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CEMCA

Best Practices in Open and Distance Education

Case Studies from Commonwealth Countries

Edited by
Manas Ranjan Panigrahi
Sudarshan Mishra

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The Commonwealth Educational Media Centre for Asia (CEMCA) is an international organisation established by the Commonwealth of Learning (COL), Vancouver, Canada, to promote the meaningful, relevant and appropriate use of ICTs to serve the educational and training needs of Commonwealth member states in Asia. CEMCA receives diplomatic privileges and immunities in India under Section 3 of the United Nations (privileges and immunities) Act, 1947.

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Contents

Foreword

Open and Distance Education has matured over the decades. The growing demand of education and boosting the Gross Enrolment Ratio in Higher Education is the indication that Open Universities are being established across the World. Open and Distance Learning Institutions in Commonwealth countries are practicing innovative strategies for facilitating learning. It is important to document these innovative developments.

The Document **"Best Practices in Open and Distance Education Case Studies from Commonwealth Countries"** provide an exhaustive review of best practices which the various open and distance learning institutes are accomplishing. It has provided factual developments in the universities which have impacted the culture of distance education institutes. It is designed as a reference tool that the reader may identify exceptional programs individual open universities offer. Each Best Practice is described by the faculty of Open University.

This publication contains best practice from six countries Botswana, India, Malaysia, Namibia, Nigeria and South Africa. There are 14 Case Studies classified under four themes. The themes are:

- Administration and Governance (Three)
- Learning Materials and Teaching Learning (Three)
- Academic Counselling and Learner Support Services (Three)
- Application and Integration of Information and Communication Technology (Five)

It is an important resource for institutes, researchers, practitioners etc to administer the practices. The publication is intended to be used as a source book for reflecting on Best Practice programs.

I thank all those who have contributed to this document and took time to elaborate the Best Practice in their respective institution and for entrusting us to publish with their discoveries. These Best Practices will encourage others to share their Best Practice.

The Handbook is edited by Dr. Manas Ranjan Panigrahi and Dr. Sudarshan Mishra. I appreciate them in helping improve the manuscript and ensuring the accuracy.

These 14 Best Practices is the tip of the Iceberg. We hope you will find it useful as you get start to replicate. They provide many tips and examples as what is happening in administration, learning material, academic counselling etc in Open and Distance Education Institutes.

Madhu Parhar
Director CEMCA

Preface

The Open and Distance Learning (ODL) system of education has brought with it a new wave that has revolutionized education. It has opened a large number of opportunities for learners, especially for learners in developing countries where they face difficulties in accessing campus-based higher-level learning. The ODL system has been in place for a few decades now and during this period, it has established its base in education systems across the world. Any system always has space for improvements, and it is time to identify the important issues in ODL that need attention and the areas that need immediate focus to equip its learners better.

This collective research takes a closer look at different aspects of education in ODL's domain. Different areas such as administration, governance, teaching and learning material, academic counselling, learner support services, and application and integration of ICT have been taken into consideration in the compilation of best practices that bring together different universities from Commonwealth countries. All these areas are equally important in contributing to a suitable learning environment. Through such an effort one is able to identify the drastic developments in the field of ODL that have helped it gain relevance in an educational environment that is evolving faster than ever before; new technological advancements are emerging every day, and constant efforts are being made in ODL systems to help its learners have access to state-of-the-art tools to make education easier and more accessible across the globe. The ODL mode of education has never been more important than now during a global pandemic and it is going to play an undisputable part in the future; hence a learner-friendly approach is the need of the hour.

It is with great pleasure that we take this opportunity to thank everyone who was a part of this initiative; our gratitude to educational practitioners and contributors for sharing of their institutional best practices for providing better learning. As always, we at CEMCA, look forward to your suggestions that will help us improve further.

Manas Ranjan Panigrahi (PhD)

Sudarshan Mishra (PhD)

Acronyms

AI	Artificial Intelligence
APEL	Accreditation of Prior Experiential Learning
BBOU	Babasaheb Ambedkar Open University
BER	Bit Error Rate
BHIM	Bharat Interface for Money
BOCODOL	Botswana College of Open and Distance Learning
BOU	Botswana Open University
BPP	Bachelor's Preparatory Programme
CA	Collaborative Agreement
CA	Continuous Assessment
CD	Compact Disc
CEMCA	Commonwealth Educational Media Centre for Asia
CEO	Chief Executive Officer
CEQUAM	Centre for Quality Assurance and Management
CGPA	Cumulative Grade Points Average
CIQA	Centre for Internal Quality Assurance
CODeL	Central Open, Distance and e-Learning
COL RIM	Commonwealth of Learning Review and Improvement Model
COL	Commonwealth of Learning
COVID-19	Corona Virus Disease of 2019
CRC	Camera-Ready Copy
D. El. Ed	Diploma in Elementary Education
DEI	Distance Educational Institute
DHCP	Dynamic Host Configuration Protocol
DNS	Domain Name System
DVB	Digital Video Broadcasting
e-CRM	Electronic Customer Relationship Management
EDGE	Enterprise Driving Growth and Excellence
GPS	Global Positioning System

HD	High Definition
HI	Human Intelligence
ICT	Information and Communications Technology
IP	Internet Platform
IT	Information Technology
KKHSOU	Krishna Kanta Handiqui State Open University
LAN	Local Area Network
LCD	Liquid Crystal Display
M Phil	Master of Philosophy
MBA	Master of Business Administration
MCA	Master of Computer Applications
MHRD	Ministry of Human Resources and Development
M-Learning	Mobile Learning
MOOC	Massive Open Online Course
MSc-IT	Master of Science in Information Technology
NOUN	National Open University of Nigeria
NPTEL	National Programme on Technology Enhanced Learning
NSOU	Netaji Subhas Open University
NTP	Network Time Protocol
ODeL	Open, Distance and e-Learning
ODL	Open and Distance Learning
OER	Open Educational Resources
OMKAR	Open Matrix Knowledge Advancement Resource
OUM	Open University Malaysia
PA	Public Address
PGDBM	Post Graduate Diploma in Business Management
PGDCA	Post Graduate Diploma in Computer Application
PGDHRM	Post Graduate Diploma in Human Resource Development
Ph D	Doctor of Philosophy
RF	Radio Frequency
SADC	Southern African Development Community
SLM	Self Learning Material

SMS	Short Message Service
SoTL	Scholarship of Teaching and Learning
TMA	Tutor-Marked Assignment
UGC	University Grants Commission
UN	United Nations
UNAM	University of Namibia
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UOU	Uttarakhand Open University
UPS	Uninterruptible Power Source
UPSC	Union Public Service Commission
VANDE	Video Audio Network for Development and Education
VC	Vice Chancellor
VLE	Virtual Learning Environment
VocUP	Vocabulary Learning Mobile App
VOIP	Voice Over Internet Protocol
VSAT	Very Small Aperture Terminal
WAN	Wide Area Network
WCAN	Wide Campus Area Network
WIT	Walchand Institute of Technology

Prologue

The diversity of population with respect to age, qualifications, locality and social and economic status cannot be addressed through a single and traditional mode of education. Secondly, growing need for continuous upgradation of knowledge and skills and technological advances mean that traditional ways of organising education and learning systems need to be augmented with innovative, flexible and technology-driven methods, so as to universalise education as a fundamental right of all people. It is well accepted that Open and Distance Learning is an indispensable part of mainstream education both in developed and developing countries due to widespread use of web-based multimedia technologies. It has become a powerful force for social and economic development.

During the last two decades, many institutions have undergone profound changes in their organisational structures, governance and modes of operation. ICT has been used in every sphere of institutional and teaching-learning activities. Traditional universities are transforming themselves to dual mode universities and providing students with the best possible learning resources. More and more open universities and dual mode institutions are being established across the world.

In the context of the COVID-19 pandemic from February 2020 traditional education systems faced an unprecedented challenge in most of the countries. Educational institutions, governmental agencies, international organisations, the private sector and civil society worked together to deliver education through a mix of technologies to ensure continuity of curriculum-based study and learning for all (UNESCO, 2020: p.7). Like distance learners, learners of traditional institutions are encouraged to rely on self-study augmented by technology. Teachers are also motivating students for self-study.

A teacher's role has changed from a mere instructor to a facilitator who plays a supportive role in motivating students for self-study. Learners are assessed through online modes. Students are encouraged to participate in Massive Open Online Courses (MOOCs) to supplement their prescribed courses of study. However, a large section of learners is deprived of such opportunities due to their locational disadvantages and socioeconomic status.

During the COVID-19 pandemic, ODL institutions had to plan distance learning programmes with sector-wide strategies to respond to the sudden interruption in education. This had to be guided by a concern for equity and inclusion. The planning for design and delivery should be guided by both immediate mitigation needs and long-term goals. Beyond a response to the crisis, efforts should be made to think of long-term goals of achieving more open, inclusive and flexible education systems. Lessons learnt from past experiences in both developed and developing countries will help in developing and implementing such long-term strategies.

Many of the ODL and dual mode institutions in Commonwealth countries are practicing innovative strategies for facilitating learning. These need to be documented as they may provide insights for a rethink of strategies for achieving more open, inclusive and flexible education systems. Here, we consolidate the best practices of eight open universities and dual mode institutions with the following objectives:

- Documenting the best practices of ODL in Commonwealth countries.
- Opening up new paths for an ODL environment.
- Arriving at a detailed description and understanding of the best practices of these eight institutions.

- In-depth exploration of the actual practices of the eight institutions.
- Examining the best practices to illustrate alternative approaches to students' learning.
- Getting an insight into the best practices and contextualising them in different institutions.

Best Practices in Open and Distance Learning

A best practice is a method or technique that has been generally accepted as superior to any alternatives. It produces results that are superior to those achieved by other means. It has become a standard way of doing things with legal and ethical considerations. It is generally accepted as the most effective practice. Eleven best practices are described in the present volume in eight ODL institutions.

Justus A. Sokefun discusses the best practices in Open and Distance Education in the National Open University of Nigeria (NOUN). How NOUN has progressively deployed and used information and communication technologies in both instructional methods and delivery as well as the method of providing support to distance learners is well-described. Preparation of course material is another very important aspect of distance learning in NOUN which promotes self-learning. Learner support services operating through a network of study centres is discussed in detail. Sokefun also covers learners' assessment process followed in NOUN.

C.M. Beukes-Amiss and Erkkie Haipinge of the Centre for Open, Distance and e-Learning (CODeL) at the University of Namibia discuss a case of developing and implementing quality guidelines and measuring tools at the University of Namibia. They also describe another best practice — use of ICT for enhancing distance learning practices. The authors also describe best practices pertaining to e-Learning in the university.

Jeetendra Pande of Uttarakhand Open University, reflects that in his institutional practice using of OERs has not only reduced the cost of development of SLM, but it is also helpful in reducing the carbon footprint. A discount of 15 per cent on the course fee is offered to learners if they opt only for e-copies of the study material which is made available through a course repository. Hence, the benefit of reduced cost of developing the material is passed on to the learners. All the material developed using OERs is hosted on the Moodle based e-Learning platform and is released under appropriate open license terms. This not only facilitates the sharing and adoption of the material by other institutions but also makes it possible to integrate existing OERs Therefore, the practice is not only beneficial in terms of cost but it is also sustainable.

YBhg Prof Dato' Dr Mansor Fadzil of Open University, Malaysia describes a case about learner affairs and support in the Open University, Malaysia. The author discusses the role of the Centre of Learner Affairs, which drives the initiative and focuses on four areas to boost learners' experience and reduce attrition. They are: Learner Engagement; Learner Development; e-CRM for Learner Support Services; and Monitoring and Research.

Daniel R. Tau discusses institutional management and administration at the Botswana Open University. He presents a case study for long-term planning that is supported by short-term strategic plans and discusses the outcomes and impact of long-term planning.

M.S. Makhanya of the University of South Africa cites the example of VocUP at the University of South Africa which is used for addressing language challenges and deficits in a multilingual society. VocUp is a mobile app developed to send a vocabulary lesson to students every day which is packaged in such a way that not only looks good but it also works well. VocUp is also used in conjunction with WhatsApp to facilitate

an interaction between students and their peers regarding the 'word of the day.' Students can choose to use VocUp on its own, or work through the lessons and then proceed to WhatsApp to interact with their peers regarding the word of the day.

Nilesh Modi and Himanshu Patel discuss the best practices in open and distance education in Dr Babasaheb Ambedkar Open University, Ahmedabad in terms of its innovative application of ICT in the delivery mechanism. ICT tools developed support the predominant print media being used by the ODL system and in effective delivery. The major initiatives taken in this regard by Dr Babasaheb Ambedkar Open University include creating a repository of e-resources of information and knowledge making the e-content accessible to millions of students and aspirants across the globe; launching an internet enabled open access free-of-cost digital learning platform for online and self-driven courses; introducing five indigenously designed android mobile educational apps for providing vital information about the university; initiatives to facilitate web-based learning through video and radio; setting up virtual classrooms; introduction to Mobipaedia; broadcasting live/recorded content on the educational channel; and installation of an internet enabled digital touch screen device, the ASK-ME Kiosk.

Subha Sankar Sarkar selected the best practices of Netaji Subhas Open University (NSOU). The author studies how NSOU has integrated ICT which facilities in the pedagogy for delivery of courses at the university. It is a combination of dedicated LMS - developed on the Moodle platform, the NSOU OER Repository and the mobile app - hosted in an android set up.

Bhaskar Sarmah discusses how a decentralised administrative structure has enhanced efficiency, capability and productivity in Krishna Kanta Handiqui State Open University (KKHSOU). To streamline and decentralise the different activities of the university, the role of different annual committees is described.

Trisha Dowerah Baruah, Juri Hazarika and Bhupen Hazarika discuss the application of ICT in Krishna Kanta Handiqui State Open University. The authors describe the ICT initiatives taken by KKHSOU such as online admissions; introduction of a virtual learning environment in terms of an online system of learning, mobile learning and offline learning through printed study material; provision of a free of cost TAB; use of the android app; and the Learner Information Management System and Learning Management System (LMS) for quality school education.

Smritishikha Choudhury and Chayanika Senapati discuss self-learning material in Krishna Kanta Handiqui State Open University. The print material is prepared in modular formats. KKHSOU's SLM is structured to make learning easy and effective. It is self-explanatory, self-contained, self-directed, self-motivating, self-evaluating and self-learning. The SLM is generally provided in English and Assamese. All the pedagogical principles of self-learning are incorporated in the SLM.

Devajeet Goswami of Krishna Kanta Handiqui State Open University describes its community radio Jnan Taranga. It is the first community radio in the entire North- East region regularly broadcasting since November 2010. The strength of Jnan Taranga lies in its identification of the needs of the community and meeting these through radio programmes. There has been active participation by the members of the community. In one case a chance listener of Jnan Taranga became an active listener and then became an anchor at Jnan Taranga. In another case, a child became an anchor for children's programmes on environment, science, recitation and general knowledge.

This volume brings together a diverse group of experts from many countries. Their contributions as a whole provide a clear picture of the problems and potential of ODL particularly in higher education and offers insights for planners and policymakers of both

open and traditional institutions. The volume is an initiative of CEMCA, with which we are pleased to be collaborating. We hope this volume will help in realising the potentialities of open and distance education in cherishing the long-term goal of more open, inclusive and flexible education systems.

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UNESCO (2020). Ensuring effective distance learning during COVID-19 disruption Guidance for teachers. Paris. Available at: http://www.unesco.org/open-access/terms-use-ccbysa-en.

Theme I: Administration and Governance

Case Study – 1:
Development and Implementation of Quality Guidelines and Measuring Tools: A Case Study of the University of Namibia

Case Study – 2:
Institutional Management and Administration at Botswana Open University:
A case study

Case Study – 3:
Decentralisation as a Means of Enhancing Efficiency, Capability and Productivity: A case of Krishna Kanta Handiqui State Open University

Development and Implementation of Quality Guidelines and Measuring Tools: A Case Study of the University of Namibia

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Introduction

The Centre for Open, Distance and e-Learning (CODeL) at the University of Namibia operates as a dual-mode centre with over 6,000 registered distance and online mode students under the direct supervision of the pro-vice chancellor, academic affairs in the University of Namibia. CODeL's director manages and coordinates all primary functions of the centre which include facilitating the development and implementation of distance, online, as well as blended learning courses and programmes through its three sections: Open and Distance Learning (ODL), e-Learning and Administration in CODeL. The centre promotes the development and implementation of policies, procedures and standards for effective service delivery in Open, Distance and e-Learning (ODeL).

The centre is also responsible for identifying, writing and administering collaborative linkages and participating in on-going planning processes, which align with the centre's strategic objectives. One of the crucial linkages that the centre has established is with the Commonwealth of Learning (COL) in

implementing its higher education integrated model phases. All activities of the centre contribute to the overall achievement of its mandate and equally contribute to the university's overall vision and mission.

Strategic Pillars

The following strategic pillars set the tone for shaping good practice cases in CODeL:

Professional leadership

This builds on a culture of infusing print-based, distance-mode practices with various technological tools focusing on its affordability for the benefit of all types of learners, regardless of their mode of study.

