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FACTORS INFLUENCING LECTURER RESEARCH OUTPUT IN NEW UNIVERSITIES IN ZIMBABWE

Chinamasa Emmanuel, Chinhoyi University of Technology

Abstract

The purpose of this study which is the initial stage of a doctoral study was to find factors promoting and those affecting lecturers research output in new universities in Zimbabwe. This was prompted by the observation that lecturer research output in new universities is low resulting in the majority of lecturers failing to be tenured. A descriptive survey based on a case study of one new university was used. Data was gathered from a stratified sample of 59 lectures and 201 teaching assistants using questionnaires, focus group discussions and informal interviews. The study revealed that, lecturers were motivated to research by external factors such as the need for tenure (82%) and promotion. Main factors affecting lecturer research output include a lack of research mentors (98%), very large undergraduate classes compelling the lecturer to spend all the time marking assignments (85%) on the expense of research, and lack of workshops on how to research and publish. The study recommends an alternated semester intake so that lecturer has one semester with no students when course is not on offer. Willing research mentors can be appointed within or outside the university to mentor others. Lecturers can be attached to successful researchers as assistant researchers to facilitate mentoring. Peer reviewers and editors can hold research development workshops for new lecturers.

Key words: lecturer, research, universities, research skills
INTRODUCTION

Universities the world over, are the highest academic institutions distinguished from other institutions of higher learning by their key function of research, knowledge dissemination and academic freedom. Bligh (1990:160) justified university academic freedom on the assumption that academics research and test ideas at the frontiers of knowledge not yet visited by others. It can be noted that the academic research function is also based on the assumption that academics have the competence to research. Research is a lecturer variable in the sense that, lecturers teach research methods and supervise students research projects. In addition, lecturers' job-descriptions require that they carry out pure and applied research to solve community problems. These expectations call for more lecturer research output than the current situation in Zimbabwe.

Moberly (1994) observed that universities in the United Kingdom (U.K) failed to provide the moral, intellectual and spiritual revolution to match the scientific, technological and economic revolution in which the people were living. One can attribute that shortfall to limited applied social research by academics. A UNESCO (2005) analysis of scientific research cited by Ntiamoah-Baidu (2008:2) reported that, developing nations together accounted for 22% of the world's share of Gross Expenditure of Research and Development (GERD). Africa accounted for only 0.6% of the (GERD) with South Africa's share representing 90% of Africa's contribution. These statistics contradict the expectation that Africa being a developing continent has a lot of opportunities for research in response to challenges of hunger, diseases and poverty.

Institutions like Chinhoyi University of Technology in Zimbabwe are invisible when issues of lecturer research excellence are tabled at continental and national levels. Its lecturer research output is low. It motivated this study to investigate factors contributing to it, as a basis for institutional interventions. This is important in Zimbabwe where no human resource capacity development initiatives for research are being implemented despite the fact that Zimbabwe's university ordinance requires lecturers to publish or perish.

International Research Output in Universities

International trends consider ranking universities on the basis of their research output a normal requirement for social accountability. It is an accepted phenomenon based on the human need to compare, compete and create benchmarking standards. Arguments against it may be motivated by
the variations in expectations from each ranking organization or board. ThomsonReuters (2010) identified the following university ranking organizations:

- The Central London Triple Accreditation Board uses Masters in Business Administration (MBA) programmes for its indicators.
- Times Higher Education considers variables such as staffing, research output and citation.
- The Institute of Higher Education Shanghai considers quality of education, faculty research output and size of university.
- Germany universities apply publications by doctorate degree students as rating indicators.
- Internet Lab considers web metric indicators such as size, visibility, popularity and the number of rich files on the web of the university.
- Higher Education Evaluation and Accreditation Council of Taiwan (HEEACT) applies annual performance ranking of published scientific papers and journal article citation indexes.

Whatever the ranking indicators used, research is the main indicator on their intersection. Bruce and Andras' (2004) study revealed a positive correlation between the number of published papers, their citation index and the UK Research Assessment Exercise (RAE). The findings suggest that counting published research papers is a reliable indicator for rating research output by universities. Some of the ranking indicators such as postgraduate students' publications automatically exclude the majority of new universities in Zimbabwe. Most of them have been recently established and have not yet offered post graduate degree programmes.

