offering - to ensure that matters are addressed as early as possible, and that the current cohort of students can benefit from improvements. Programmes will be reviewed regularly as stipulated in the *Academic Programmes Review and Development Policy (APRDP)*.

5.5 Staff and Student Support

Educational technology support for staff and students encompasses interactive activities and services intended to support and facilitate the learning and teaching process. This Strategy seeks to enable the University's to effectively support the blended learning delivery of a range of qualifications in-country and internationally. It also facilitates access to world-class Open Educational Resources (OER) to enhance

the quality of its programs and the student learning experience. Student support includes online tutoring, counselling and advising as well as administrative activities such as monitoring student performance and learning needs. Student support is designed to help students meet their learning outcomes and gain the knowledge, skills and attitudes that they need in order to be successful in their programs of study. Support for Academic staff will include continuing professional development and guidance on the use of digital technologies in their teaching, including the appropriate use of OER.

5.5.1 BOU staff and students will be supported by:

5.5.1.1 a robust ICT infrastructure that has sufficient bandwidth to allow high-speed connectivity, adequate storage capacity and technical capability to create and deliver rich multi-media e-learning course content to students;

5.5.1.2 a strong and flexible online learning environment that incorporates a range of integrated interactive technologies for learning, teaching and assessment

5.5.1.3 technology-enabled learning and teaching physical environments that provide rich learning experiences.

5.5.2 The Strategy aims at enhancing student success in a holistic manner, with emphasis on:

5.5.2.1 Individualised and personalised systems of support;

5.5.2.2 Mainstream support that is sustainable and caters for all

5.5.2.3 Learning analytics that informs both the students and teachers

5.5.2.4 Achievement of student success.

5.5.3 Student Support in the online environment is anchored on the following eight functional areas which will guide in implementing a holistic approach to address student's issues to enable them to become rounded persons in line with the graduate attributes in their university life and after:

5.5.3.1 Pre-entry support

5.5.3.2 Welcome and Orientation

5.5.3.3   Academic Advising and Support

5.5.3.4   Personal counselling and support

5.5.3.5   Health and Wellness

5.5.3.6   Learner Leadership and Governance

5.5.3.7   Special Needs Services

5.5.3.8   Career Development services.

5.5.4   The following interventions will be undertaken in order to increase student retention and success:

5.5.4.1   A robust orientation (especially for those new to online learning): This approach allows teachers and students to examine the course; learn how to use relevant educational technology, materials, resources and procedures; ask questions; and get to know their peers and teacher. Such orientations have proved to be an effective strategy contribution to student completion of online learning courses.

5.5.4.2   Online orientation for students: Effective online modules which offer a self-directed online orientation for blended and online learning would be made available. Such online orientations will allow students to participate as appropriate and allow them to focus only on areas which are relevant. The online orientation opportunities will be synchronous and asynchronous (using relevant technologies).

5.5.4.3   Organise students into learning teams, cohorts, or a community of students to provide peer support. In most cases social and academic integration through being an active part of an online learning community result in higher online completion rates). Access to peers reduces isolation and loneliness, which is prevalent in traditional distance learning.

5.5.4.4   Help students to develop self-study and time-management skills and habits through mentorship. There is need to help online students develop schedules, techniques for completing work, and skills needed for successful completion of an online course. Potential and first-time online students

especially will be assisted to manage their time, develop a study schedule, and set up routines and procedures by which to accomplish their online work. Mentors or online-teachers, should help students to cultivate independent study strategies and skills and to develop self-efficacy (time management, print and digital resources retrieval and self-study strategies).

5.5.4.5   Assist students with communication skills (reading, writing, verbal expressions). Online learning has a large read-and-write component while verbal interactions occur via web-conferences and oral recordings. Many students have problems with the rhetorical, grammatical, and mechanical conventions associated with writing. An online module will be provided to help students to develop these communication skills.

