An analysis of the challenges faced in the production of learning materials at the
Zimbabwe Open University (ZOU)

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Abstract:
The purpose of the study was to establish challenges faced by the Zimbabwe Open University production team when producing ODL learning materials.

A case study design was employed. Interviews were conducted to gather the desired data. Twenty participants were drawn from the production team within ZOU.

Literature review focused on the production process in ZOU, Team Players in production process, issues on quality assurance, resources, as well as e-learning in production of learning materials.

A wide range of challenges were noted. The study revealed that failure by team players to adhere to stipulated deadlines was the major challenge as it affected the unit’s forward planning leading to delays in distribution of the learning materials to students. Lack of ideal equipment and adequate technical support affected both production operations as well as development of the e-learning platform. The production team yearned for constant training, workshops and visits to some institutions in the production industry.

Introduction
In distance education it is the institution that teaches instead of the teacher. This is made possible by the provision of high quality learning materials by the institution. Thus, the learning materials should be designed to be user-friendly to promote self-study and independent learning activities (Col 2005, Sheerer 2003). Furthermore, the structure of a learning module is of paramount importance in maintaining a learner’s concentration and interest. The structure must be clear to learners and allow them to exert some control over how to learn. According to Rowntree (1994) ODL materials have to be purposefully structured, paced and engaging. Providing high quality learning materials is the greatest support a distant learner can get (Col, 1997). ZOU’s production team is mandated to ensure the production of a world class teaching and learning materials. Thus, this study focuses on the production of ODL learning materials in the Zimbabwe Open University.

Background to the Study
Production Process in the ZOU
The learning materials development and production is an assembly line process in which deadlines are important to ensure that students get materials on time in order to meet deadlines for assignments as well as preparing them for examinations. The bottom line is, learners should have their learning materials at registration periods. According to the Materials Development Unit’s (MDU) Procedure Manual, learning materials submitted to MDU should be developed and produced within a period of three months. Below is the cycle indicating the various stages of module production:

1. Prior to the beginning of every ZOU semester, MDU receives information about modules on offer from different Faculties in ZOU
2. Editors commence the editorial process
3. Desktop publishers and Graphic Designers work hand in hand with editors and Faculties to implement the ZOU house-style; Graphic Designers attend to the creation of illustrations and cover designs. These activities are monitored by the Production Planner
4. Editors proofread the draft modules before and after desktop publishing and Graphic Designers complete all layout and design
5. The manuscript is returned to Faculties for final faculty-changes suggested by the Editors. At this stage the Faculty approves or disapproves the module for mass production.
6. The module is then sent to Quality Assurance Unit who checks on module consistency and adherence to ZOU rules and regulations
7. Once Quality Assurance Unit has approved the module, MDU then prepares an internal requisition for printing services of both new and reprint modules
8. The Production Planner receives a dummy module which is examined by a team comprising of Editors, Desktop Publishers and Graphic Designers
9. All things be equal, mass production of the module commences
10. Finally printers deliver the printed module to ZOU’s Stores Department

Team Players in the Production Process

There should be standard competencies and qualifications of members of the course team to ensure the quality of learning materials meet the specified criteria set by the institution. Team members of the production team include Faculties (Deans, Chairperson, Programme Leaders, Writers, Content Reviewers etc.), MDU staff - (Manager, Editors, Production Planner, Desktop Publishers, Graphic Designers, Information Records Clerks), Quality Assurance Personnel and Printing Press Personnel. Roles of some team members have been outlined in the Production Cycle. Perhaps we need to mention that the role of the Faculty is to generate the manuscript which is then submitted to MDU for development and production.

Each team member should hold particular qualifications in order to handle the various activities. For example, module writers have to meet particular criteria that is, competence in a respective field in order to produce quality materials. There are also some checks and balances which are employed at each stage of development and production. Needless to say the design, development and production of learning materials involved course team approach to ensure quality of content, design and delivery suitable for distant learning.

Issues of Quality Assurance in the Production Process in ZOU

Open and distance learning is a feasible approach to meeting the vast numbers of people who were systematically deprived of educational opportunity in the past. It is flexible as it gives people the ability to determine where, when, what and how they want to learn. This no doubt, is in line with ZOU’s vision and mission statement which aims at providing lifelong education in an affordable and flexible manner. The provision of well-designed and quality learning materials assists learners to succeed in their studies. ZOU Quality Assurance Policy stipulates that;
1. The Zimbabwe Open University is committed to the provision of high quality Open and Distance learning, scholarship, research and community service.
2. All ZOU personnel are committed to high levels of excellence, creation of an innovative culture, promotion of integrity, adherence to ethical standards, delighting customers and other stakeholders.
3. ZOU management and staff are committed to continuously improve the University’s products, services and the quality management system in compliance with the requirements of ISO/IEC 9001, the Certification Body and Regulatory Authorities.
4. All departments/faculties/units are committed to meeting the corporate objectives and targets articulated in the University’s Strategic Plan periodically availed to ZOU employees.
5. All university personnel are required to be familiar with this policy, relevant quality documentation and to implement the policies, processes and procedures in their work.

With the advent of the e-learning platform there is an increase in access to a more diverse group of students and this is a cost effective way (SAIDE, 1994, ANC Education Department, 1994). The up-loading of high quality materials promotes this venture hence the technical staff in the production team have a major role to play in presenting the learning materials in an interesting way to capture students’ concentration in order to achieve success in their studies. ZOU’s students under the Virtual Region are enjoying this service. Gunawardena (1992) prescribed a model of a learner-centred education system that can be facilitated by use of interactive communication technology. Adequate support services enable learners to take control of their learning experiences.