Zimbabwe set up the Zimbabwe Council for Higher Education (ZIMCHE) in 2009 to monitor the quality of education in the 14 universities in Zimbabwe now (2011). It started by ensuring that lecturers are suitably qualified. They hold a minimum qualification of a masters' degree for a teaching assistant's post and a doctorate for a lecturer's post. It has not yet gone to the extend of ranking universities but raised a need for lecturer research skills hence the need to identify factors influencing lecturer research output in new universities.

Several factors have been identified as limiting lecturer research output in universities. Pomfret and Wang (2003) noted that the majority of economists in Australian universities have limited research published in
refereed journals hence their work was rarely cited. They attribute the low average research output to the fact that Australian academic economists do not consider research as part of their job. They suffer no penalty for failing to research and publish.

Lack of funding is raised as a factor militating against lecturer research output in universities in Africa (Zindi and Munetsi, 2008). Studies carried out by Payne (2003) reveals that funding research increases the quantity of research but decreases its quality. Low quality research negatively affects its rate of citation and keeps its international rating level low. Kumar (2008) noted that Indian universities increased the number of research articles published between 2003 and 2004. They attributed the increase to the availability of Internet which facilitated academics access to international journals. Although ICT is also available in Nigeria, Onasanya et al (2010) observed that many academics lacked training in the use of computers as a tool for effective teaching and research purposes. According to Ntiamoah-Baidu (2008) other factors militating against lecturer research output include a shortage of senior level lecturers and researchers to mentor others. Increasing demand for higher education resulting in an increased focus on undergraduate training at the expense of postgraduate training and research also affected lecturer research output.

There are mixed views on the rewards to a lecturer's research output and teaching. Young (2006) reports that academics complaint that teaching was being accorded a low status compared to research and administrative tasks. Bligh (1990:185) proposed a ratio of research: teaching: management = 40:40:20 which suggests an equal weighting of research and teaching for the reward system.

Although arguments for rewarding a lecturer more for research than teaching are based on the assumption that research informs and enhances teaching, literature raises debatable doubts. Studies by Green and Lindsay (1999) and Lindsay, Green and Lindsay (2002) on undergraduate and postgraduate students' views on lecturers' research and their quality of teaching report some advantages and disadvantages. Students noted four advantages of lecturer involvement in research namely:

1. Promotion of student motivation,
2. Enhancement of knowledge currency, lecturer credibility and expert power,
3. Improves lecturer competence in research supervision and
4. Develops lecturer enthusiasm and motivation.
Students also raised the following disadvantages of lecturer research activities:

1. It reduces lecturer availability to students,
2. Research time competes with teaching time and
3. There is a high probability of lecturer distorting curriculum if research work is not in line with courses that the lecturer teaches.

These findings from United Kingdom suggest more personal gains for the lecturer on the expense of students who are the lecturer's prime clients.

**Research Output in Zimbabwe Universities**

Africa's universities' Vice-Chancellor's workshop (1984) in Chikomba (1988:16) emphasized universities research functions when they said, "the fundamental function of universities is the advancement of knowledge through research and publication". This is based on the assumption that lecturers have the skills to research and publish citable material.

Out of the 100 universities in Africa ranked by Internet Web in 2010, only the University of Zimbabwe was on rank 23 out 100. This ranking in which only 1 out of 14 universities has recognizable research output require no more evidence to support that research output in Zimbabwe's universities is low.

Different explanations for low research output in Zimbabwe's universities have been presented from different angles. Riley (1998) noted that agricultural scientists experienced difficulties in publishing agricultural research work due to weaknesses in biometry and statistics. They were also ignorant of data analysis software packages. Majoni and Chidakwa (2003:104) report that “60% of the 2003 second semester Zimbabwe Open University (ZOU) students failed to complete their research projects.” They attributed the problem to ZOU's libraries which have inadequate journals to support student research work and inadequate supervisor guidance. Thodhlana, Mawere and Weda (2011) reiterated that students in ZOU failed to complete research projects due to limited time, lack of libraries, internet and typing facilities. They also pointed out that the supervisor played a significant role in the student's completion of a research project. These studies are focused on students in Zimbabwe Open University there is need to focus on the lecturer who is expected to guide these students.
One of the factors influencing lecturer research is the university research policy. Hill (2000) called for a clearly defined research policy highlighting the research agenda and priorities to focus institutional research efforts. Besides lack of a clear research policy, funding was another problem in Zimbabwe's universities. According to Chombo (2000) the solution is for lecturers to fundraise. Unfortunately, fundraising was not welcomed by academic staff who argued that their business is to teach and not fundraising.