Shared vision and goals

The centre has a clear and shared understanding of how e-learning can improve student learning outcomes, which are reflected in its vision and mission.

Purposeful learning

The virtual learning environment (VLE), Moodle used by the centre is guided by a social constructivist learning philosophy that promotes effective learning practices, engages students and helps contextualise learning to meet the needs of both distance and face to face students.

Stimulating a secure learning environment

e-learning as one of the driving pillars of the centre, is used effectively to promote diverse, flexible, interactive and quality learning and teaching in a safe and accessible online environment that supports ODL.

Accountability

Through its innovative practices, the centre enhances accountability across the university's community, improving communication between parents/lecturers, students and staff.

Good practice

During late 2017, the Commonwealth of Learning (COL) and UNAM formalised a collaborative agreement (CA) through CODeL by which COL committed to support the university in implementing pilot phases I, II and III of its higher education integrated model. One of the pillars of the model focused specifically on quality assurance through which quality assurance and continuous quality enhancement at CODeL were to be strengthened.

This culminated in an initial workshop that was held in late 2017 to support CODeL as an academic support centre improving the capacity of staff members to understand and support the delivery of high quality ODeL programmes. For achieving this, another workshop was held in early 2018, after which the centre started a quality drive in 2018 focusing on the development of quality guidelines and measuring tools to be used and implemented in various sections for all CODeL activities and processes.

As part of the quality drive and subsequent development of quality guidelines and measuring tools and with the aim of implementing these in CODeL a quality assurance task force was established to support, coordinate and validate the implementation of the quality guidelines and measuring tools aimed at analysing and realising the current quality of all activities and processes eventually improving all these activities and processes in the centre.

The development and implementation of the quality guidelines and measuring tools started with a focus on outlining all the activities and processes within CODeL through which these could be implemented and ensuring their eventual improvement. This practice involved all CODeL management and staff members in all CODeL centres and training of all staff members.

After the mapping and agreement about all the activities and processes that would need quality guidelines, several days were

spent on developing the quality guidelines with their accompanying measuring tools for implementation. Quality guidelines were then fully developed for the following activities and processes in CODeL:

1. Centre leadership and governance (director's office)
2. Student administration
3. Regional administrative student support
4. Student support
5. Print-based material development
6. Stores and dispatch
7. Online facilitation
8. Online and blended course design
9. E-learning systems administration (systems administration, digital media and video conferencing)

After the development of these with their accompanying measuring tools, which were validated through an independent consultant of COL and the internal quality assurance task force with senior members from the Quality Assurance Centre (CEQUAM) in the university and CODeL, representatives from each section in CODeL were nominated to oversee and champion the administration of these and prepare all staff members in CODeL accordingly.

The actual administration and measuring of the quality guidelines then started and was completed with the writing of a report on the quality assurance findings and self-improvement plans (SIPs).

Outcomes and impact

The quality drive and full engagement of all staff members in CODeL, including all management members changed the concept of business as usual. Adherence to the timely implementation of this practice was assured through the development of an activity calendar/plan that was put in place for the quality assurance task force to monitor.

Staff members seemed to be very positive regarding the practice, admitting that their awareness about quality and how to go about achieving it their respective functions, improved even though during the implementation it appeared to be intense.

Feedback highlighted that some CODeL management members established an interview guide for purposes of writing an article and they maintained that this practice led to collaborations among staff and the overall realisation of the interdependence of activities and processes in the centre, where if quality suffered in one area/aspect, the overall reputation of the centre also suffered.

Staff members also regarded the process as an introspection of their current practices that enabled them to diagnose deficiencies in products and services prior to the quality drive and implementation of the quality guidelines and measuring tools.

One of the major lessons learnt from implementing this practice is that it must remain an on-going activity to continuously revise, update and align quality guidelines with job functions to ensure relevance at all times. It also requires frequent and on-going engagement with staff members.

Conclusion

The development and implementation of the quality guidelines and measuring tools helped in a full-scale reflection process regarding all activities and processes of a dual-mode ODL entity such as CODeL.

Challenges coupled with dual-mode ODL entities remain but engagement in practices such as the development of guidelines and measuring tools for all activities and processes, provides another fresh perspective on how to assess, analyse and improve going forward.

Institutional Management and Administration at Botswana Open University: A case study

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Introduction

Botswana Open University (BOU) is the newest open university in the world. It was set up in July 2017 after the Parliament of Botswana passed an act that provided for the continuation of the Botswana College of Distance and Open Learning (BOCODOL) under the name Botswana Open University. BOCODOL started operations in 2000 with a mandate of extending education and training to out-of-school youth and adults using ODL methodologies on a nationwide scale to improve the quality of their lives through the acquisition of knowledge and skills. Amongst the primary tasks that the college was mandated to carry out was widening the scope of the programmes beyond secondary school level. This provided a challenge to the management to devise ways and means of incrementally growing its value proposition.

Context

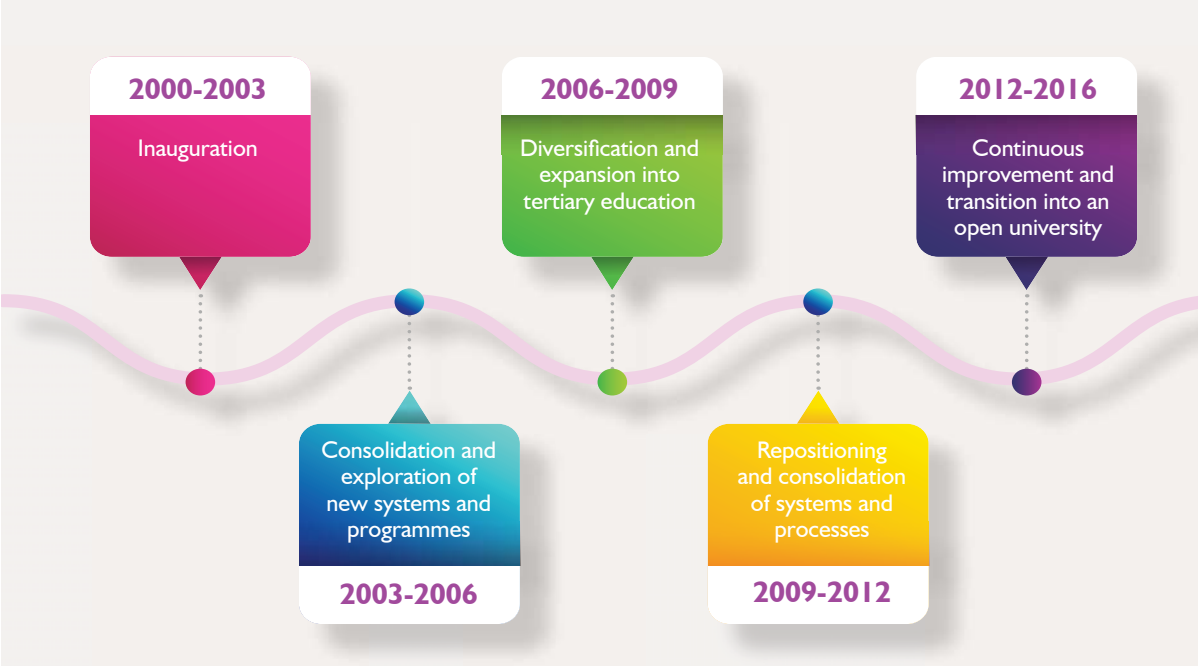
To set the ball rolling, the governing structures (the board of governors and the executive management) embarked on long-term planning with an inclination towards the National Vision 2016. The determination was that 'as the Country celebrated its 50th Anniversary of independence, the College would be celebrating its successful transition into an Open University' – a determination that came to pass hardly a year later than the targeted time.

Good practice

Long-term planning

In its submission for 'Good Practices in Open Universities,' the university wished to make a case for long-term planning that is supported by

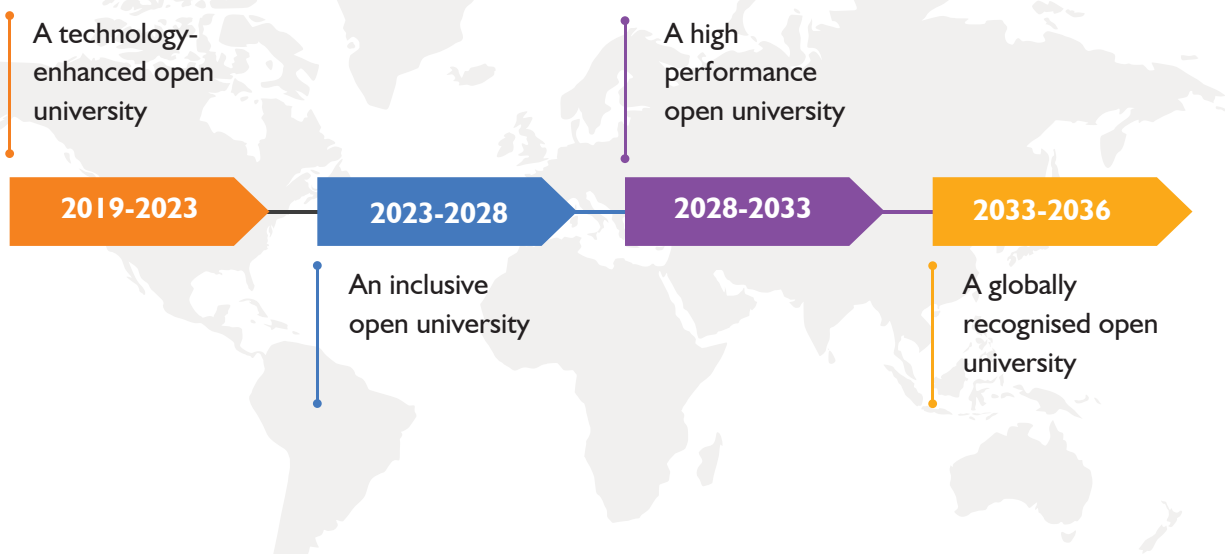
FIGURE 1: STRATEGICAL ROADMAP TO 2016



short-term strategic plans. In 2000, the college management came up with a roadmap to 2016. The roadmap was divided into five strategic plan periods which drove five key milestones which were geared towards ushering the college into university status by 2016 (Figure 1).

In 2016, based on the progress of the legislative preparations for its transformation to a university the college drew up a strategic plan 2016-20 which set out to embrace the transformation. However, due to delays in bureaucratic decisions, the University Act was promulgated in July 2017. Following the act, the university's new governance reviewed the 2016-20 strategic plan in view of coming up with a new long-term framework which would guide its growth pathway to 2036. The framework is primarily aligned with Botswana's Vision 2036 whose primary aim is to guide the evolution of Botswana into a knowledge-based economy. It also echoes the country's commitment to international protocols on education and development such as the United Nations

FIGURE 2: INSTITUTIONAL ROADMAP WITH MILESTONES



Sustainable Development Goal 4, The African We Wait Agenda 2063 and the SADC Protocol on Education and Training. Insights from these 17 years resulted in the following roadmap with milestones (Figure 2)

Outcomes and impact of long-term planning

Long-term planning enables organisations to direct stakeholders towards a desired common future thus inducing collective innovations and continuous evaluation of key milestones with respect to challenges and opportunities propagated by the environment. Moreover, clarity of purpose, alignment and value propositions for the shareholder and customers become the main drivers of competitiveness. Botswana Open University has leveraged long-term and strategic planning to keep all stakeholders on the path of evolution of the institution since its inception. The development of the strategic plans followed an inclusive model of consultations with stakeholders from conceptualisation, through launching to reviewing progress. Some of the success stories and outcomes that are attached to BOU's management and administrative strategy are:

- Widened access to education from an annual enrolment of 2,081 in 2000 to 18,000 in 2019.
- Increased scope of programmes into tertiary education subsequently transformed into an open university.
- Widened use of technology in programme development, delivery, assessment and quality assurance.
- Attracted impactful partnerships with both local and international partners for programmes being offered and technology used.
- Supported over 220 staff members from the legacy institution to upgrade their academic qualifications through ODL in readiness for university status.
- Increased buy-in from shareholders resulted in increased motivation to finance the growth of the new university.

Conclusion

Long-term planning, stratified by targeted short-term plans, is the cornerstone of sustainable development. Countries embark on long-term planning both as individuals and as consortia as exemplified by the United Nations Agenda 2030, the Africa Union Agenda 2063, the SADC Protocol on Education and Training and Botswana's Vision 2036. However, not many organisations, especially public institutions embark on long-term planning. Several challenges may be responsible for them avoiding embarking on long-term planning. First, long-term planning is leader-driven – most chief executive officers are contracted for a short period of time and hence tend to focus on issues pertaining to their term of office; second, strategic planning is a technical skill that involves a tedious process and can also be costly both in terms of time and financial resources; third, there is generally no expectation from the government for public institutions to embark on long-term planning; and fourth, research shows that the implementation of long-term and strategic plans is very low – with over 70 per cent of the organisations with strategic plans failing to implement them. Botswana Open University has had the privilege of being headed by the same CEO from inception till today. This has, to a large extent, contributed to the adoption and mainstreaming of long-term strategic planning in the BOU culture of management and administration.

Decentralisation as a Means of Enhancing Efficiency, Capability and Productivity: A case of the Krishna Kanta Handiqui State Open University

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Introduction

The Krishna Kanta Handiqui State Open University is the only state open university in the entire North-Eastern region of India. Established by an act of the Assam Legislative Assembly in 2005, the university started functioning on 11 December 2006. The university started its first academic programme 'Bachelor Preparatory Programme' in 2008 with an enrolment of 3,434 learners. The current strength of on-roll learners is more than 1.8 lakh (Source: KKHSOU's official records).

Context

The administrative structure of the university is designed in such a way that certain functions are delegated as statutory powers to different levels of authority. For example, there are different statutory bodies/authorities like the board of management, the academic council, the finance committee, the schools of studies, the planning and development committee and the selection committee.

When Dr Hitesh Deka took charge as the vice Chancellor of the university on 11 March 2014, he came up with a grand vision of decentralizing the different activities of the university. He formed a number of committees by assigning responsibilities of particular tasks to the employees of the university. This made the functioning of the university more efficient and productive.

Good practice

To streamline and decentralise the different activities, a number of annual committees have been set up since 2016. Committees formed for 2016 are listed in Table 1.

TABLE 1: DECENTRALISATION OF ACTIVITIES THROUGH DIFFERENT COMMITTEES IN KKHSOU IN 2016

Name of the Committee	Team Leader consisted of (By Designation):	Total Members and Composition of Members*
1. Examination Committee	**Chairperson:** Vice Chancellor **Convenor:** Controller of Examinations	Total : 8 Admin : 6 Academic : 2
2. Examination Discipline Committee	**Chairperson:** Controller of Examinations Convenor: Deputy Registrar, Examinations	Total : 7 Admin : 5 Academic : 2
3. Admission/Registration of Learners' Committee		Other members to be co-opted as per requirement.
• BPP	Faculty member.	
• Bachelor Degree Programmes	Faculty member.	
• Certificate/Diploma etc.	Faculty member.	
• D. El. Ed	Faculty member.	
• Ph D/M Phil	Faculty member.	
4. SLM Publication and Distribution Monitoring Committee	**Chairperson:** Dean (Study Centre) Convenor: Assistant Registrar, SLM.	Total : 7 Admin : 6 Academic : 1
5. Publication Committee – I (for University Newsletter and other Academic Publications)	**Chairperson:** Dean (Academic) **Convenor:** Faculty Member.	Total : 6 Admin : 2 Academic : 4
6. Publication Committee – II (for University Journal)	**Chairperson:** Dean (Academic) **Convenor:** Faculty Member.	Total : 6 Admin : 2 Academic : 4
7. Grievance Redress Cell (Separate committees for):		
• Teachers	**Chairperson:** Dean (Academic)	Total : 4 Admin : 1 Academic : 3
• For all employees other than teachers,	**Chairperson:** Dean (Academic)	Total : 4 Admin : 4
• For all gender-related matters	**Chairperson:** Assistant Registrar, Administration (lady)	Total (all ladies) : 4 Admin : 2 Academic : 2

Name of the Committee	Team Leader consisted of (By Designation):	Total Members and Composition of Members*
• For Study Centre and learners' related matters	**Chairperson:** Dean (Study Centre) **Convenor:** Assistant Registrar (Study Centre)	Total : 5 Admin : 3 Academic : 2
8. Prospectus Committee	**Chairperson:** Deputy Registrar (Academic) **Convenor:** Faculty Member.	Total : 7 Admin : 2 Academic : 5
9. Annual Report Preparation Committee	**Chairperson:** Assistant Registrar (Admin) **Convenor:** Faculty Member.	Total : 5 Admin : 2 Academic : 3
10. Budget Committee	**Chairperson:** Registrar **Convenor:** Finance Officer	Total : 5 Admin : 5
11. Mother Teresa Social Welfare Mission	**Chairperson:** Faculty **Convenor:** Faculty	Total : 5 Admin : 3 Academic : 2
12. Multimedia Production and Community Radio Committee	**Chairperson:** Dean (Academic) **Convenor:** Faculty (Mass Comm.)	Total : 6 Admin : 3 Academic : 6
13. Internal Quality Assurance Committee	**Chairperson:** Vice Chancellor **Convenor:** Director, CIQA.	Total : 7 Admin : 6 Academic : 1
14. Innovations and International Affairs	**Chairperson:** Dean (Academic) **Convenor:** Faculty.	Total : 5 Admin : 3 Academic : 2
15. Study Centre Management and Monitoring Committee	**Chairperson:** Dean (Study Centre) **Convenor:** Assistant Registry (Study Centre)	Total : 7 Admin : 7
16. Event Management	**Chairperson:** Deputy Registrar (Admin) **Convenor:** Faculty.	Total : 9 Admin : 1 Faculty : 8
17. Financial Resource Utilisation and Management Committee	**Chairperson:** Finance Officer **Convenor:** Faculty.	Total : 5 Admin : 4 Faculty : 1
18. Sport Purchase Committee	**Chairperson:** Finance Officer **Convenor:** Deputy Registrar (Admin).	Total : 3 Admin : 3
19. Library Committee	**Chairperson:** Assistant Registrar (Admin) **Convenor:** Faculty.	Total : 3 Admin : 2 Faculty : 1

Name of the Committee	Team Leader consisted of (By Designation):	Total Members and Composition of Members*
20. Stand-alone Committees*:		
• Public Relations	• Public Relations Officer	
• Resource Mobilisation	• Faculty.	
• Organising Seminars/ Workshops	• Faculty.	
• Conduct of ODL-related Workshops/Training Programmes	• Faculty.	
• Campus Monitoring (Headquarters)	• Faculty	
• Campus Monitoring (City Centre)	• Faculty.	
• University Website Monitoring and Social Networking.	• System Analyst.	