5.5.4.6   Ensuring accessibility for students with disabilities is a key consideration in this Strategy, as well as in all courses offered by the University. Special measures will be taken to provide assistive technologies that will enable students with special needs to achieve independence in their learning. Focussed training on assistive technologies will be provided for both students and staff.

5.5.4.7   Provision of appropriate and effective training to students in using educational technologies that are relevant to their context. This will enable students to translate their more traditional learning skills into effective online learning skills.

5.5.4.8   Education of potential students about the advantages of online learning. Students must own online learning and share the advantages of it. They must be educated to realise that online learning, requires a high degree of individual and collaborative engagement

5.5.4.9   Use technology to track student participation and engagement, as well as programme and subject design impact, as mandated in the *Learning Analytics Policy*.

5.5.4.10   Online student support strategies and related technologies will be planned for and integrated early in sound learning designs for accessibility; learning analytics; adaptive and personalised learning.

5.5.4.11   Preparation of students for employability and entrepreneurship through work-readiness programmes including work placement and experience.

5.6   Library and Information Services

Technology-enhanced learning requires that libraries provide their resources and services in a blended mode: face-to-face, print and digital. To support blended learning at BOU, the Library and Information Services will:

5.6.1   Improve the quantity, quality and comprehensiveness of online educational resources;

5.6.2   Make educational resources easily discoverable and retrievable for both students and teachers;

5.6.3   Ensure that the resources are readily available at all times, while staff support is available at extended but appropriate times;

5.6.4   Provide annotation, evaluation and peer review services of materials for authors and teachers;

5.6.5   Provide access to scientific data sets, e-journals and digital libraries;

5.6.6   Develop peer-interaction platforms for both students and teachers;

5.6.7   Provide copyright education and management, especially for Open Educational Resources licenses;

5.6.8   Provide continuous education and staff development on information literacy;

5.6.9   Provide information content to teaching staff engaged in blended learning;

5.6.10 Administer linkages between digital library resources and the digital learning environment for a connection between the learning activities and learning resources;

5.6.11   Enable use of communication technologies to deliver digital reference services and teaching support;

5.6.12   Provide strategic alliances and collaborations with other libraries for the implementation of this Strategy;

5.6.13   Implement a robust Library Management System;

5.6.14   Introduce Research Data Management Programmes.

5.7   Quality Assurance and Moderation

5.7.1   Quality Assurance

The purpose of the BOU Quality Assurance System (QAS) is to coordinate and ensure the development and maintenance of quality standards and guidelines for a common approach to education provision in the University. BOU's QAS is the primary instrument in developing a quality culture at the University to ascertain that its graduates have appropriate attributes, competencies and key skills. The QAS is based on the *Quality Policy* and the specific requirements for programmes are contained in the *Academic Programme Review and Development Policy.* In particular, the BOU *Quality Assurance Guidelines for Blended Learning* will be used for the conduct of academic quality reviews for compliance and enhancement purposes.

5.7.2   Moderation

Moderation is a way of ensuring quality and consistency of assessment, learning and teaching. It involves professional judgement to ensure valid, reliable, fair and consistent assessment practices for staff, students and external stakeholders in alignment with BOU policies and external requirements. Moderation typically occurs during:

5.7.2.1   Pre-delivery processes: considers assessment design; assessment processes; planned marking processes; a comprehensive analysis of the content of the Course Outline across all subject offerings, including:

(a)   the appropriateness of all learning materials to the assumed knowledge for the course and the level of the award;

(b)   the currency and suitability of the learning materials, as well as the clarity and tone of the communication with students;

(c)   an appraisal of the relation between the program and the intended course learning outcomes; and

(d)   an appraisal of the extent to which previous moderation reviews, feedback and comments have been addressed.