Nherera (2000) identified two hurdles to university research in Zimbabwe, lack of mentors and local journals. He noted that retention of qualified senior staff in most African universities was problematic. Graduates sent abroad for training left university for private sector or remained abroad. The situation compelled universities to do with new lecturers and teaching assistants without research mentors. In addition, there are limited local journals interested in research focused on Africa. Nherera (2000:54) explained the pathetic situation when he said, "Most of the prominent international journals in which African scholars must 'publish or perish' are in Europe or North America." Under these circumstances, Zindi and Munetsi (2008) attached lecturer anxiety leading to emotional stress to the demands for tenure requirements when no supporting material is available.

Efforts to develop qualitative research capacity in universities started with the research-training programme in Eastern Africa. According to Okuni and Tembe (1997) funding was provided by the German Foundation for International Development (DSE). A similar research training programme for teachers, college and university lecturers from Malawi, Zambia and Zimbabwe was run in 1999. It was jointly funded by International Development Research Centre (IDRC), Germany Foundation for International Development (DSE) and Educational Research Network in Eastern and Southern Africa (ERNESA). Nherera (1999) pointed out that the research training programme aimed to develop a research culture among practitioners in educational institutions.

Issues raised in the above discussions are based on established universities. They cannot account for the situations in the new universities established in Zimbabwe. Rottenburg (1987) acknowledges that no preparation, training and upgrading of academics competence in research received special attention.
Lecturer Research at Chinhoyi University of Technology

Chinhoyi University of Technology (CUT) in Zimbabwe was established as part of the recommendations by Chetsanga Commission to upgrade Technical Colleges into degree awarding institutions in Zimbabwe. According to Nherera (2001), Chinhoyi University began operations in 1999 under the auspices of the University of Zimbabwe technical degree programme. Chinhoyi University of Technology Act number 15 of 2001 resulted in Chinhoyi Technical Teachers College operating as a fully-fledged university in 2002.

Chinhoyi University of Technology's (2005 - 2015) strategic and business plan, key result area number is “Quality Action Research”. An applied research focus was advocated by Mugabe (1981) in Chikomba (1988:6) who announced that Zimbabwe's university research should address escalating problems such as unemployment, food security, natural resources and sustainability. The reflexive dialectical critique and collaborative aspects of action research cited by Chilisa and Preece (2005:104) tallies well with Chinhoyi University of Technology's entrepreneurship focus. Its strategic actions linked to action research include:

1. Appointment of a Research Board and Research Director
2. Reviewing and upgrading the quality of teaching, learning and research.
3. Establishment of a feedback system and tracer studies to keep the university informed about the performance of its graduates and employer expectation. (This is a quality control measure).
4. Engaging in market research to maintain relevance of programmes to the needs of the community (entrepreneurship focus).

These action plans on paper provide rich sources of research areas for lecturers. I inferred that the omission of lecturer research competence programmes on Chinhoyi University of Technology action plans was based on the assumption that lecturers have the skills.

Currently (2011), Chinhoyi University of Technology has four schools and an institute to cater for Zimbabwe's technological and economic development areas of engineering, agriculture, hospitality and tourism, business management, entrepreneurship and life long learning. Student enrolment stands above 50 000. After the brain-drain motivated by the 2006 - 2009 inflation, Chinhoyi University has an academic staff compliment of 59 lecturers and 201 teaching assistants.
Research Problem

The study is motivated by the fact that, Chinhoyi University of Technology lecturers research output is low. The problem is supported by the director of research who said, "Not more than three papers per year are published. No major research projects are underway" (Jingura, 2010). This problem raised the question:

What factors affect lecturer research output in new universities in Zimbabwe?

METHODOLOGY

Research Design

The study applied a descriptive survey to identify factors affecting lecturers research output. According to Verma and Mallick (1999: 79) the strengths of descriptive surveys required in this study include its ability to indicate prevailing conditions. This was supplemented by informal interviews and focus group discussions. Focus Group Discussions enabled lecturers and teaching assistance to discuss on equal levels.

Population and Sampling

The population of this study was composed of 59 lecturers and 201 teaching assistants. This is a finite population in which factors affecting research output was expected to depend on the respondents' level. Since these people are in the same institution, stratified sampling was employed. Proportional sampling of lecturer: teaching assistant = 1:4 raised 38 lecturers and 150 teaching assistants. Factors affecting research output for each of the strata was assumed to be uniformly distributed hence simple random sampling within each strata was applied by matching employee code number to the last four digits of random numbers generated by a computer.