Source: Official Records, KKHSOU.

**Admin consists of all non-teaching staff, including Grade IV employees.*

Such committees were also formed in 2017, 2018 and 2019. In certain cases, the committee members were reshuffled among different committees. Apart from these committees, certain other committees were also formed whenever a need was felt.

Outcomes and impact

On earlier occasions as well, certain committees were formed for the smooth conduct of specific tasks like organising national conferences during the COL-RIM exercise. Delegation of powers to such an extent was exemplary. This exercise had the following major impact:

(1) Intra-communication across the different branches improved quite significantly.

(2) People felt a sense of belonging and being empowered.

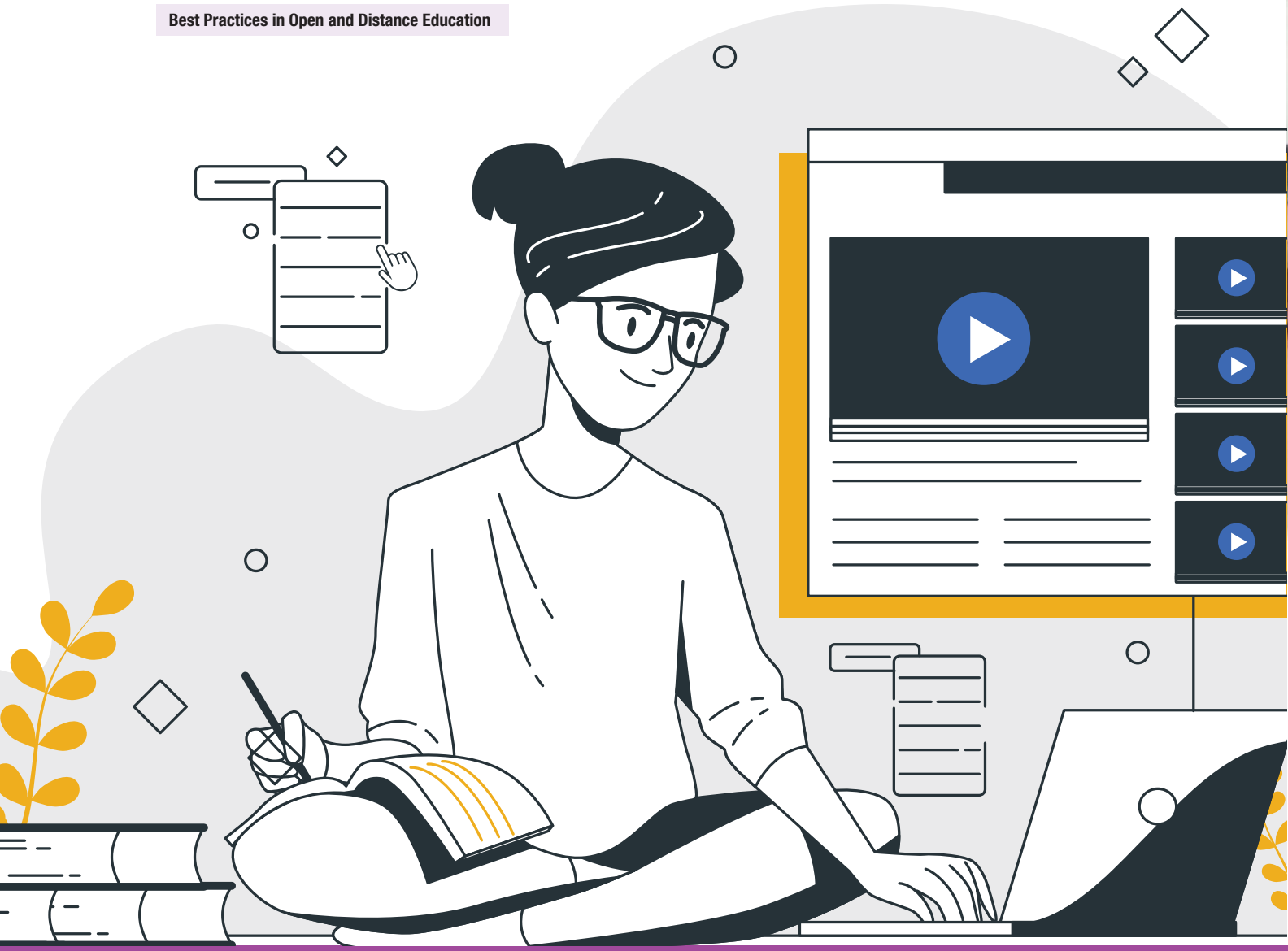
(3) Innovative ideas came up for solving problems.

(4) Certain programmes like village adoption and offering free scholarships to women UPSC aspirants (after they cleared the preliminary examinations) significantly improved the social image of the university. Scholarship awardees could clear the UPSC final examinations.

(5) Productivity and efficiency of all the employees increased to a great extent.

Conclusion

The present generation of Indians has democracy in its blood. Thus, freedom of speech and opinion is an inherited capability of present day Indians. Under such circumstances, the decentralisation of power at KKHSOU helped the university realise the true spirit of democracy on the one hand, while on the other it significantly improved efficiency, capability and productivity across all the sections and among all the employees of the university.



Theme II: Learning Material and Teaching Learning

Case Study – 4:
Innovations in addressing language challenges and deficits in a multilingual society: The example of VocUP at the University of South Africa

Case Study – 5:
Self-Learning Material: A case of Krishna Kanta Handiqui State Open University

Case Study – 6:
Role of OERs in bringing down the cost of education at Uttarakhand Open University

Innovations in addressing language challenges and deficits in a multilingual society: The example of VocUP at the University of South Africa

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Introduction

The use of mobile phones has become a part of ODeL. At the University of South Africa (Unisa), the challenges inherent in ODeL (the separation between students and lecturer), is compounded by the fact that almost 70 per cent of its students are second or third English language speakers. These students often struggle to meet academic demands because of language barriers and inherited deficits. Studies indicate that successful academic performance is based on students' reading, writing and vocabulary competencies (Folse, 2010), which have a positive impact on language proficiency. In teaching contexts, student support initiatives for such students must, therefore, include a focus on vocabulary.

At Unisa, a mobile-based app was developed in the form of VocUp to assist foreign-language speakers to improve their English language skills. The idea behind the app was harnessing the affordability of mobile technology in a manner that resonated with students' lifestyles using a portable programme of learning that could be accessed anytime, anywhere.

Context

Unisa services a linguistically, culturally and ethnically diverse range of students whose numbers exceed 300,000, almost 70 per cent of whom are studying in a language that is not their mother tongue. Since, more than 90 per cent of Unisa's students have access to mobile phones, it made sense to use a device familiar to the students.

Given that Unisa was a well-established ODeL university, it had already harnessed the affordability of mobile phones to facilitate some teaching and learning as well as various administration processes, assessments, assignments and a mobile version of the Unisa library Oasis catalogue. Mobile learning (M-learning) also features prominently in Unisa's official publications and policies through a mobile app to enhance teaching and learning vocabulary for first year students who are challenged by poor English proficiency.

Good practice

Many existing mobile apps for language learning lack the theoretical principles of openness, flexibility, lifelong learning and student-centeredness that are central to ODeL, nor did they combine the pedagogic principles of vocabulary teaching. As a possible solution to this problem, a mobile app was developed that not only taught vocabulary, but also bridged the interaction gap.

The first step in developing the app was identifying what needed to be taught and how. Nation and Waring (1997) assert that the starting point of teaching vocabulary is focussing on form, meaning and use. Therefore, word 'capsules,' which contained the word, a part of speech, definition, three sentences demonstrating its different uses and three exercises for further application and testing were developed. The app, VocUp was then developed to send a vocabulary lesson to students every day. It packaged it in such a way that it not only looked good but it also worked well. VocUp was also used in conjunction with WhatsApp to facilitate interaction between students and their peers regarding the 'word of the day.' Students could choose to use VocUp on its own, or work through the lessons and then proceed to WhatsApp to interact with peers regarding the word of the day.

Outcomes and impact

In a pursuit of meaning and use, the participants engaged in cognitive activities, creating their own sentences and using the new words in various contexts, including in casual chats in the groups. As students engaged in vocabulary activities on their WhatsApp groups, it was noted that they offered the first language equivalent of the word or tried to refine its meaning and use by referring to their first language. Students appreciated exchanging ideas with peers, sometimes using emojis, indigenous languages as well as other media such as images and audios.

Another crucial finding was that formative assessment helped in facilitating interaction. The exercises prompted more discussions. Students exchanged ideas on correct options, sometimes prompting self-correction. The exercises, as multiple-choice or sentence and paragraph writing also facilitated cognitive engagement with the words. The assessment was deemed so important that some students requested more exercises to be included as part of the intervention. The use of mobile phones meant that the participants could continue with their daily lives while they caught up on vocabulary, prompting excellent buy-in from students.

While VocUp and WhatsApp played complementary roles, the remarkable feature of the app is that it can work excellently as a standalone VocUp app or with WhatsApp depending on students' needs.

Conclusion

This intervention was designed to support students as they learnt a language, but its guidelines may be applied in using mobile technologies to support students in other subjects.

Related resources

Folse, K. (2010). Is Explicit Vocabulary Focus the Reading Teacher's Job? *Reading in a Foreign Language*, 22(1), 139-160.

Nation, P. and Waring, R. (1997). Vocabulary size, text coverage and word lists. *Vocabulary: Description, acquisition and pedagogy*, *14*, 6-19.

Self-Learning Material: A case of the Krishna Kanta Handiqui State Open University

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Introduction

Assam being one of the states in the North-east region of India, occupies a distinct place in the field of education (with a literacy rate of 73.18 per cent as per the 2011 Census). The Krishna Kanta Handiqui State Open University (KKHSOU) was established in 2005 under the provision of the KKHSOU Act 2005 and is the only open university in this region.

Context

The university mainly focuses on large segments of the population who are disadvantaged such as those living in remote and rural areas including working people, women learners, housewives and adults who wish to upgrade or acquire knowledge. KKHSOU offers master's degrees, bachelor's degrees, PG diplomas and diploma and certificate courses. KKHSOU has been offering the courses through the print medium (SLM) from the time of its inception.

Good practice

Development of self-learning material (SLM) in print:

KKHSOU's learners depend on the prepared SLM. The print material is prepared in modular formats and is different from text books. KKHSOU's SLM is structured to make learning easy and effective. It is self-explanatory, self-contained, self-directed, self-motivating, self-evaluating and self-learning.

The syllabi of different programmes has been upgraded as per the recommendations of the report of the committee to regulate the

standards of education being imparted through distance mode constituted by the Ministry of Human Resources under the chairmanship of N R Madhava Menon, popularly known as the Madhava Menon Committee Report, 2014.

Each programme offered by KKHSOU has a few courses. Each course has a set of printed learning material called 'Blocks.' Most of the courses have two Blocks. Each Block has a minimum of six to seven units. A unit consists of 3,000 to 5,000 words or 12-15 pages depending on whether it is a degree or master degree course. Each unit is structured based on the principles of instructional design (home-style). Each unit normally has an introduction, objectives, presentations, check your progress, activity, let us know, let us sum up, further reading, answers to check your progress and model questions to make it learner centric. The units are written in conversational style so that they can be personalised. The SLM is generally provided in English and Assamese.

Credit system: While preparing the SLM, KKHSOU follows UGC guidelines as announced from time to time. Currently KKHSOU is following all the rules and regulations related to SLM development in print form as suggested by UGC's New Regulation on Distance Education in 2017. All the programmes are assigned credit weightage:

- Master's degree programme: 64-72 credits
- Degree programme: 96-100 credits

The university conducts training programmes from time to time for the development of SLM.

Institutional arrangement for development of SLM in print:

- *The dean (academic)* of KKHSOU deals with the planning of new programmes. The upgraded syllabus of any programme is framed by the CCS (committee on courses) convened by the dean (academic). The university's academic council approves the syllabus as suggested by CCS.
- The *schools and departments* of different subjects are the basic academic units responsible for the conceptualisation, design and development of academic programmes. The schedule for the development of the courses is done according to the university's academic calendar. There are course coordinators for each course who also form the SLM preparation team in consultation with other faculty members of the department. The SLM preparation team includes subject experts, content writers, content editors, language editors, format editors and translators (in case of bi-lingual SLM).
- The SLM branch takes utmost care in printing the SLM and its timely delivery. KKHSOU has a panel of printers who print SLM in black and white. The different departments prepare camera-ready copies (CRCs) of the SLM. The printing of SLM is given to an empanelled printing press on the basis of the quotes given. Soon after the enrolment process is complete, the KKHSOU SLM branch distributes the SLM to each learner for the courses in which he/she has enrolled on the day of admission.

Outcomes and impact

The university has successfully completed 15 years of its existence and lakhs of learners have passed out from the university. In fact, there are many college teachers and civil service aspirants who take help of the university's SLM because of its simple and lucid material.

Conclusion

KKHSOU's printed SLM go through many phases so that error free, easy, learner centric and quality material can be provided to its learners. Although, KKHSOU has adopted new technologies to provide the learning material through video CDs, a mobile app and the internet, printed SLM is regarded as the best practice.

Role of OERs in bringing down the cost of Education at Uttarakhand Open University

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Introduction

Uttarakhand, the 27th state of India was carved out of Uttar Pradesh on 9 November 2000. The state covers a total area of 53,483 square km. Most of the area of the state is hilly and forested. There are 13 districts in Uttarakhand which are grouped into two divisions — Kumaun and Garhwal. Out of the 13 districts — Pithoragarh, Almora, Nainital, Bageshwar, Champawat, Uttar Kashi, Udham Singh Nagar, Chamoli, Dehradun, PauriGarhwal, TehriGarhwal, Rudraprayag and Haridwar (Urban), three are plain districts and the remaining 10 are hill districts. According to the 2011 Census, Uttarakhand's population was approximately 100.86 lakh with a literacy rate of 78.80 per cent.

The Uttarakhand Open University (UOU) was established by an act of the Uttarakhand Legislative Assembly in 2005 (Act No. 23 of 2005) with the aim of disseminating knowledge and skills through distance learning using flexible and innovative methods of education to ensure 'independent learning.' The university's major objective is catering to the educational needs of target groups to create a skilled and knowledge based human resource for speedy upliftment and development of the state. The university aims to impart quality education by maintaining high academic standards. For this purpose, it has radically reoriented itself in view of the rapid changes in the sphere of professional and technical education and has

developed a number of new and innovative self-employment/ employment-oriented courses of study. The university's vision is providing the most critical components of growth through quality higher education to the people of Uttarakhand. UOU offers its programmes through 125+ study centres established at different locations in the state under eight regional centres at Dehradun, Roorkee, Pauri, Uttarkashi, Dwarahat, Bageshwar, Haldwani and Pithoragarh. Currently approximately 78,477 students are enrolled in various programmes offered through 14 schools.

Context

Computerisation is leading to far reaching developments in the higher education landscape. Every organisation is taking different initiatives for adopting ICT in education in a big way. The innovations of today offer freedom to improve approaches for creating instructive frameworks for both educating and learning. Significant reduction in the cost of ownership of digital gadgets has resulted in the use of laptops, notebooks, smartphones and tablets by students. Educational institutions are taking advantage of the rapid development of these systems to ease education for both students and teachers. For Uttarakhand, with special reference to the geographical sites of the schools in interior rural areas it is imperative to take advantage of IT for providing accessible quality education. Uttarakhand has a decent base of mobile users with 68.4 per cent of the population using mobile phones (Census, 2011). In such a scenario, an ODL system can play a vital role by using digital technologies to reach those who are difficult to reach through various ICT initiatives.