5.7.2.2   Review of assessment tasks reaffirms the fairness, clarity and standards of the assessment tasks before they are used. Assessment tasks will be subject to pre-assessment moderation to ensure that:

(a)   they are appropriately aligned with the learning outcomes of the program;

(b)   assessments are fair and feasible, take into consideration adjustments that may be required for students with disabilities and that reasonable weightings are applied for each task;

(c)   they are appropriately spaced throughout the study period and achievable by students in the allocated timeframe;

(d) their content and instructions are presented clearly, using plain English, so that students understand what is required of them in order to achieve a given grade;

(e)   the academic challenge they demand of students is consistent with the level of the award for the programme

5.7.2.3   During-delivery processes: includes checking the consistency of marking of the assessment tasks and grading process against the assessment/marking criteria and related standards in order to ensure consistency across groups of students in the same subject.

5.7.2.4 Post-delivery processes: an examination of the effectiveness of the moderation process and includes a formal reflection on moderation methods used.

5.7.3 Benchmarking

Programmes and courses will be benchmarked regularly against similar accredited courses offered by other higher education providers to ensure comparability of standards and to gain feedback for ongoing review and improvement. This process will be managed by the Schools and will occur in addition to the moderation processes internal to the University.

5.8 Resources

The success of this Strategy is dependent upon the University providing adequate ICT infrastructure to support delivery of all the envisaged blended learning services. Such an infrastructure requires relevant human resources to research, review, design, implement and support it.

5.8.1 ICT infrastructure

The ICT infrastructure will be extended on an incremental basis in line with the growth of the University and budget availability in order keep up to date with new technological developments in higher education. The following are the minimum resources required to support the implementation of the Strategy:

5.8.1.1 Adequate and reliable bandwidth to access the Internet and internal University networks;

5.8.1.2 A Data Centre with Uninterruptible Power Supply (UPS) for Headquarters;

5.8.1.3 A Disaster Recovery Site with power backup generator;

5.8.1.4 Mobile Device Management technologies;

5.8.1.5 Gateways (E-Payment, SMS);

5.8.1.6 IT Support Framework - Information Technology Infrastructure Library (ITIL), Control Objectives for Information and Related Technologies (COBIT);

5.8.1.7   Enhanced capacity and coverage of existing Wi-Fi in Regional Campuses;

5.8.1.8   Helpdesk System;

5.8.1.9   Plagiarism software;

5.8.1.10   An integrated Data Warehouse for gathering and integrating data for learning analytics.

5.8.1.11   Provision of assistive technologies for students with special needs.

5.8.2   Human Resources

The following minimum resources are required:

a)   Adequate Helpdesk Staff for assisting students and staff during and outside working hours;

b)   Adequate Database Administration staff for helping outside working hours;

c)   Adequate Network Administration staff;

d)   Adequate Systems Administration staff;

e)   Adequate Learner Management System Administration staff

f)   Adequate staff for providing training, for example in Moodle and Linux.

g)   Any other staff needed to enhance support and/or delivery of the blended and online learning programmes

Targeted specialised and on-going staff development in instructional/educational design in particular, will be provided to academic staff. A range of online resources will be developed to support staff development on key aspects of the effective integration of technology in course and programme design. Empowerment of staff should further include providing targeted incentives within the recognition, reward and promotions procedures, recognising developmental contributions aligned to this Strategy.

6   CONCLUSION

6.1   This Strategy has an accompanying *Implementation Plan 2019-2023* which provides detailed information on initiatives, outcomes, measures, responsibilities and timelines.

6.2   The success of this Strategy depends on support by Senior Management, the expertise and commitment of academic staff to teach in the online environment, the professionalism of support staff, the engagement of students in blended learning courses and a robust ICT infrastructure. It requires talent, creativity and a high level of commitment of all staff. Technology on its own cannot yield positive results without staff who provide the intellectual capital and driving force behind the appropriate and effective use of technology to enhance learning and teaching, and ultimately student success at the University. This Strategy provides a key mechanism for the achievement of the University's strategic intent:

"By 2023 BOU will be an innovative Open University recognised for its technology-enhanced programmes, relevant research and societal impact."

7   REVIEW

The Strategy will be reviewed after three years or earlier as necessary