Production of Learning Materials on E-learning Platform

There is a wave building towards the generation of technologies that are providing a multi-media platform. In this case, the quality of interaction is critical. According to Gunawardena (1992) the providers and the users should be competent in the use of communications media hence they should have the ability to:
- interface with technology
- clearly understand the unique strengths and weaknesses of each media
- ability to use the medium to communicate with teachers or other distant learners

ZOU has computer laboratories in all its regions indicating the existence of the e-learning platform. ZOU is in the process of providing course materials and communicating with students to increase quality and effectiveness of learning.

Issues of Resources in Production of Learning Materials

The Materials Development Unit is the printing and publishing arm of the Zimbabwe Open University. It provides services to Faculties, Departments and Administration. As such, a materials production resources centre is expected to house the latest high-end computer and printing workstations equipped
with all industry standard and academically required software packages. It should be carefully designed to include the computer, printing and multimedia production tools needed to support ODL academic activities. It is also anticipated that such a materials resource centre would feature a computer laboratory for student use since Africa and in this case Zimbabwe is still a technologically challenged country.

High-end Computers – Both Apple Macintosh and PC Platform
There used to be a time when Apple Macintosh computers were the most ideal for producing print, audio and visual materials. This was so since they featured fast processors and the manufacturers of Macintosh computers deliberately designed their machines for graphical work. Today it is possible to find equally fast and reliable PC computers which can deliver as well as Macintosh computers. The ZOU has Apple Macintosh machines (iMacs) however, these need to be replaced since there were purchased in 2001 and are no longer performing as well as is expected. The MDU has PC machines which are able to produce print based publications. However, as the University looks to produce multimedia materials, it is necessary to look to purchasing high-end computers as a step towards being a world-class institution.

High-end Software
The term high-end software refers to industry specific software which has to be purchased as this software does not come pre-installed on new computers. Corel Suite and Adobe Suite are the major high-end software for a print, audio and visual studio.

Heavy Duty Desk Printers and Commercial Printing Equipment
Ideally every team of graphic designers and desktop publishers requires heavy duty colour and monochrome printers capable of printing on A4 and A3 substrate. MDU has one heavy duty printer an HP4250 which prints in monochrome and on A4 paper.

The ZOU is to be commended for purchasing and installing the Ricoh 1357 Print-On-Demand commercial printing platform. Unlike the Lithographic printing platform which requires films, plates and huge printing machines the Print-on-Demand platform allows for any number of prints as per student demand.

Other Equipment Includes:
- Scanners – featuring high dots per inch for example, 1200x1200 dpi, ability to scan from paper, film, plastic, etc. With high volume scanning tray and capability plus ability to scan large format papers.
- Professional digital cameras, video cameras, audiovisual editing equipment and a good supply of consumables.

Research Questions
What does the production process in ZOU entail?
What support does the production team receive from the institution?
What challenges do the team players face in the production process?

Method
The case study design under the qualitative research design paradigm was employed to ascertain the challenges encountered in the production cycle of ZOU’s learning materials. This was rated an ideal design as it allowed participants to elicit their views about the production process.

Participants and Setting
The study comprised of 20 participants drawn from Materials Development Unit (MDU), Faculties and Quality Assurance Department.

Instruments
Structured interviews were administered to the participants. They were asked questions relating to challenges faced in relation to the production process, team players in the production process, issues about e-learning, quality assurance and resources. Some participants were also asked to respond through emails or telephone interviews.

Procedures
The Registrar of ZOU granted the researchers permission to carry out the study in the institution. Structured interviews, questionnaires, telephone interviews, emails were administered to the respondents. The collected data were analysed using a Statistical Package for Social Sciences (SPSS) and content analysis.

Findings
Production Process in Materials Development Unit in ZOU
The production process in ZOU embraces various team players ranging from Faculty, Materials Development Unit staff as well as Quality Assurance Department. The study revealed that problems at any stage of the production process derail the whole process. The major hurdle was failure by some team players to adhere to deadlines. Failure to adhere to deadlines affects the Unit’s forward planning. Hence such a position has effects on the distant learner who may fail to receive the learning materials on time. Furthermore, inadequate technical support and resources was found to be another challenge. Some computers currently in use were out-dated and were bound to affect the production process. The study also revealed that there was need for several forms of back-up. The Materials Development Unit has limited control over production activities handled by other team players, for example, Faculties. Production of modules may be delayed at various stages of development and production stifled in the process.
E-learning Platform at ZOU

The study revealed that there is inadequate equipment to handle the e-learning platform. For example, the conversion of PDF files to word version is a challenge due to lack of ideal software. The production staff needs constant training to be in line with new technologies in the production industry.

Quality Issues in the Production Process

The study revealed that there is need for proper coordination of team players. Good communication would yield better results. In addition, failure to meet deadlines was said to compromise the quality of learning materials since team players would end up working under pressure.

Issues of Resources

There was need for state of the art equipment to promote efficiency in the production process.

Challenges Faced by Team Players in the Production Process

The issue of meeting deadlines was the major challenge among the team players. In addition, some technical issues experienced in the production process were another area of concern.

Recommendations

- Deadlines to be adhered to in order to promote efficiency and forward planning.
- Institution to provide state of the art equipment to promote efficiency in the production process.
- Avoid work stoppages due to lack of adequate technical support.
- Ideal software to be availed to the production team and training of the staff on the use of the software.
- Increase forms of back-up for example, server, external hard drives, etc.
- Production team to be periodically attached to institutions handling similar machines to broaden their knowledge base.
- Work-related visits and workshops to be organised for the staff.
- Improve teamwork operations by arranging meetings to clear sticky issues.
- Periodical production workshops for the team players.

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