Good practice

As per the ODL regulations, it is mandatory to develop SLM before applying to the UGC for any programme.

Challenges

1. **Cost:** A 3-year UG programme (general) comprises of 96-100 credits. A PG programme (general) and a PG programme (professional) has (64-72) credits and (96-124) credits respectively. In the ODL system, SLM is provided to all the learners. Therefore, the cost of developing and printing SLM is an important consideration in deciding the fee for the programme. If the cost of developing and printing SLM is reduced, it will bring down the programme costs significantly.
2. **Development time:** Development of SLM takes a reasonable amount of time and efforts.
3. **Quality of SLM:** SLM is developed through empanelled experts at the university and often many experts are involved in developing material for a course. Hence, the quality of material is uneven.

Development of SLM using OERs

A pilot project was conducted for developing the course material for the Master of Computer Application, a 3-year professional programme with 136 credits through OERs to study its effect on the cost, development time and quality of SLM. A 4-credit course is divided into 4 Blocks of 4 units each. Therefore, a 4-credit course approximately consists of 16 units. The MCA programme consists of 34 courses with approximately 544 units. The cost of developing a 4-credit course is given in Table 2.

TABLE 2: COST OF DEVELOPING A 4-CREDIT COURSE

Unit Writing (Rs)	*Unit Editing (Rs)*	*Page Setting (Rs)*	*Postage (Rs)*	*Misc. (Paper, printing, etc.)*	*Total (Rs)*
6,000/unit	*3,000/unit*	*20/page*	*1,320/ course*	*300*	-
Total cost involved in developing a 4-credit programme with average 16 units				*96,000+48,000+5,120+1, 320+300=1,50,740*	
Total cost involved in developing 34 4-credit courses with average 16 units per course				*51,25,160*	

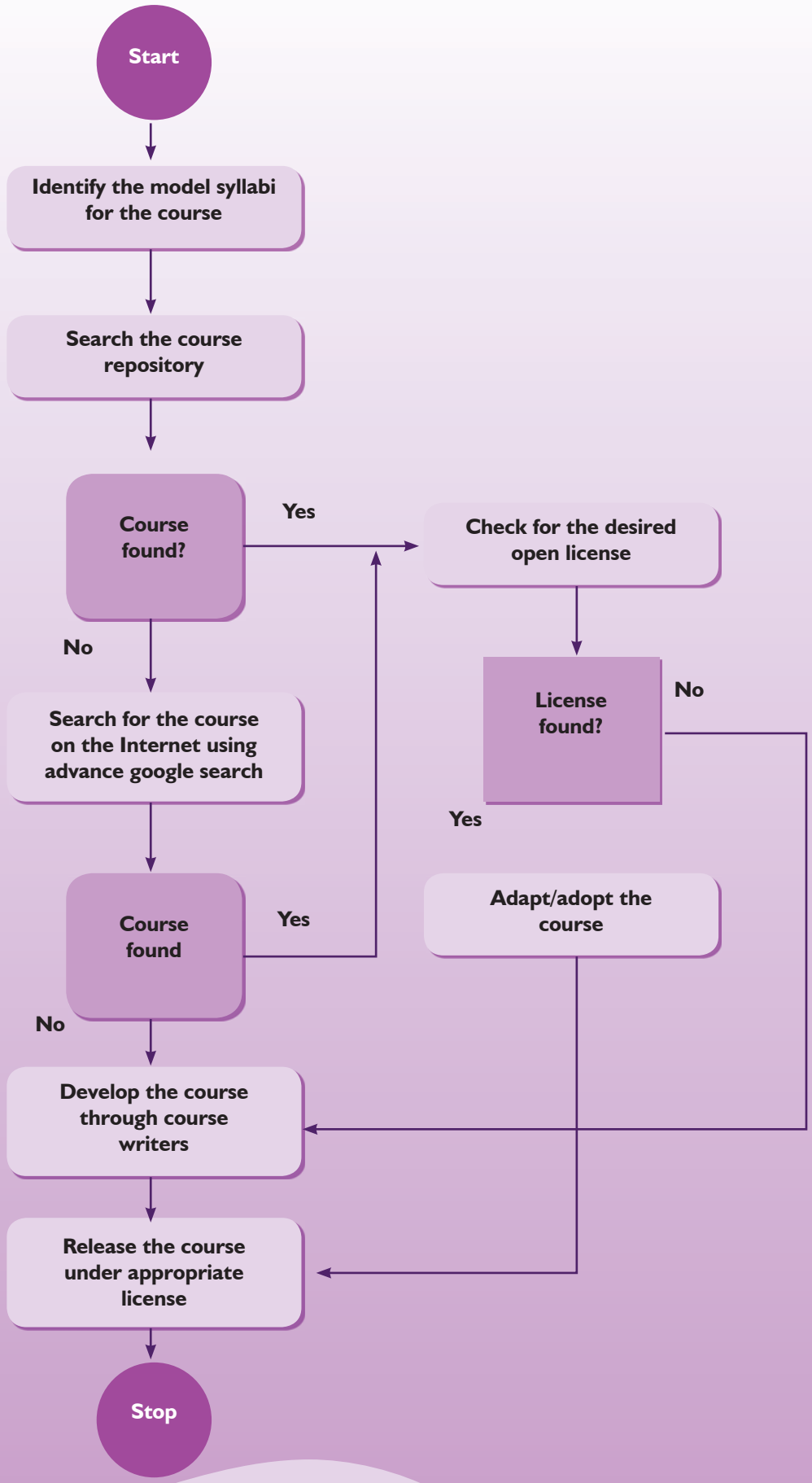
Therefore, the total cost of developing a MCA programme is approximately Rs 51,25,160. Apart from this, there are some other costs like workshop and training programmes for course writers. Table 3 gives the timeline for the development of SLM.

TABLE 3: TIMELINE FOR THE DEVELOPMENT OF SLM

S. No.	Activity	Timeframe (days)
1	*Preparation and approval of concept note*	*10-15 days*
2	*Expert committee meeting for designing the syllabus and the course structure of the programme*	*10-15 days*
3	*Approval of the syllabus and course structure of the programme developed by the expert committee by the board of studies (BOS) of the school*	*05-10 days*
4	*Workshop for identified course writers for developing the course material*	*10-15 days*
5	*Distribution of the units to the course writers with the approval of the authorities*	*10-15 days*
6	*Course writing*	*90 days*
7	*Extension*	*45 days*
8	*Review of the units received from the course writers by the school for quality, plagiarism and other aspects*	*30 days*
9	*Reallocation of the rejected units for course writing*	*90 days*
10	*Extension*	*45 days*
11	*Review of the rewritten units received from the course writers by the school for quality, plagiarism and other aspects*	*30 days*
12	*Dispatch of units to the identified course editors after the approval of the competent authorities*	*15 days*
13	*Course editing*	*90 days*
14	*Extension*	*45 days*
Total		550 days = approx. 18 months

Figure 3 gives the approach followed in developing SLM using OERs

FIGURE 3: STRATEGY FOR DEVELOPING SLM USING OERS



Outcomes and impact

Reduced development costs: Approximately 97.05 per cent of the cost of developing SLM was saved using OERs for course development. Table 4 gives the details of cost saving in developing SLM using OERs.

TABLE 4: COST SAVING IN DEVELOPING SLM USING OERS

S. No.	Head	Cost (Rs)
1	*Proposed development cost for 34 courses*	*51,25,160*
2	*Actual development cost of developing 33 courses*	*Nil*
3	*Cost of developing discreet mathematics course*	*1,50,740*
Total Saving		*49,74,420*

Reduced time: The programme was developed in 70 days, which is significantly less than the 550 days taken for developing SLM following the conventional approach (Table 5).

TABLE 5: DEVELOPMENT TIME OF SLM USING OERS

S. No.	*Activity*	*Timeframe (days)*
1	*Preparation and approval of concept note*	*10-15 days*
2	*Expert committee meeting for designing the syllabus and the course structure of the programme*	*10-15 days*
3	*Approval of the syllabus and course structure of the programme developed by the expert committee by the board of studies(BOS) of the school*	*05-10 days*
4	*Workshop on OER skills for course developers for developing course material using OERs*	*10-15 days*
5	*Identification of open textbooks for MCA courses matching the syllabus of the respective courses*	*10-15 days*
Total		*70 days*

Enhanced quality: All the courses were adopted from sources like NPTEL and SAYLOR ACADEMY which have high quality course material. Moreover, OERs go through the cycle of contribution and quality improvements. This not only results in better-quality material but it also has a chance of improvements through peer reviews.

Conclusion

Using OERs has not only reduced the cost of developing SLM, but it is also helpful in reducing the carbon footprint. A discount of 15 per cent on the course fee is offered to

learners in case they opt only for the e-copy of the study material which is made available through the course repository. Hence, the benefit of reduced costs of developing SLM is passed on to the learners. All the material developed using OERs is hosted on the Moodle based e-learning platform and is released under appropriate open license terms. This not only facilitates the sharing and adoption of the material by other institutions but also makes it possible to integrate existing OERs available in many course repositories like NPTEL and the WIT-Solapur e-learning portal. Nine courses were developed using external funding and the remaining 16 courses were adopted from different sources which are available as OERs. The list increases every month. Therefore, this approach is not only beneficial in terms of cost but it is also sustainable.

Note: This is a pre-print of an article published in the *International Journal of Information Technology*. The final version is available online at: https://doi.org/10.1007/s41870-018-0126-z].

Theme III: Academic Counselling and Learner Support Services

Case Study – 7:
Moving 'e' for better learner support: A case study of the University of Namibia

Case Study – 8:
Learners' Affairs and Support: A Case study of Open University Malaysia

Case Study – 9:
Jnan Taranga, Community Radio for Student Support: A case of Krishna Kanta Handiqui State Open University

Moving 'e' for better Learner Support: A case study of the University of Namibia

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Introduction

The Centre for Open, Distance and e-Learning (CODeL) at the University of Namibia operates as a dual-mode centre with over 6,000 registered distance and online mode students under the direct supervision of the pro-vice chancellor, academic affairs in the University of Namibia. The director of CODeL manages and coordinates all primary functions of the centre, which for the contextual purposes of this report, include facilitating the development and implementation of distance, online as well as blended learning courses and programmes through its three sections, Open and Distance Learning (ODL), e-Learning and Administration in CODeL. The centre promotes the development and implementation of policies, procedures and standards for effective service delivery in ODeL.

The centre is also responsible for identifying, writing and administering collaboration linkages and participates in on-going planning processes, which align with the centre's strategic objectives. One of the crucial linkages that the centre has established is with the Commonwealth of Learning (COL) in implementing its higher education integrated model phases. All activities of the centre contribute to the overall achievement of its mandate and contribute to the university's overall vision and mission.

Strategic pillars

The following strategic pillars set the tone for shaping good practice cases in CODeL:

Professional leadership

Builds on a culture of infusing print-based, distance-mode practices with various technological tools, focusing on their affordability for the benefit of all types of learners, regardless of their mode of study.

Shared vision and goals

The centre has a clear and shared understanding of how e-learning can improve students' learning outcomes, which are reflected in the centre's vision and mission.

Purposeful learning

VLE and Moodle used by the centre is guided by a social constructivist learning philosophy that promotes effective learning practices, engages students and helps contextualise learning to meet the needs of both distance and face to face students.

Stimulating a secure learning environment

E-learning as one of the driving pillars in the centre is used effectively to promote diverse, flexible, interactive, quality learning and teaching within a safe and accessible online environment that supports ODL.

Accountability

Through its innovative practices the centre enhances accountability across the university's community, improving communication between parents/lecturers, students and staff members.

Good practice

One of the focus areas as part of CODeL's mandate is facilitating and driving the implementation of e-learning at the University of Namibia. In its effort to support the university's mission of providing quality higher education through teaching, research, innovation and community services, CODeL has tasked itself to develop and expand the skill set of academic staff as well as students, to adopt e-learning for blended and/or online learning implementation. Lecturers at higher education institutions need digital competencies to enable them to 'deliver what students need, both equipping them with the right skills for Industry 4.0 and future proofing [them in] the workforce' (Paul Feldman, Chief Executive at Jisc, 2018).

Having adopted the blended learning approach for its e-learning implementation, CODeL believes that it is imperative for lecturers, including part-time tutors, to be knowledgeable and skilled in the use of various e-learning systems/tools made available by the centre. This is to ensure that lecturers are able to take full advantage of available technologies in their efforts to enhance teaching with modern instructional approaches and improving student learning, while strengthening their scholarship of teaching and learning (SoTL) research activities. These are all in line with teaching and learning principles outlined in the UNAM Teaching and Learning Policy's sections 5.4 and 5.16 (p. 5) as well as the innovative teaching approach 6.1.8 (p.6).

This practice of moving 'e' was cemented in the following way in CODeL:

E-learning training

The university has an online and blended learning strategy through CODeL, whereby courses with the largest number of students are expected to make advanced uses of e-learning to improve the quality of students' learning, while reducing the pressure on the university's physical infrastructure.

Outcomes and impact

The e-learning training, now specifically targeted at faculties, develops lecturers' capacity to use

the Moodle VLE and how they can apply the various e-learning tools in content development, assessment and facilitation of online learning. Each training session starts with an introduction to the concept of blended learning, identifying the specific needs of lecturers to help suggest instructional design models suitable for their needs and goals.

The following depicts the types of e-learning technologies/tools and services used by CODeL staff members during training sessions, illustrating their key affordances for teaching, learning and assessment.

Ticketing system – OSTicket

The centre implemented an online ticketing system following a two-pronged approach, to provide better support to ODL and online students, as well as lecturers wishing to use CODeL services. To orient users on how to use the online ticketing system, a user guide was created for CODeL staff members and students which shows how to respond to tickets created by a student or lecturer and assigned to a CODeL staff member.

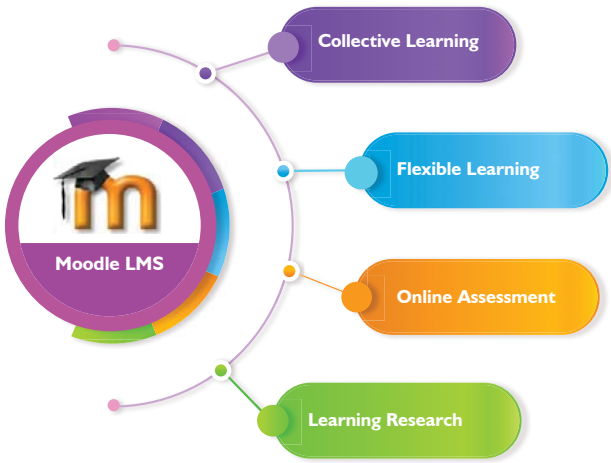
A separate user guide is available for the front-end use of the ticketing system, where someone can request a service or report an issue by creating a ticket. The system is configured in such a way that tickets are automatically assigned to the relevant person and an email notification is sent.

- Request a service or report an issue by creating a ticket
- Tickets are automatically assigned to the relevant person and an automatic email notification is sent

A virtual learning environment (learning management system) -Moodle

The centre adopted Moodle as its learning management system as the main system for e-learning services at the University of Namibia. Various software servers were installed for different functions. Each software server depends on other servers' software to serve more than one main software system.

- Meeting teaching, tutoring, supervisory, assessment and research needs
- Enhancing lecturer-student and student-student interaction
- Fostering flexible, mobile learning

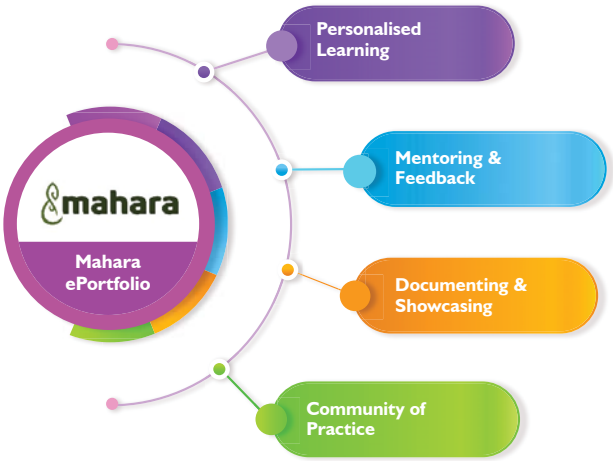


ePortfolio -Mahara

ePortfolio in education is a pedagogical approach that promotes reflective and meaningful learning. It requires students to reflect on their learning and promotes meaning making. Mahara is an open-source software that CODeL has integrated with Moodle to foster both reflective and collaborative learning. With plans to implement competence frameworks in Moodle, Mahara will later serve as a tool for students to develop a wealth of evidence of their learning

over their entire study period.

- Facilitating community of practice building efforts
- Creating e Portfolios
- Assures reflective learning practices
- Mentoring and collaborating



Online support and common spaces

CODeL customised and integrated an online support (ticketing system) to help students report issues, request services and browse through Frequently Asked Questions (FAQs). The online support system is accessible from different locations served by the internet.

