

PAPER PRESENTD BY UGANDA NURSES AND MIDWIVES EXAMINATIONS BOARD (UNMEB) AT TVET CONFERENCE, 17 - 20TH JUNE 2014, HOTEL AFRICANA, KAMPALA UGANDA

Sub theme for UNMEB presentation:

Exploitation of Technological advancement in promoting TVET.

TITLE: UNMEB JOURNEY OF EXPLOITATION OF TECHNOLOGICAL ADVANCEMENT IN PROMOTING TVET.

1.0 Background;

Uganda Nurses and Midwives Examinations Board (UNMEB) is a semi-autonomous Government body that was established in December 2005 by Ministry of Education and Sports (MoES) with a cardinal objective of streamlining, regulating and coordinating examinations and awards for Nurses and Midwives in Uganda. The Nursing and Midwifery assessment is defined in the Business, Technical, Vocational Education and Training (BTVET) Act No. 12 of 2008 and was operationalised by Statutory Instrument No. 4 of 2009;

2.0 Exploitation of technological advancement at UNMEB while promoting TVET

In the bid to uphold examination standards for nurses and midwives, Investment in IT infrastructure remains at the forefront of UNMEB strategy as a mechanism for quality service delivery. This paper highlights UNMEB Technology engagements, exploitation, benefits, lessons and future plans. Cognisant of UNMEB mandate and the time limits within which examinations conduct and feedback delivery to stakeholders must be achieved at national level, It is a necessity that IT is adopted in order to save on costs and time as well as minimize errors during examinations management. UNMEB's Engagement of technology is evident in the following areas;-

2.1 Objective Structured Practical Examinations (OSPE) Approach: During practical examinations, UNMEB engages an OSPE approach to test practical skills and student competencies in the likely event of interfacing with the case under examination in real life. OSPE involves use of IT generated models that have shape, texture and size of the human body parts. (Show slide to demonstrate sample). Each student under examination is presented with uniform IT generated models and is expected to demonstrate her/his ability to diagnose, prescribe, treat and monitor the patient presented with the case under examination. The use of IT generated models has promoted harmonized and objective examinations to all students' countrywide. The models have enabled continuous practicing and skills acquisition obtained from well-equipped skills laboratories in nursing and midwifery schools. UNMEB however monitors skills acquisition in real life scenarios using casebooks and assessment tool books for each course. Students are exposed to clinical areas in hospitals and health centers as required by the curriculum. Students are placed on ward for skills

acquisition in handling diversity of cases on a day to day basis, under guidance by hospital mentors and preceptors. All examination centers must be attached to major hospitals in the country to ensure student acquisition of expected competencies before a student is examined. It is true that a harmonized examination is should be a requirement to students trained and exposed to uniform curriculum. UNMEB appreciates the need to examine student's competencies in a clinical environment but it is on record that the student patient ratios are not equal (1:1) and therefore exploitation of the technology to present a uniform environment during examination. The model should be adopted by regional economies to promote harmonization in training and examining of nurses and midwives, who cannot practice and be examined on the same patient given the increasing numbers of students and non-uniformity of cases presented in clinical areas.

2.2 Use of Internal Examination Management Information System (EMIS): UNMEB engaged an Internal Examination Management Information System (EMIS) designed to ultimately improve quality of service delivery to the wide spread stakeholders. The EMIS is run on an online platform currently accessed in a radius of only 200 meters. The system holds student's bio data, enrollment details, promotional grades and summative examinations data. The limited radius limits unwanted access and is used as a security control. The uploaded data is critical to UNMEB and provides a platform for report generation on each student from the time to completion of program. The data has proved useful to stakeholders during student enrollment, upon registration for practice, during practice and in event of need for license revoking or legal procedures.

2.3 Electronic generation of UNMEB mandatory outputs (Examination cards, student's album, and certificate and results book) in a timely manner: UNMEB embarked on electronically generating reports that are utilised during the examination management processes. Reports generated include electronic student albums that contain all student identity requirements like photograph, NSIN number, and examination number, period of examination, course and school. The student Album continues to be a useful tool that controls impersonation and examination malpractice and is used to monitor student attendance during examination. Other reports generated include examinations cards, Pass slips, Award Certificates, summative results book, and statistical analysis reports.