In addition, common spaces are created to place information relevant to all students studying in distance and online modes. Common spaces can be accessed on Moodle where all ODL and online students are enrolled, from within all individual courses for ease of use. CODeL's annual information letter is one such example that is loaded in the common space for easy reading by all ODL and online students. CODeL can also monitor the number of students who accessed and read this information letter for better planning purposes.

Online interactions

Online interactions between students and lecturers are promoted through the use of Moodle. Students are able to use online communication tools such as forum discussions and chatrooms to create virtual learning groups as well as for interacting with their lecturers. Video conferencing tools are also integrated in the Moodle

LMS to enable lecturers and students, especially working students to interact at any time of their convenience. Important course announcements can be made on Moodle within every course space or general announcements for all ODL and online students.

FIGURE 4: TYPICAL LANDING PAGE OF AN ODL COMMON SPACE ON MOODLE

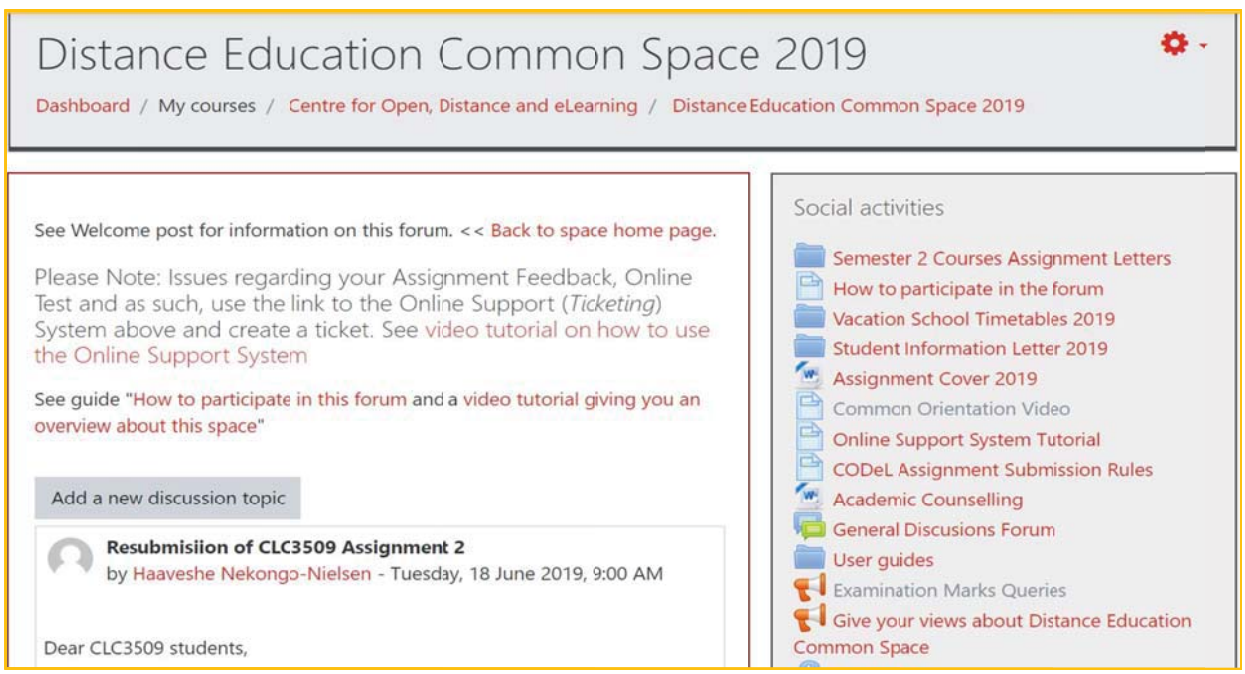
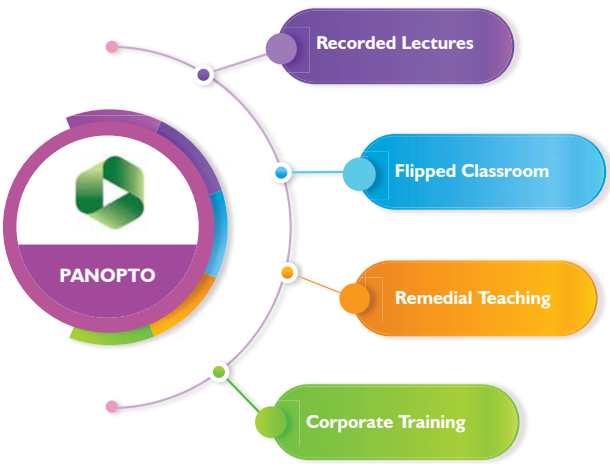


FIGURE 5: COMMUNICATION TOOLS FOR EVERY COURSE MOODLE

Video capturing- panopto

Video capturing of lessons both the combined way and through using panopto has enabled the introduction of innovative blended learning pedagogies such as the flipped classrooms. The centre supports lecturers to record their lessons and make them available on demand to students, thereby making face-to-face sessions more interactive and focussed on deeper learning. The flipped classroom concept also fosters meaningful interactions between students and lecturers based on the content that students can access beyond class time.

- Recording lectures
- Sharing tutorials and feedback
- Supporting staff training and corporate communication

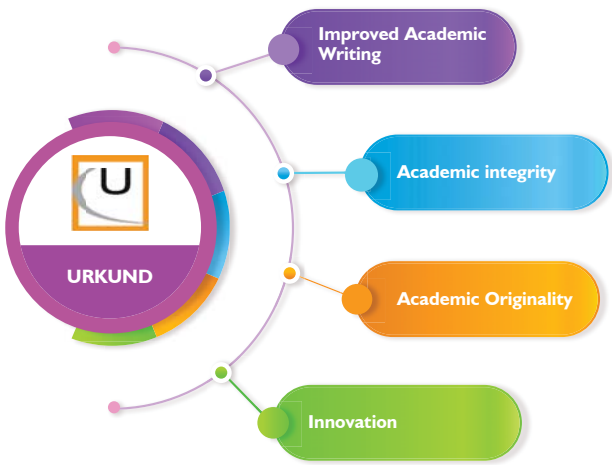


Both ICT solutions, Moodle learning management and the video capturing software panopto produce a lot of analytic data that can be used to inform research and policy and help take decisions to improve practices in CODeL.

Plagiarism detection and academic writing support - URKUND

URKUND is a text-matching software that helps with the detection of plagiarism. One of the challenges that tutors at CODeL experienced and complained about is that ODL students tended to copy and paste information from the web without acknowledging the source. With the use of URKUND, tutors no longer rely on hunches when they suspect plagiarism, but have a tool to identify plagiarism. URKUND also benefits students as its 'presence of within the teaching environment makes the vast majority of students, who would never deliberately take any prohibited shortcut, more carefully, check their references and cite and paraphrase correctly' (URKUND, 2019).

- *Recording lectures*
- Sharing tutorials and feedback
- Supporting staff training and corporate communication

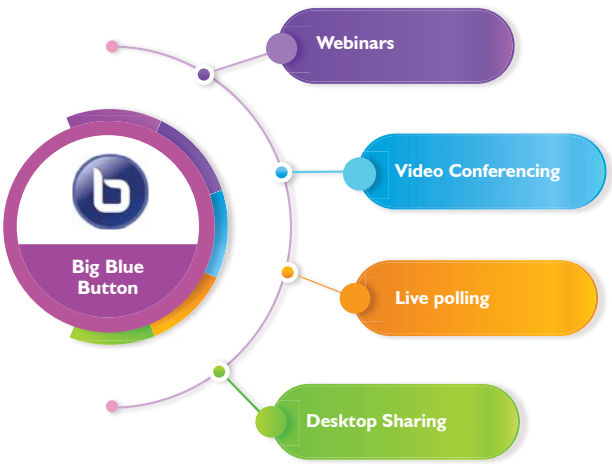


Video conferencing (big-blue-button)

CODeL supports staff in the delivery, development and administration of quality video conferencing desktop solutions and these are provided to lecturers to use Zoom or big-blue-button from CODeL's video conferencing venues or from the comfort of their own offices or homes to optimise communication from the comfort of their own space as long as they are connected to the internet.

State-of-the-art video conferencing software has been installed at all UNAM campuses and selected distance regional centres for facilitating interaction between lecturers and students. This has enabled the offering of various post-graduate programmes to students in the regions who would otherwise have not been able to access such programmes. One such programme is being provided by the Faculty of Education and another by the Faculty of Economic and Management Sciences.

- Real-time sharing of audio, video, slides, chat and screen
- Live online classroom with option for record and playback
- Live meetings and classes in low-bandwidth environments



Conclusion

This moving 'e' good practice ensures that the University of Namibia reaches scale in terms of the number of lecturers trained and capacitated in the use of various e-learning tools and technologies across all the modes of study and readiness for the 4IR through CODeL.

Though training times clash with other academic activities and can be very challenging, continuous and flexible training calendars help in overcoming and achieving this. More and more academics are now reporting that they have finally experienced the value of e-learning.

Related resources

Big Blue Button (2019). *Big Blue Button*. Available at: https://bigbluebutton.org/

Jisc (2018). *Digital skills crucial to the success of fourth industrial revolution*. Available at: https://www.jisc.ac.uk/news/digital-skills-crucial-to-the-success-of-fourth- industrial-revolution-28-jun-2018

Mahara (2019). *About Mahara*. Available at: https://mahara.org/view/view.php?id=2

UNAM (2013). *Teaching and Learning Policy*. Windhoek: University of Namibia.

URKUND (2019). *Plagiarism control for universities and higher education institutions*. Available at: https://www.urkund.com/services/higher-education/

Learner Affairs and Support: A Case study of Open University Malaysia

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Introduction

Open University Malaysia (OUM) was established on 10 August 2000 as a private university but owned by a consortium of 11 public universities in Malaysia. Flexibility in terms of admissions, programme delivery and learning approaches are the cornerstone of the university's success. The university has registered a cumulative learner enrolment of over 180,000 and produced 85,000 graduates since opening its doors in 2001.

Context

A major challenge for the university is relatively high learner attrition during the first and second semesters. To address this, OUM has embarked on improving learner retention through enhanced support services. Research by the university revealed that learners' main challenges stemmed from the learners themselves. An initiative was introduced to provide interventions and support to help learners overcome their challenges.

Good practice

By adopting a learner focused approach, the university helps enhance learners' experience, which is in line with its 2020 strategic planning. The Centre of Learner Affairs, which drives the initiative, focuses on four areas to boost learners' experience and reduce attrition. Among its activities are:

Learner engagement

Proactive interventions are made to ensure that learners are given the necessary support starting from registration till the completion of the course. The centre focuses more on the first and second semester learners because these students have the highest attrition rate. The following programmes are conducted for specific target groups:

a. Overcoming loneliness and isolation through meet up sessions, workshops and meetings

Learners in ODL, especially those who are new to the system often feel isolated. To address this issue, learners are encouraged to attend study skill workshops and academic revision sessions conducted regularly by 33 learning centres nationwide.

- Study skills workshops provide initial orientation on the essential procedures and services available to new learners. They also provide extensive exposure to the ODL method, various learning skills and motivational tips.
- Academic revision sessions are conducted for subjects with the highest failure rate.

In 2018, a one-stop centre was created on the student portal for new learners to get all the information they needed to succeed in OUM. In 2019, the OUM engage system was introduced which acted as an automatic trigger to remind learners of important activities such as assignments/tasks' due dates and examination dates.

b. Caring environment through counselling and guidance

Learners can contact the university's counsellors to discuss issues regarding their studies and personal matters either in person, via the phone, email or the e-Customer Relationship Management (e-CRM) service. For special cases, the centre calls learners to offer assistance when necessary. Learners with CGPA below 2.00 (undergraduate) and 3.00 (postgraduate) also receive reminders to contact the counsellor for guidance for improving their results.

Learner development

Engaging learners with various development programmes may promote a sense of belongingness towards the university. The centre coordinates overall learners' development activities including areas such as community outreach events, intellectual discourses and sports.

e-CRM for learner support services

With advances in technology, learners can contact the Learner Service Unit to make enquiries, provide feedback and suggestions or lodge complaints via e-CRM. Interaction between learners and the university via e-CRM has two advantages – it reduces processing time for complaints, issues or enquiries and the data captured is based on real time which is used for monitoring and improvement purposes. To encourage learners to use the platform, it has to be reliable, user-friendly and mobile-friendly. In 2018, e-CRM registered an average of 2,141 tickets monthly, comprising complaints and requests on areas ranging from examinations to convocations. The highest number of tickets, 36 per cent were examination related while the lowest 1 per cent were related to APEL.

Monitoring and research

The centre conducts tracer studies in collaboration with the Ministry of Higher Education. These studies help gauge the employability and marketability of OUM graduates.

Outcomes and impact

By implementing these good practices, the attrition rate was reduced from 8 per cent in 2017 to 7.5 per cent in 2018. A satisfaction survey found that 80.2 per cent of the learners were satisfied with the quality of online learning, and 84.3 per cent with the quality of services offered by the learning centres. There are two notable findings from the tracer studies – more than 95 per cent graduates believed that their qualifications were a good return to investment and were willing to recommend OUM to their families and friends.

Conclusion

The data from e-CRM and tracer studies is crucial in monitoring learners' service levels. By adopting these best practices OUM has been able to create a learner-centred environment to enrich learners' experience and knowledge that leads to high academic achievements and a better retention rate. OUM is currently doubling its efforts to narrow the gap between learner expectations and institutional delivery.

Jnan Taranga, Community Radio for Student Support: A case of the Krishna Kanta Handiqui State Open University

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Introduction

The Krishna Kanta Handiqui State Open University (KKHSOU) was established under the Krishna Kanta Handiqui State Open University Act, passed by the Assam State Legislature in 2005. It is the first state open university in the North-East region of India. The university was established with the objective of providing 'Education Beyond Barriers.' Specifically, the university designed its academic programmes to meet the needs of particular groups of learners in remote and rural areas, working people and housewives who wanted to pursue the goal of attaining higher education irrespective of age, gender, time, caste and creed. At present the university is offering a number of academic programmes at the undergraduate, post graduate, diploma and certificate levels besides PhD and MPhil programmes in different disciplines.

Context

In its endeavour to reach the unreached, KKHSOU directs its efforts towards the local community. Accepting its responsibility towards society and to the local community in particular, the university visualised setting up a community radio station. In 2008, the concept of a community radio was new to the university and to the North-East region. A community radio is seen as a mirror of the community and a platform for community engagement. With

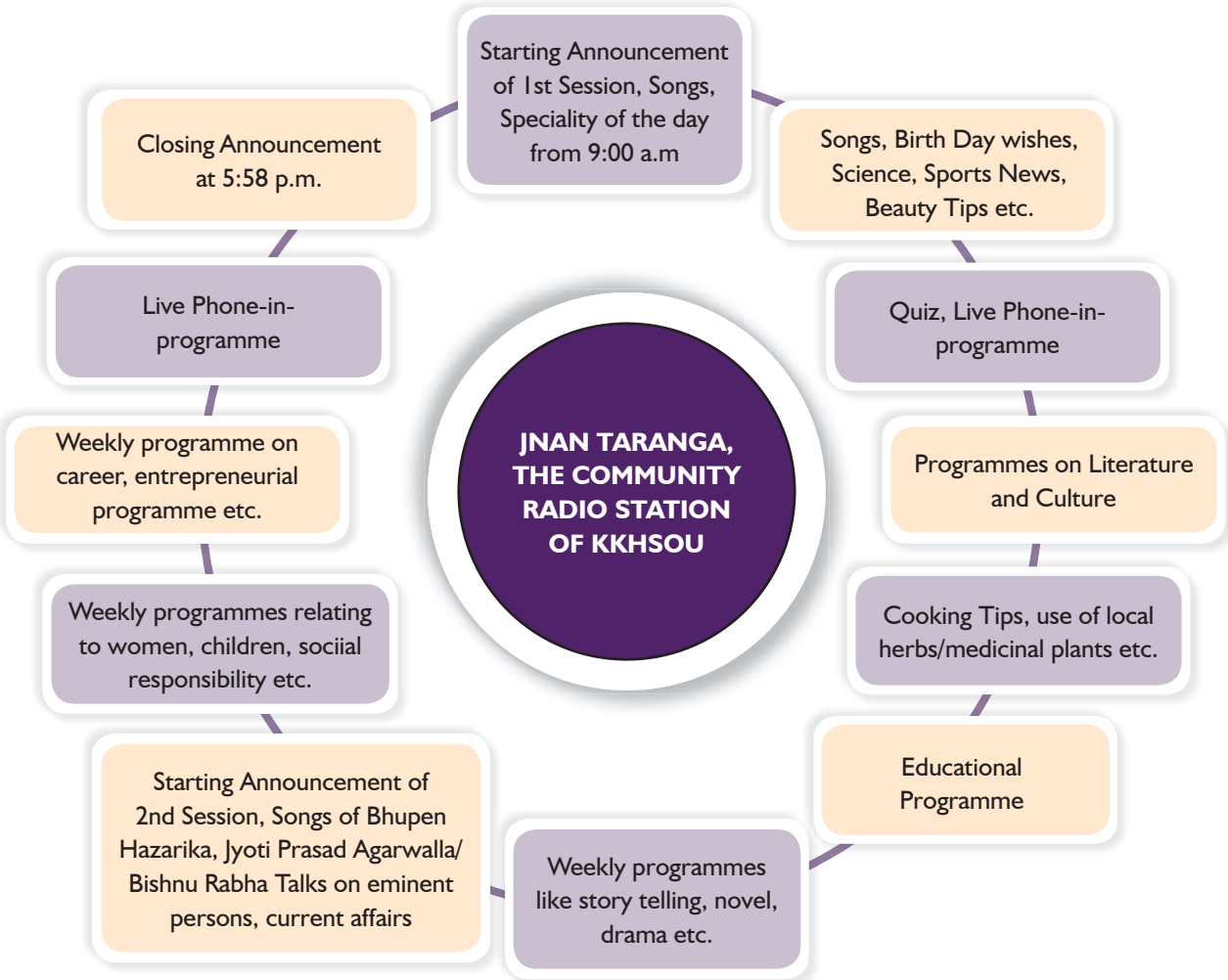
the aim of serving the local community, the university moved forward with the concept of a community radio.

Good practice

The dream of reaching the local community through the community radio became real with the launching of community radio Jnan Taranga, the first community radio in the North East. The experimental broadcasting of Jnan Taranga was on 28 January 2009 at 90.4 MHz and regular broadcasting started from 20 November 2010. It needs to be mentioned here that the university received invaluable support from the Ministry of Information and Broadcasting, Government of India and the Commonwealth Educational Media Centre for Asia (CEMCA), New Delhi. Since then, 20th November is celebrated annually in the university as the foundation day of Jnan Taranga.

In due course, Jnan Taranga expanded its portfolio of programmes to reach the local community to encourage the community members' active participation via the radio frequency. The evidence to this is the broadcasted programmes of Jnan Taranga over a long period of time. As a community radio, the reach of Jnan Taranga was limited to a 10 km radius from the location of the university. At present the city office of the university is at Housefed Complex, Dispur, Guwahati, Assam and Jnan Taranga is functioning from this location. It is a matter of pride that listeners from all over the world can tune to Jnan Taranga as it is now available on the internet (http://jnantaranga.kkhsou.in/iradio/).The strength of Jnan Taranga lies in its identifying the needs of

FIGURE 6. ACTIVITIES UNDER JNAN TARANGA COMMUNITY RADIO



the community and meeting such needs through radio programmes. A glimpse of the radio programmes catering to different sections of the community through CODeL, is given in Figure 6.

Outcomes and impact

The impact of KKHSOU's community radio can be judged from the active participation of members of the community and Jnan Taranga's continuous efforts to empower members of the community. In one case, a chance listener of Jnan Taranga became an active listener and then became an anchor of Jnan Taranga. In another case, a child became an anchor for children's programmes on environment, science, recitation and general knowledge.

Conclusion

Educational institutions are centres of learning. A developing society in particular has many expectations from these institutions and looks at them for fulfilling the dreams of future generations, which are connected with educational needs, career development, social upliftment, community participation, community empowerment and women's empowerment. Therefore, educational institutions need to engage continuously with the community. In the case of KKHSOU, one of the practices adopted for such engagement is a community radio. For effective engagement, KKHSOU's efforts are directed towards knowledge dissemination and community engagement through Jnan Taranga. In the days to come, KKHSOU will play a bigger role through Jnan Taranga in community development.

Theme IV: Application and Integration of Information and Communication Technology

Case Study – 10:
Application of ICT in the National Open University of Nigeria: A case study

Case Study – 11:
Enhancing distance learning practices through the use of ICT: A case study of University of Namibia

Case Study – 12:
Innovation in ICT for E-learning and Digital Initiatives for the Betterment of Students: A case of Dr Babasaheb Ambedkar Open University

Case Study – 13:
ICT Integrated Pedagogy: A case study of the Netaji Subhas Open University

Case Study – 14:
Application of ICT in Open and Distance Learning: A case of the Krishna Kanta Handiqui State Open University

Application of ICT in the National Open University of Nigeria: A case study

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Introduction

The National Open University of Nigeria's goals and objectives emanate from and are consistent with the philosophy, mission and objectives of higher education in Nigeria. Its objectives are ensuring equity and equality of opportunities in education generally but specifically in university education; providing wider access to education in Nigeria; enhancing opportunities that support Education for All and life-long learning; equipping and placing Nigerians in the contemporary global culture of technological literacy; providing educational resources through an intensive use of information and communication technology; providing flexible but quality education; and reducing costs and remove inefficiencies and hassles in education delivery.

Context

The university adopted the following strategies to fulfil its objectives:

a. Establishing study centres all over the country as deemed necessary or desirable.

b. Instituting professorships, readerships, lectureship and other posts and offices and provide opportunities to them.

c. Instituting and awarding fellowships, exhibitions, bursaries, medals, prizes and

other titles, distinctions, awards and forms of assistance.

d. Providing for discipline and welfare of the university's members.

e. Holding examinations and granting degrees, diplomas, certificates and other distinctions to persons who have pursued a course of study approved by the university and have satisfied requirements laid down by the university.

f. Granting honorary degrees, fellowships or academic titles to deserving person(s) and organisation(s).

g. Demanding and receiving from any student or any other person attending the university for the purpose of studying, charges such as fees, as the university may determine from time to time.

h. Acquiring and holding grants and charges or otherwise dealing with or disposing moveable and immovable property wherever situated.

i. Accepting gifts, legacies and donations, but without an obligation to accept the same for a particular purpose unless it approves the terms and conditions attached thereto.

j. Entering into contracts, establishing trust, acting as trustees solely or jointly with any other persons and employing and acting through agents.

k. Constructing, equipping and maintaining libraries, lecture halls, laboratories and other buildings (whether in Nigeria or elsewhere necessary or suitable or convenient for any of the objectives of the university).

l. Holding public lectures and understanding publishing and book selling.

m. Subject to any limitation or conditions imposed by statute, investing money pertaining to the university by way of endowment, whether for general purposes and such other monies that may not be immediately required for current expenditure in any investments or securities or in the purchase or improvement of land, with power from time to time to vary any such investments and to deposit any money for the time being (uninvited) with any bank on deposit or in current accounts.

n. Borrowing, whether with interest or not if need be for the security of any or all of the moveable or immovable property of the university, such as the council may from time to time in its discretion find necessary or expedient to borrow.

o. Giving gifts for any charitable purposes.

p. Performing any task authorised or required by statute of the university.

q. Doing acts or things, whether or not incidental to the foregoing powers as may advance the objectives of the university.

Good practice

The seven points contained in the National Policy on Education (2004) can be summarised as three roles expected from the university system — teaching (facilitation), research and community service. In this regard, NOUN with its accessibility, is well positioned to discharge these functions.

Facilitation of learners in all its courses and programmes is carried out to produce manpower for development and for educating future leaders. The university's curricula is customised as per societal needs. With its experienced academics the university is engaged in research that is relevant to the needs of the nation. The expected outcomes of the research are expanding the frontiers of human knowledge, thus giving us a better understanding of the world around us, of ourselves and of our culture. Literacy as a primary tool for social change and sustainable community development has been given an impetus by the accelerated education being provided by NOUN.

The university as a provider of education for all through its unique approach of flexibility, will continue to be relevant to national development in its programmes and in the production of manpower for global services.

Some of the expected outcomes of NOUN's education services are:

a. Raising literacy levels in Nigeria.

b. Increasing access to quality university education.

c. Widening the number of beneficiaries of university education thus reaching out to the hitherto hard-to-reach students and ensuring that nobody interested in, and capable of having a university education, is left out.

d. Assisting Nigerians to be on the right side of the digital divide.

e. Enhancing and facilitating workplace training and professional development.

f. Meeting the yearnings of Nigerians for university education.

g. Reducing the pressure on university placements in conventional universities.

To achieve this, the university has countywide study centres as the backbone of its distance learning methodology.

Application of ICT is a best practices in NOUN

The power of emerging information and communication technology lends a new dimension to the concept to ODL delivery as it creates the communication channels required for effective teaching and learning processes. Face-to-face interaction (even though limited in distance learning) is superior than all other forms of interactions. This will have to be overcome by the progressive deployment and use of ICT in instructional methods and their delivery as well as the method of providing support to distance learners.

ICT

One of the impetuses for the global adoption of ODL is the great improvement and availability of new emerging ICTs which can be deployed for the purpose of teaching and learning. It is thus imperative that the application of ICT form a major thrust in the operational activities of the National Open University of Nigeria. For this, a directorate has been established in the university.

The Information and Communications Technology Directorate has the responsibility of providing an enabling environment for NOUN to drive its ODL programmes in Nigeria. The directorate engages experts in Information Technology, Engineering and Knowledge Management to support an electronic and computer-mediated learning environment at the university. It is also responsible for all computing, multimedia learning material development, website development and management, database administration, system development and networking and programming activities to help open and distance learning, teaching and research,

The directorate's strategic goals are:

a) Building a robust and scalable wide area network (WAN) connecting all study centres and corporate headquarters.

b) Deploying integrated Enterprise Information Systems (HIS) to enhance information flows and organisational activities.

c) Developing an information security management system and data recovery plan to consolidate the deployment of a virtual learning environment to enhance learning, evaluation and facilitation.

d) Reviewing and implementing effective lCT policy guidelines.

e) Leveraging transformational technologies for improving the effectiveness of

delivering distance learning content.

f) Promoting adequate manpower development and ICT skills acquisition.

ICT's structure in NOUN

Local area network

The directorate of is responsible for connecting and managing local area networks (LANs). The LANs system groups provide Windows server infrastructure for the NOUN domain. Services offered within the NOUN domain include file and print, web, calendar and computing infrastructure. The LANs are connected through the Wide Area Network and allow the following activities:

- Training and learning
- Assessment and testing
- Interactive sessions
- Communication such as email, chat forums, instant messaging and file transfers
- Access to a national virtual library
- Other computer applications such as word processing, spread sheets and databases

Network engineering

Network engineering is a group of system, network and operations professionals responsible for signing, securing and overseeing the NOUN data network. Its mission is designing, maintaining, securing and operating a state-of-the-art, university-wide data network to serve academic applications, research requirements and support needs of NOUN. This includes internal connectivity as well as external access to the commodity internet and connectivity with all the study centres. The network infrastructure at NOUN consists of high-speed Ethernet backbones. The physical infrastructure is comprised of twisted-pair copper and fibre optic cabling interconnected by a variety of routers and switches. Network engineering is also responsible for the operations of a distributed, highly redundant DNS. DHCP, wireless and NTP architecture.

Telecom operations

Telecom operations provide cabling and wiring infrastructure services that form the foundation for NOUN's computer and telephone networks.

Email services

ICT offers reliable email services for all schools, directorates, units, staff and students of NOUN. The core of the system is based on Google Educational Apps. Technical support for admissions and registrations for courses are also administered online via email.

Student management system

Admissions and registrations for students are done online from the NOUN portal; this facility makes it possible for students and applicants to interact with the university online and in real time. The university upgraded the student management portal to www.noun.edu.ng which allows prospective and registered students to pay directly to the university's account and also do the following:

- **Application:** This allows prospective students to apply for admissions online.
- **Admission:** Minimum entry requirements for all programmes offered by the university have already been inputted into the e-admission portal which allows, for instant admission when qualified or suggests a programme of study for the applicant commensurate with his/her qualifications and experience. The detail procedure for online applications can be obtained on the student management portal on www.noun.edu.ng.
- **Registration:** Admitted students can register for courses and exams on the e-registration module of the management portal.

- **Assessment:** Registered students can attempt their tutor-marked assignments (TMAs) using the e-assessment module of the student management portal. On completion of TMAs students see their grades as well as correct answers to assignment questions on their respective portals.
- **Technical support:** This platform helps monitor student activities and provides necessary support that they might need.
- **Student's ID cards:** This platform enables individual students to be able to print their ID cards.
- **E-examination platform:** For achieving a high level of integrity, holding regular examinations as well as timely release of results, the university has adopted the computer-based examination or e-examination for 100 and 200 level students as well us certificate programmes and general studies' courses. The university has upgraded its examination platform to Exam Pro+ which has enhanced capabilities for administering and managing the examination process.

The university website

The university website will be designed by the Directorate of Information and Communication Technology through the World Wide Web (www). The university website will be available at **www.nou.edu.ng** and **www.noun.edu.ng**. The university website internet access will be a major means of communication and information exchange among the university's community, general public and students.

Network layout and infrastructure

Requirements for LANs

A key technology requirement is the use of open standards and standardisation of the internet platform (IP) for video, data and voice services. This ICT schedule will be required to provide the hardware and software to set up LANs for the functions and services including:

a) Acquisition and installation of servers, computers, storage systems, printers, scanners and other peripheral equipment.

b) Site preparation including provision of an appropriate working environment to include flooring, cooling power supply and protection (UPS, line conditioners, surge protectors).

c) Establishing a structured cabling\system within the study centre, complete with hubs, switches, modems, boosters and patch-panels.

d) Acquisition and implementation of software tools and applications.

e) Computerisation of study centres' activities.

Requirements for a virtual library and classroom

Each study centre will be equipped with devices for live viewing, presentation systems to create virtual classrooms, rich and compelling multimedia presentations and memorable learning experiences. These will be installed in a large auditorium capable of seating up to 300 students and other adjoining rooms used for smaller classes and tutorials. The equipment will also be interfaced with LAN and WAN.

ICT will provide the hardware and software to implement the following:

a) Acquisition and installation of multi-system video cassette recorders.

b) Acquisition and installation of multimedia projectors and other multimedia presentation facilities including pointers, projector screens, remote control, cables and mountings.

c) Acquisition and installation of wired and wireless public address (PA) systems complete with recording and audio-conferencing talk back systems.

Requirements for a wide campus area network (WCAN)

A WCAN using VSAT solutions for the delivery of distance learning will be deployed with the central HUB/gateway infrastructure in Lagos and two-way VSAT equipment in all the study centres. The network will be a high speed and scalable IP network for supporting distance learning content based on data, video and voice communication delivery. The solution must support unicast, multicast or broadcast transmissions as well as fully interactive services based on the DVB standard for digital satellite transmission. The critical factors include:

- **Reliability:** Guaranteed end-to-end uptime on the communication link
- **Availability:** Guaranteed 95 per cent uptime
- **Quality:** Guaranteed response times and BER performance
- **Throughput:** Guaranteed bandwidth to be available constantly
- **Security**: Ability to support required encryption schemes
- **Flexibility:** Adjustments in speed and support for multiple applications

In addition, the network will support internet access, web browsing, emails, file transfers and toll quality Voice over IP (VoIP) services. The architecture must be open and flexible to allow for a dynamic ramp up and quick deployment of new locations and new applications/functionality without having to worry about technological constraints.

The ICT Directorate will ensure the provision of hardware and software to implement these objectives which will include:

a) Provision, installation and implementation of the VSAT hub infrastructure and associated equipment and software. This includes a dish antenna. RF equipment, DVB modem, servers, encapsulates, video/audio encoders, routers and other outdoor and indoor equipment.

b) Provision, installation and implantation of two-way VSAT equipment in each of the study centres. This includes a dish antenna, RF equipment, DVB modem, router and other outdoor and indoor equipment.

c) Provision of details on the space segment channel rental including a two-way satellite link, details for both the inbound and return speeds and relevant technical support services.

d) Content distribution network solution for catching WAN content locally.

e) Firewall services.

f) VOIP solution and IP/TV system.

Policy guidelines for use of ICT

As part of the institutional infrastructure, NOUN has acquired, developed and is maintaining computers, computer systems and networks. These computing resources are intended for university-related purposes including direct and indirect support for the university's instructions, research, and service missions; the university's administrative functions; student activities; and free exchange of ideas among members of the university's community and between the university's community and the wider local, national and world communities.

The use of university computing resources, like the use of any other university-provided resource and university-related activities, is subject to the normal requirements of legal and ethical behaviour in the university community. Thus, permitted use of a computer, computer system or network does extend only to whatever is technically possible. Users are expected to abide by all applicable restrictions, whether or not such restrictions can be circumvented by technical means.