2.4 Generation of electronic and paper backup system of examinations data: Given the nature of technology it is important that users prepare themselves in event of crushing or loss of information. UNMEB from time to time backs up the data on profiled back up system which are either electronic or in hard copy. This is done on detachable electronic devices and in hard copy. Hard copy examples are printed students albums and results books for future reference in case the system is not accessible.

2.5 Implementation of UNMEB research agenda through utilization of secondary system generated data: Since UNMEB data is electronically stored; UNMEB carries

out secondary research and also uses the data to provide input to the primary research carried out. Examples of such data is the pass and failure rate per district and gender, contribution to health human resource in terms of cadre output per discipline, foreign student nurses who qualify from Ugandan nursing and midwifery training institutions among others.

2.6 Engagement of online discussions as a platform for networking and information sharing: UNMEB developed an online discussion forum as a mechanism for information sharing and collection of feedback. The discussions have been vibrant and are continually gaining momentum. The results from the discussion forum have provided input to the reforms in UNMEB examination processes on a day to day basis. Discussion topics are introduced online on a bimonthly basis. Comments are forwarded by Secretariat to the Examinations committee for further analysis and recommendation. We acknowledge and appreciate stakeholders who have continually provided input to the topics. UNMEB further encourages stakeholders to visit www.unmeb.go.ug/discussionforum to participate in the vibrant discussions. However all comments are modulated before public viewing.

2.7 Timely dissemination of information: UNMEB is one of the information centres for health cadre information. The information generated by UNMEB has been utilized by Ministry of Health, Ministry of Education, Uganda Nurses and midwifery Council, Health Service Commission, Local Governments, development partners, employers and employment bureaus among others. This information is made available online, on call or in a formal letter upon request. The tools used for information dissemination are website, Facebook, twitter and electronic mail.

3.0 BENEFITS OF TECHNOLOGY EXPLOITATION TO UNMEB

Ultimate benefit is ensuring quality of service delivery as we continue to uphold examination standards and deliver our mandate. This is achieved through:-

- Information accuracy,
- Reduction in data processing time,
- Provision of instant answers to inquiries on a wide spread platform,
- widening of UNMEB partnerships and networks,
- Information sharing and dissemination,
- Timely feedback collection,
- Implementation of research agenda,
- Enabling secure storage ad controlled access to UNMEB information,
- Simplified examination management processes.

4.0 Challenges

- Need for IT skills acquisition to move in tandem with technological advancements. This calls for continuous capacity building and system upgrades translating into high management costs,
- Information safety calls for strict control mechanisms that may be expensive to install and maintain,
- Over reliance on human resource ethics and integrity,
- Impending loss of data in event of infrastructure and energy breakdown,
- Resistance to change posed by attitudes and cultural diversity in African society,
- Etc.

5.0 UNMEB Future plans for development of regional economies

- **Cost reduction by widening stakeholder participation:** UNMEB will in future build capacity of partners to be able to upload classified information within a limited period of each year. This will involve capacity building within several institutions; sharing data capture formats in easy to execute programs adapted by the system, issuance of temporary passcodes to institutions, withdrawal of rights after mass upload and verification. This will substantially reduce the data collection and upload costs but increase networking and working partnerships for UNMEB with its stakeholders.
- **Providing limited online access to partners who need to use UNMEB Information:** UNMEB will develop special shared platforms as follows. MOES will access enrollment data, UNMC will access cadre output data, MOH will access classified data utilized during health planning processes, and other partners will continue to receive information from UNMEB upon request on call and by formal letter. UNMEB will continue to disseminate its information in a classified manner given its sensitivity as a means to promote its usefulness to its partners and the region.
- **Establishment of Examiner tracking system.** The system will monitor examiners during the examination marking and examination of practical sessions within schools to ensure strict adherence to examinations regulations.
- **Acquire state of the art printing equipment** to support quality and timely examinations printing in a more secure and controlled environ

6.0 Conclusion

Although it is UNMEB's desire that our processes are transformed to IT driven services, UNMEB continues to appreciate the human resource in the Secretariat and partners that have continually provided support towards delivering our mandate. Special appreciation goes to MOES, MOH and UNMC for the continued support to UNMEB. UNMEB further invites stakeholders especially Development Partners to support its current and future plans which will

transform UNMEB ideas into benefits to Uganda, East Africa and Africa and therefore upscale Africa TVET programs to world class standards especially in the field of nursing where human resource is badly needed to save lives world over.