Policy on the use of university computing resources

a) Users must comply with all federal, state and other applicable laws as well as all generally applicable university rules and policies. Examples of such potentially applicable laws, rules and policies include the laws of libel, privacy, copyright, trademark, obscenity and child pornography, the Electronic Communications Privacy Act and the Computer Fraud and Abuse Act which prohibit hacking, cracking and similar activities, the university's code of student conduct, the university's Business Conduct Policy and the university's sexual harassment policy. Users who engage in electronic communication with persons in other states or countries or on other systems or networks should be aware that they may also be subject to the laws of those other states and countries and the rules and policies of those other systems and networks. Users must be sure that the use of any downloaded material (including print, audio and video) stored on university or personal computers is not in violation of copyright laws.

b) Users are responsible for complying with the rules for the software files and other data they install on university or personal systems. Proof of legal licensing should be available on request.

c) Users may use only those computing resources that they are authorised to use and use them only in the manner and to the extent authorised. Ability to access computing resources does not, by itself, imply authorisation to do so. Users are responsible for ascertaining what authorisations are necessary and for obtaining them before proceeding. Accounts and passwords may not under any circumstances be shared with, or used by persons other than those to whom they have been assigned by the university, not even with family members or partners.

d) Users must respect the privacy of other users and their accounts, regardless of whether those accounts are securely protected. Again, ability to access other persons' accounts does not, by itself, imply authorisation to do so.

e) Users must respect the finite capacity of these resources and limit use so as not to consume an unreasonable amount of the resources or to interfere unreasonably with the activities of other users. Although there is no set bandwidth, disk space, CPU time or other limit applicable to all users of the university's computing resources, the university may require users of these resources to limit or refrain from specific use in accordance with this principle. The reasonableness of any particular use will be judged in the context of all the relevant circumstances.

f) NOUN computing and network resources and services may be used only by authorised persons for university-related purposes. Users are expected to respect the priority of university business and keep personal use to a minimum. Mass emailing or spamming of sub-populations in the NOUN community are not allowed, except as authorised by appropriate administrators. The use of automated scripting programmes for generating address lists for mass mailing is not allowed, except for staff and schools who secure permission for the mailing from human resources.

g) Individuals may not state or imply that they speak on behalf of the university and may not use university trademarks and logos without authorisation to do so.

h) Affiliation with the university does not, by itself, imply authorisation to speak on behalf of the university. Authorisation to use university trademarks and logos on

the university's computing resources must be obtained prior to their use. The use of appropriate disclaimers is encouraged, for example, 'the thoughts expressed here are my personal opinion and do not represent the position of NOUN in any way.'

Learner support services

Learner support focuses on meeting the needs of all learners. Meeting such needs is central to high quality learning and the effective provision of ODL. It serves as an intermediary between the student (the learner) and the university.

The Directorate of Learner Support Services operates through a network of study centres located in each of the state capitals and some communities.

The study centres are the first point of call for students' learning activities. The centres screen newly admitted students, register students, keep student records, serve as multimedia delivery routes, provide regular guidance and counselling and develop and manage essential feedback mechanisms.

The essential staff at the study centres are: directors, student counsellors, facilitators, administrative officers and the accountants. Student counsellors in particular are in constant touch with learners to provide early warning signals regarding difficulties with studies and offer prompt remedial action. The Instructional and Tutorial Facilitators conduct regular tutorial meetings and facilitate instruction at the centres. They are responsible for tutor-marked assignments and assist in conducting examinations. The study centres' directors are in charge of the day-to-day administration of the centre and regularly liaise with the headquarters. Except in special circumstances, an academic staff occupies the office of a study centre director.

Enhancement of distance learning practices through the use of ICT: A case study of the University of Namibia

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Introduction

CODeL at the University of Namibia operates as a dual-mode centre with over 6,000 registered distance and online mode students under the direct supervision of the pro-vice chancellor, academic affairs in the University of Namibia. The director of CODeL manages and coordinates all primary functions of the centre, which includes, for the contextual purposes of this report, facilitating the development and implementation of distance, online as well as blended learning courses and programmes through its respective sections — Open and Distance Learning (ODL), e-Learning and Administration in CODeL. The centre promotes the development and implementation of policies, procedures and standards for effective service delivery in ODeL.

The centre is also responsible for identifying, writing and administering collaboration linkages and participates in on-going planning processes, which align with the centre's strategic objectives. To this effect, one of the crucial linkages that the centre has established is with the Commonwealth of Learning (COL) in implementing its higher education integrated model phases. All activities of the centre contribute to the overall achievement of its mandate and this also contributes to the university's overall vision and mission.

Strategic pillars

The following strategic pillars set the tone for shaping good practice cases in CODeL:

Professional leadership

This builds on a culture of infusing print-based, distance-mode practices with various technological tools focusing on its affordability for the benefit of all types of learners, regardless of their mode of study.

Shared vision and goals

The centre has a clear and shared understanding of how e-learning can improve student learning outcomes, which are reflected in its vision and mission.

Purposeful learning

The VLE, Moodle used by the centre is guided by a social constructivist learning philosophy that promotes effective learning practices, engages students and helps contextualise learning to meet the needs of both distance and face-to-face students.

Stimulating a secure learning environment

E-learning as one of the driving pillars in the centre is used effectively for promoting diverse, flexible, interactive and quality learning and teaching within a safe and accessible online environment that supports ODL.

Accountability

Through its innovative practices, the centre enhances accountability across the university's community, improving communication between parents/lecturers, students and staff.

Good practice

The University of Namibia tasked itself to transform part of its teaching and learning processes with the establishment of the Centre for Open, Distance and e-Learning (CODeL) in 2016. Various initiatives have been implemented at the University of Namibia to infuse/integrate the use of ICT in teaching and learning, more specifically in ODL.

One of the reasons for this transformation was the fact that all distance-mode assignments were previously, solely submitted as print-based, hard copies and distance-mode students entered their examinations without knowing what their continuous assessment (CA) marks were.

CODeL regarded this transformation as an opportunity to introduce the use of various technologies in print-based ODL practices and piloted the online submission of assignments and their online assessment through three of its already existing distance-mode programmes within the first year, 2016, and a full roll-out thereafter across the rest of the programmes after a positive and successful evaluation of the pilot phase.

This practice required the use of a learning management system (LMS), to be specifically CODeL downloaded, fully customised and built Moodle as its VLE which is in use. This also required establishing lasting partnerships with other divisions within the University of Namibia such as the computer centre, to work out agreements with national operators to avail 3G or 4G dongles or sim cards, to first and senior students, regardless of their mode at very reduced prices to bridge the gap in internet access and allow online assignment submission and assessment even from mobile phones.

Online assignment submission

Moodle provides students the ability to submit their assignments online, which was a direct result of the piloting phase. Online assignment submission has proved to be an effective method for ODL students, who submit their assignments from different locations using the internet and the lecturer who receives and grades the students' assignments.

Online assessments/marking

Online assessments were also piloted and almost two-third of the students in the selected programmes managed to submit their assignments online, which was encouraging for a new initiative. For academic year 2017, all assignments for distance mode students with the exception of a few, such as Mathematics assignments, were submitted online using Moodle.

Outcomes and impact

Online assignment submission and assessment/ marking improved the following aspects at CODeL:

- **Enhanced assessment administration:** Online submission of assignments reduced the manual processing of assignments as they are no longer submitted in hard copy format. This has enabled staff in CODeL to focus on quality control aspects of the assessment administration process.
- **Improved document trail records:** CODeL uses Moodle VLE for the submission of assignments. Moodle logs all student activities online, while keeping all documents uploaded and accessible for as long as necessary. This has reduced the risks of assignments being lost or misplaced while strengthening and improving student progressions due to easy retrieval of past assessment records.
- **Flexible and distributed student assessment services:** Online assessments have helped students reduce costs on travel as they no longer have to travel to the nearest CODeL centre to submit their assignments but can do so wherever they are, as long as they have internet access, which is availed through a negotiated reduced pricing of 3G or 4G dongles or sim cards.
- **Immediacy of assessment feedback:** Previously, the manual grading of assignments required distance mode students to rely on snail mail and courier services to receive feedback on their assignments. This process was long and was not conducive to learning as students generally received their assignments back while already writing their exams or already having appeared in the exams. Online assessments ensure that students receive feedback the moment the tutor has completed the grading of their assignments so they know their grades well before exams start.
- **Enhanced student-tutor interaction:** Moodle enables online interaction through forums and other two-way communication platforms. Students can send queries to tutors for clarifications of grading decisions or explanation of feedback provided to them.
- **Learning analytics:** Having assessments done online helps CODeL to take advantage of learning analytics for activities such as student performance in assignments, identification of problematic modules in terms of student performance, monitoring of student online assessment behaviour (for example, trends regarding times of submission, access to online platforms, devices used for submitting assignments and online tests), track student-student interactions and identify other trends necessary to help inform planning and quality enhancement of ODL services.
- **Plagiarism control:** With online submission of assignments, CODeL is able to scan all assignments submitted for plagiarism, thereby informing measures to strengthen students' academic writing competencies, while identifying deliberate cheating. In practice, plagiarism scanning has also helped CODeL identify the quality of assignments. For example, typically assignments with questions at lower-order thinking levels of Bloom's Taxonomy generate higher plagiarism scan similarity scores compared to research- oriented, higher order thinking oriented questions.

Online assessment/marking: **Student feedback** improved the following aspects at CODeL:

All courses on Moodle have student-feedback that requires students to provide feedback on their impressions of the quality of assessments with regard to the following aspects:

- Immediacy of feedback
- Quality of the feedback
- Relevance of the feedback
- Type of learning material the assignments required students to consult.

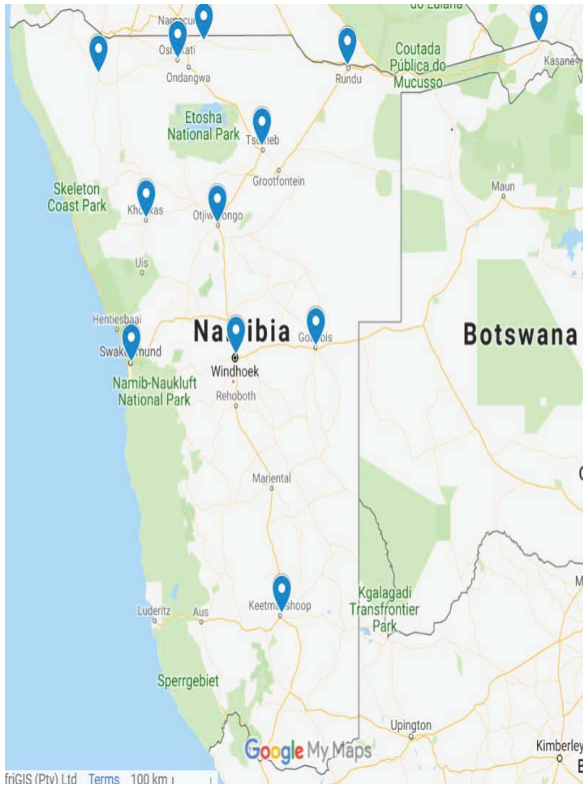
This student feedback has both pedagogical (for tutors to improve their assessment practices) and strategic value (helping CODeL plan interventions and improve policies for assessment).

The beginning remained bumpy just like the introduction of any new idea and CODeL had to continuously assess the relevance of introducing such a practice and its accompanying consequences, employing various change management strategies for its acceptance and improvement through the use of constructive feedback, while keeping an eye on its overall, significant impact.

Conclusion

Access to ICTs for teaching, learning and interaction is available at the following university campuses and CODeL centres nationwide in various regions and towns, that contribute to making such a practice possible:

1. Khomas Region: Main Campus
2. !Karas Region: Southern Campus
3. Omaheke Region: Gobabis Regional Centre
4. Erongo Region: Swakopmund Regional Centres
5. Kunene Region: Khorixas Centre
6. Kunene Region: Opuwo Centre



7. Otjizondjupa Region:Otjiwarongo Regional Centres
8. Zambezi Region: Katima Mulilo Campus
9. Kavango East and West Region: Rundu Campus
10. Otjikoto Region: Tsumeb Regional Centre
11. Oshana Region: Oshakati Campus
12. Ohangwena Region: Eenhana Regional Campus

Though challenges will always be there (such as access to personally owned computing devices by CODeL online tutors, makers and students, besides mobile phones). However, CODeL is moving from strength to strength in enhancing distance learning practices through the use of ICT. This practice is now commonplace with a focus on continuous improvements for both students and staff members as it has been fully functional for almost three years after the piloting phase.

Innovations in ICT for E-learning and Digital Initiatives for the Betterment of Students: A case of Dr Babasaheb Ambedkar Open University

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Introduction

The aim of education today is traversing the boundaries of the classroom and reaching out to students at their convenience. Our education industry is striving to reach out to the maximum number of students for empowering them as they build the Indian youth army for tomorrow. Thus, Babasaheb Ambedkar Open University (BAOU) believes in the implementation of best practises in education of the 21st century with all possible innovations and creativity.

BAOU has been working and will continue to serve the field of education following a flexible approach and user-friendly technique of imparting education providing a viable alternative for everyone who needs to pursue education to expand one's horizons of knowledge, to sharpen one's existing knowledge and to upgrade one's knowledge, skills and training thereby making learning a fulfilling experience.

Context

The ODL system has shown tremendous growth during the past few decades due to its unique feature of being a user-friendly system. In this system, the students are free to learn at their own pace and convenience while being located far away from the institution. This uniqueness and the ease of gaining knowledge play a pivotal role in facilitating today's emerging knowledge society.

In today's competitive world, the success of the ODL system depends on innovations, which increase the efficiency and quality of the system. For this, a concerted study of the diverse areas of the ODL system is required, which should be followed by introducing innovations.

Good practice

Innovative applications of ICT in the delivery mechanism: ICT touches all parts of life including education. The impact of ICT on education can be felt strongly by observing the uses of ICT tools in teaching. These tools support the predominant print media being used by the ODL system. The current multimedia being used by the ODL system includes interactive radio, television, teleconferencing and videoconferencing. The mobile is a good means of instructional delivery to ODL learners. Mobile learning aims to make the learning process more flexible, accessible and personalised. Mobile learning is about exploring new ways of using mobile environments for improving access to information for learners who want to update their knowledge continuously to satisfy the everyday demands of their jobs.

ICT tools are expected to help teachers in finding solutions to learning problems by providing them with new instruments for analyses and continuous monitoring of students' learning processes.

Major noteworthy efforts for promoting innovations

Dr Babasaheb Ambedkar Open University is the first of its kind open university in all state open universities, which has introduced various innovations related to teaching-learning practices like OMKAR, OMKAR-e, Swadhyay TV, Swadhyay Radio, Virtual Classroom, Mobipaedia, Educational Apps, Kamdhenu and the ASK-ME Kiosk.

1. ***Omkar – (Open Matrix Knowledge Advancement Resource):***

   O M K A R - The Open Matrix Knowledge Advancement Resource is a technology-enabled domain, constituting a repository of e-resources of information and knowledge making e-content accessible to millions of students and aspirants across the globe. The domain is a dynamic platform that is compatible with multimedia convergence for a two-way communication of information and knowledge.

2. ***OMKAR-e (Open Matrix Knowledge Advancement Resource for Empowerment):***

   Considering the demands of today's learners, BAOU was the first state open university in India to successfully launch internet enabled open access free-of-cost digital learning platform for online and self-driven courses that proactivates learning. OMKAR-e encourages device independent learning with the help of technology. It provides flexible learning timings – 24×7. Various multilingual courses are being offered and others are under development that cover a wide spectrum. Each multilingual course on OMKAR-e has clearly defined learning outcomes with pedagogical components that consist of text, videos, self-assessment exercises and discussion forums. It maps the students' progress in the course. URL: www.omkare.in

3. ***Educational Apps:***

   Five indigenously designed android mobile educational apps for providing vital information about the university have also been launched. Apps made available by BAOU on the Google Play Store are:

   - **Info@BAOU:** Provides general information about the university.
   - **Courses@BAOU:** Provides detailed information regarding courses offered by BAOU.

- **StudyCentre@BAOU:** Provides information about locations and contact details of study centres across Gujarat.
- **I Want to Study@BAOU:** Provides information for identifying relevant courses based on age and educational qualifications of the learners.
- **Mobipedia@BAOU:** Provides information related to unfamiliar terms or words as a reply SMS at a minimal cost.

4. *Swadhyay TV and Swadhyay Radio:*

Swadhyay TV and Swadhyay Radio are two rare initiatives taken by any state university for the first time. These initiatives facilitate web based learning through video and radio respectively. A state of the art high definition TV and sound recording studio named Chaitanya Studio supplements these initiatives to ensure high quality educational content production. This facility and initiatives will also work towards enriching the archival system for OMKAR-e. URL: www.baou.edu.in/swadhyay.tv

5. *Virtual classrooms:*

A classroom without walls, a virtual classroom, facilitates web based learning in an interactive mode. A distance learner gets a feel of face-to-face interaction like a conventional classroom setting with facilities like hand raising to ask questions, chatting and power point presentations. A group of learners can benefit by interacting with the domain expert from any remote location in the world. Software facilitates easy recording, retrieving and archival facilities. To facilitate face-to-face interaction like a conventional classroom for distance learners, BAOU has set up eight virtual classrooms across Gujarat. Students from all over Gujarat will benefit from these.

6. *Mobipaedia:*

BAOU is the first university to introduce the educational mobile app - Mobipaedia, to assist keen learners. This mobile encyclopaedia application provides information related to unfamiliar terms or words as a reply SMS at minimal costs. The android application Mobipaedia can be downloaded from the Google Play Store at no extra cost.

7. *Chaitanya Studio:*

BAOU produces high quality audio-visual content at the state of the art full HD Chaitanya Studio with facilities for post-production, storage of content and archival of content.

8. *VANDE Gujarat Educational Channel:*

The university broadcasts live/recorded content on the Government of Gujarat's educational channel number 16 VANDE (Video Audio Network for Development and Education) Gujarat.

9. *ASK-ME Kiosk:*

A student friendly initiative by BAOU, an ASK-ME Kiosk is an internet enabled digital touch screen device displaying detailed information about the university free of cost. Visitors and guests are made aware of the university, the courses it offers and study centres' locations on the ASK-ME Kiosk. By entering their enrolment numbers, students can retrieve information related to their courses, current progress, admission status, results, grade cards, examination schedules and other information. When installed in public places or libraries, this device helps students to avoid visiting cyber cafés.

10. *Kamdhenu:*

Kamdhenu- with this holy name BAOU started a chapter in the field of education with a mission to reach the needy people on the periphery of society. Kamdhenu is

a first of its kind ICT enabled world's most advanced classroom on wheels. It is a GPS enabled air-conditioned van with 16 internet enabled work stations networked through LAN. It is equipped with a LCD projector, a screen, a white board and a public address system. The Kamdhenu project earned the prestigious Enterprise Driving Growth and Excellence (EDGE) award in 2012 for BAOU. It is an important initiative by BAOU to spread digital literacy in rural and remote areas.

Digital initiatives: The university has taken major digital initiatives to reach out to a mass of students to provide them all kinds of services on their figure tips.

1. **Online admissions:** The admission process from July 2017 has been made online to facilitate students to take admissions from their door step and at their time of choice. The admission process is easy, faster, secure and device independent.

2. **Highly secure examination system:** The entire exam process is carried out using a bar code to ensure accurate, transparent and faster result declaration. This step reduces the quantum of work involved, eliminates scope for wrong entries and makes it easier to keep track of papers for rechecking and reassessment.

3. **A cash-less campus:** The payment process has been made cash-less by introducing online payment for all kinds of fees through the payment gateway and the BHIM App.

4. **Self-learning study material at students' figure tips:** Study material is sent to students' homes immediately after their admission is confirmed and SLM e-content is made available through the university's website.

Outcomes and impact

Innovations in ICT application in teaching and learning:

1. Confirm the noble aim of the university to make education available to the maximum number of people beyond caste, creed and region.

2. A survey of the stakeholders revealed that various initiatives of the university involved various unique platforms for e-learning.

3. Omkar-e focuses on bridging the gap between the students and relevant education through ease of learning.

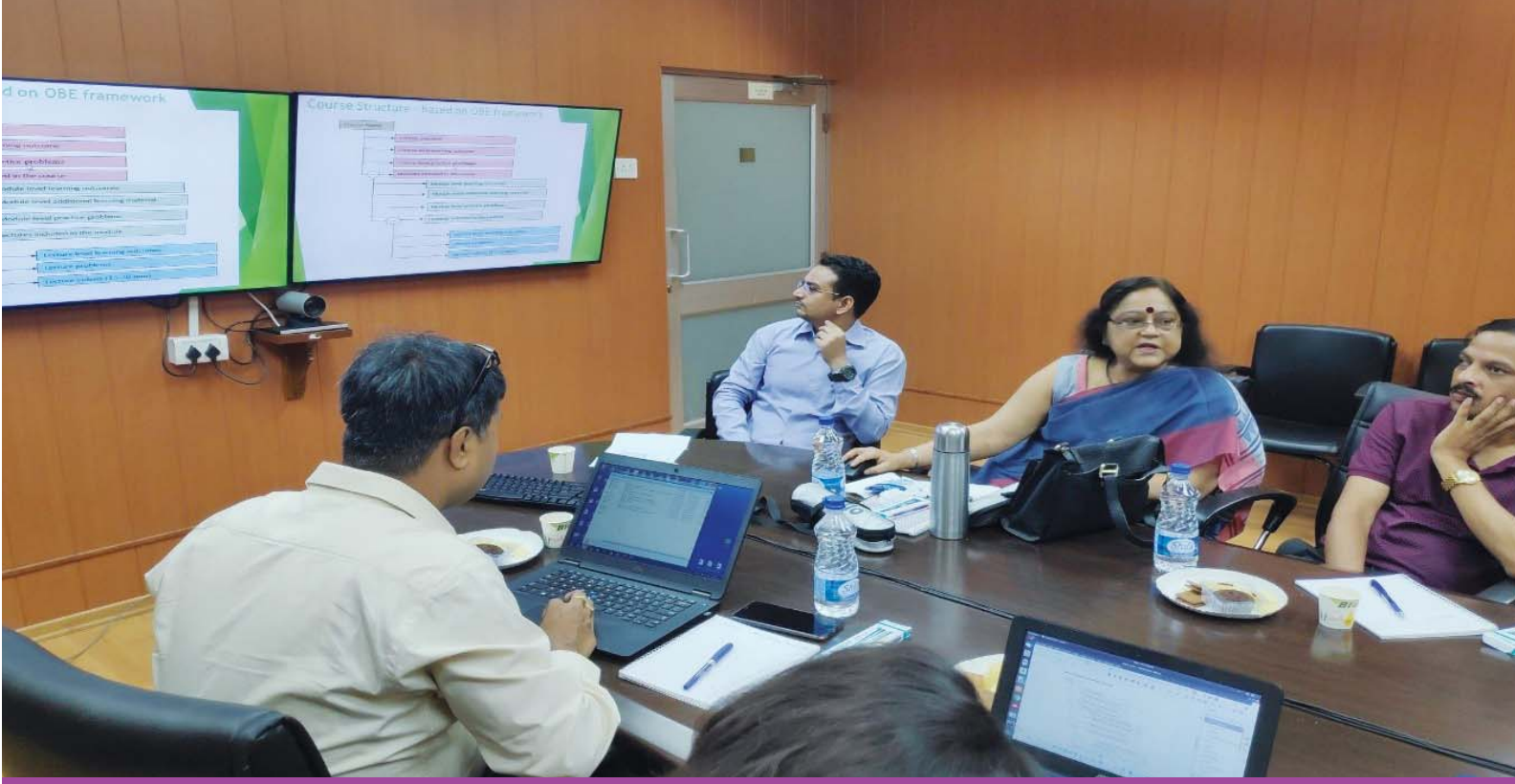
4. Students have full freedom in selecting their courses, their schedule for study, their place for study and when to appear for the exams.

5. The employability of the students has increased due to such initiatives.

Conclusion

In the age of ICT, most of the students are now focusing on the ODL mode of education, and they are seeking more technology and flexibility which has resulted in a major drive for e-learning initiatives in higher education. Academic institutions are working on improving outcomes assessments, policies and governance around e-learning and investments in faculty and staff.

At the time of implementing e-learning technologies in an institute, one must emphasise reliability, security of student data, ease of use for both faculty and students and effectiveness. The IT departments expect their institutions to be ready to embrace the increased use of e-learning technologies and services, but awareness about technology and student support services and training to the stakeholders play a vital role in this.



ICT Integrated Pedagogy: A case study of Netaji Subhas Open University

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Introduction

The Indian education system is one of the largest education systems in the world with a variety of courses and levels of programmes having millions of enrolled learners. The traditional classroom based education system has certain limitations in terms of physical infrastructure as well as human resources. To overcome these limitations, artificial intelligence (AI) can be effectively used for imparting quality education to a large number of aspirants. But for effective application of AI, we cannot ignore the importance of human intelligence (HI). Human intelligence is very important at every step. Only HI can implement AI judiciously to integrate ICT in developing and delivering course content to a large number of learners. The objective of democratisation of education can be fulfilled by integrating ICT in the education system. Over the last two decades the rapid growth of ICT has become one of the most important topics in the education sector, especially in the higher education sector. This is due to ICT's ability to provide a dynamic and proactive teaching-learning environment. ICT is now playing an important role in the dissemination of sustainable quality learning resources through the web. Due to the digital era, the Netaji Subhas Open University (NSOU) has integrated ICT and modern tools which facilitate pedagogy for delivering courses.

Good practice

The ICT integrated NSOU pedagogy

The ICT integrated NSOU pedagogy is a combination of:

- A dedicated LMS - developed on the Moodle platform
- The NSOU OER Repository - developed using the DSpace software
- The Mobile App - hosted on an android set up (downloadable from the Google Play Store)

All the digital platforms are learner friendly which can be easily accessed anytime, anywhere either on a PC/laptop or a mobile phone having internet.

Components of the ICT integrated NSOU pedagogy

There are eight basic components of the ICT integrated NSOU pedagogy:

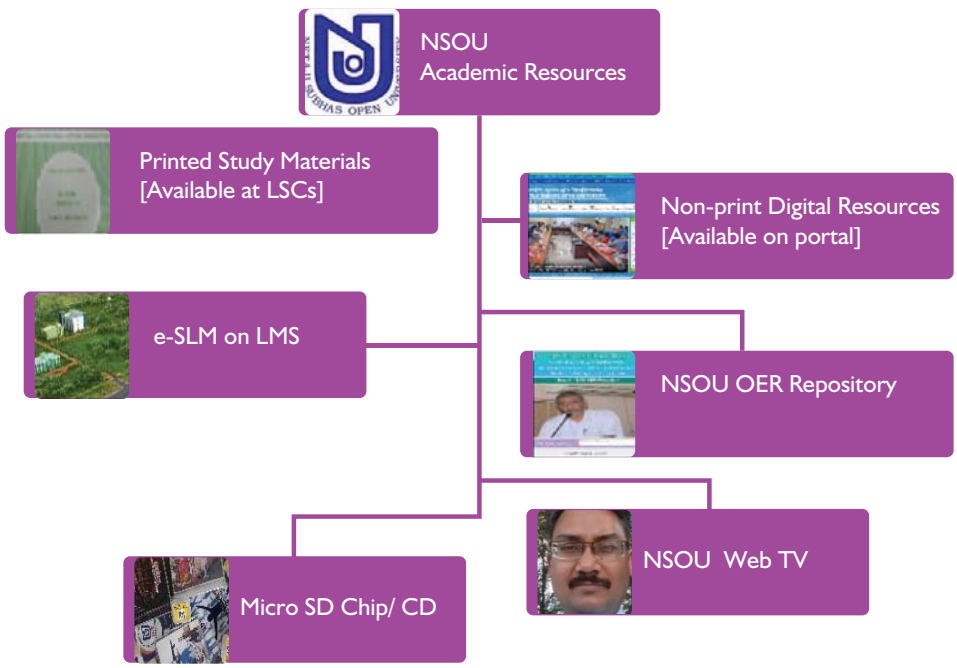
a. e-SLM
b. Audio-visual lectures
c. Live chats through LMS
d. SMSs through registered mobile numbers
e. LMS (www.nsouict.ac.in)
f. OER Repository (www.nsou.krc.net.in)
g. m-Learning (mobile app) for online learning
h. SD card for off-line learning
i. Online placement facilitation service

Outcomes and impact

In the educational context, ICT has the potential to increase access to educational material and improving education's outcomes and quality. Educational resources developed using this innovation follow a four-quadrant approach which includes text, A/V lectures, animations, self-assessment questions/ quiz and links to online resources (further readings) which increase learners' motivation and their interest in learning. ICT integration encourages interaction and cooperation among peers and teachers regardless of distance and promotes learner centric education which helps in assessment and decision making. In the ODL system, the learners and teachers are scattered in terms of places. The *ICT integrated NSOU pedagogy* helps in minimising the distance between teachers and learners and facilitates real time interactions. In short, this particular innovation has the potential to:

i) meet the learning needs of individual learners
ii) provide quality academic resources
iii) promote equal opportunities

FIGURE 7: ICT INTEGRATED NSOU PEDAGOGY



Application of ICT in ODL: A case of Krishna Kanta Handiqui State Open University

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Introduction

Universities, both conventional and distance all across the world have one motto providing the best possible services to learners and the academia as a whole without compromising on the quality of education. This calls for massive investments on the part of the administration of educational institutions and universities to fuel infrastructural growth. When one talks about infrastructure, it basically narrows down to the ICT set up that forms the main backbone for the delivery of IT services. Along with the setting up of a robust IT based delivery mechanism, what really matters is how the learning material is delivered to the learners through a particular medium. The medium of delivery differs from institution to institution with some laying more emphasis on conventional teaching methods and some others giving more importance to a blended learning approach. The latter has acquired much prominence in recent months owing to its wider applicability, interactive features and cost effectiveness. Such a blended learning approach is most commonly seen in open universities where it is quite a challenge to disseminate classroom lectures to learners who are scattered in a wide area. The Krishna Kanta Handiqui State Open University, the first and the only state open university in North East India has been a pioneer in the field of ODL especially in adopting a learner centric learning delivery mechanism.

Context

ICT is the buzzword in today's field of ODL. Unlike conventional universities, learners in the ODL system are not in regular contact with instructors or counsellors as a result of which an alternative system must be in place. Herein, comes the role of ICT which acts as an interactive medium and also delivers the learning material within the shortest possible time to learners. Thus, a lot of emphasis has been placed on how to best use technology for effective learning.

Good practice

Whenever the concept of a good practice is put forward, the first thing that strikes us is whether the concerned practice adopted by the respective university or any Distance Educational Institute (DEI) will be feasible in the long run. As such, whenever ICT based tools and techniques are involved it is better to do a short survey before introducing any kind of IT based communication tools. Here, we talk about the 'application of ICT' under good practices.

Technology has come to be an important part of the teaching-learning process in distance education. Different ICT based communication tools are used extensively to suit learners' needs and preferences. Gone are the days when self-learning material was the main instructional material for learners. However, these days such conventional material is supplemented by ICT based tools and techniques. This form of blended learning is most appropriate for the distance education system as it has opened the doors to new alternatives for providing education and training in ways not possible just a few decades back.

Some of the best practices that are being followed at KKHSOU are:

Online admissions

The university has made online admissions to various courses compulsory from the 2018-19 academic session onwards.

A virtual learning environment

The university has introduced ICT enabled programmes from February 2015 onwards. These programmes are offered in the field of Master of Business Administration (MBA), Master of Computer Application (MCA), Master of Science in Information Technology (MSc-IT), Post Graduate Diploma in Computer Application (PGDCA), Post Graduate Diploma in Business Management (PGDBM) and Post-Graduate Diploma in Human Resource Management (PGDHRM). As far as the MBA programme is concerned, learners are selected based on a written entrance test.

Learners who enrol in these programmes can avail of the contents of the programme through online, mobile and offline platforms:

i. **Online:** In the online system of learning, learners are given an individual LMS (Learning Management System) ID using which they can access the soft copies of the study material and other pre-recorded video lectures. Learners also have the option of joining live virtual classes as and when conducted. However, if a learner is unable to attend these, then he or she can go over their recorded version. There is also a provision for learners to participate in discussion forums.

ii. **Mobile learning**: Learners using the android platform can download the 'Lurningo' app from the Play Store and access all the benefits of online learning on their mobile phones.

iii. **Offline:** The university's printed study material is given to the learners. Moreover, learners have the choice of opting for a SD (secure digital) card by paying a nominal fee. The SD card contains all the video lectures of that particular semester. The learners just need an android/Windows phone where they can access all the videos without net connectivity.

Provision of Tabs: Learners in MBA and MCA programmes are provided learning Tabs free

of cost which help them learn anywhere and at any time.

- ***Android app*:** The android app which is available free of cost from the Google Play Store is another important IT tool that helps in browsing for information at one click. However, this app is applicable only for android devices (2.3.6 and above versions).

- ***The learner information management system:*** Under this system every learner (from the 2013 academic session onwards) at KKHSOU has been provided with login credentials (enrolment and date of birth) which enables him/her to access personalised information.

- ***The learning management system (LMS):*** The university has a LMS ePragya which has been constructed under a collaborative project between KKHSOU and the Commonwealth Educational Media Centre for Asia (CEMCA). The project has been aptly titled 'Designing ICT-based Intervention Programmes for School Teachers: An Initiative by KKHSOU for Quality School Education.' Work is going on for developing another LMS eBidya which will have resource material and both audio and video components.

Outcomes and impact

The integration of ICT with the teaching learning process has had very far-reaching effects for distance learners. It is expected that in the coming months, the use of ICT based learning platforms will widen the horizons of learners thereby leading to their holistic development.

Conclusion

Technology used in distance education systems differs from place to place and from organisation to organisation. No two universities/ Distance Learning Institutes generally use the same form of distance learning technologies. But the basic technologies that are used to support distance learning tools are more or less the same.

In short, to provide education in the 3A format (anybody, anytime and anywhere), ODL institutions use ICT rigorously which is most essential for improving the quality of teaching-learning technology, web-based technology and web portals, radio, television, teleconferencing, videoconferencing, mobile technology, internet satellite and cable network.

To provide education at the doorstep, conventional tools of learning in distance education in the form of SLM, counselling sessions and assignments have to be supplemented by appropriate ICT tools to not only to make the ODL system at par with the face-to-face conventional system, but also to make it more attractive and an effective form of the teaching learning process.

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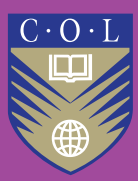

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