Instruments

The main instrument used was the questionnaire. It sought respondents' length of service, factors affecting lecturer research output and strategies to enhance lecturer research output in the institution. Questionnaires were used since the study required individual views, population is literate and data collected from a large population within a short time. Focus Group Discussion guides were used to collect group views and any factors peculiar to that particular group.
Findings and Discussions
Data presented here was gathered from questionnaires completed by 59 lecturers and 201 teaching assistants. The sample was large enough for the factor variables to be normally distributed and findings generalized to new universities in Zimbabwe. Respondents were distributed by length of service at Chinhoyi University of Technology and number of research publications as shown in Table 1.

Table 1, Respondents distribution by length of service and publications. N=260

<table>
<thead>
<tr>
<th>Length of service in years</th>
<th>0 - 3</th>
<th>4 - 6</th>
<th>7 - 9</th>
<th>10 - 13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of respondents</td>
<td>113 (43.4%)</td>
<td>58 (22.3%)</td>
<td>15 (5.8%)</td>
<td>74 (28.5%)</td>
</tr>
<tr>
<td>Number of publications</td>
<td>23</td>
<td>75</td>
<td>8</td>
<td>30</td>
</tr>
<tr>
<td>Mean of publications</td>
<td>0.2</td>
<td>1.3</td>
<td>0.5</td>
<td>0.4</td>
</tr>
</tbody>
</table>

Findings show that the majority (43.4%) of respondents have less than 4 years in service. This group is struggling for a publication for tenure. The average number of publications is less than two for all groups. This finding supports Jingura (2010) who noted that less than three papers are published per year. One group of interest is that of respondents who have served more than 9 years. The majority are former Technical Teachers College employees. Focus group discussions with them revealed that, they considered teaching as their core business rather than research. They also pointed out that the university had not dismissed any of them for none publication they did not really see either a positive or negative motivation for publishing.

Table 2, Factors promoting lecturer research output N = 260

<table>
<thead>
<tr>
<th>Factor</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirement for tenure and promotion</td>
<td>213</td>
<td>82%</td>
</tr>
<tr>
<td>Encouragement from Research Board</td>
<td>96</td>
<td>37%</td>
</tr>
<tr>
<td>Availability of Internet Facility</td>
<td>52</td>
<td>20%</td>
</tr>
<tr>
<td>Availability of Library</td>
<td>77</td>
<td>30%</td>
</tr>
<tr>
<td>Access to computers</td>
<td>38</td>
<td>15%</td>
</tr>
<tr>
<td>Establishment of local journal</td>
<td>21</td>
<td>8%</td>
</tr>
<tr>
<td>Funding</td>
<td>13</td>
<td>5%</td>
</tr>
</tbody>
</table>

What is interesting is that all of the above factors are external motivators. Establishment of a local journal (Zimbabwe Journal of Technological Sciences) was mentioned as a low motivator (8%). During interviews and focus group discussions participants reported that the journal was too selective. It had specific technology related themes which lecturers either had no interest in or were not familiar with. They either did not submit articles to it or had their articles rejected for being irrelevant, lacking utility value or poor methods.
Table 3. Factors affecting lecturer research output  

<table>
<thead>
<tr>
<th>Factor</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Limited skills for either statistical analysis (quantitative) or qualitative research design</td>
<td>110</td>
<td>42%</td>
</tr>
<tr>
<td>✓ Large classes compelling lecturers to spent most of their time marking</td>
<td>221</td>
<td>85%</td>
</tr>
<tr>
<td>✓ Poverty compelling lecturers to teach more than two courses for extra payment</td>
<td>103</td>
<td>40%</td>
</tr>
<tr>
<td>✓ Lack of mentors to guide them</td>
<td>254</td>
<td>98%</td>
</tr>
<tr>
<td>✓ Limited computer skills</td>
<td>144</td>
<td>55%</td>
</tr>
<tr>
<td>✓ Lack of personal interest in research</td>
<td>156</td>
<td>60%</td>
</tr>
<tr>
<td>✓ Reviewers destructive commends on lecturers’ first attempts</td>
<td>84</td>
<td>32%</td>
</tr>
<tr>
<td>✓ Lack of workshops by editors and reviewers to assist novices</td>
<td>200</td>
<td>77%</td>
</tr>
<tr>
<td>✓ Compelled line of research (technology) which is not withinother lecturer’s interests</td>
<td>72</td>
<td>28%</td>
</tr>
<tr>
<td>✓ Limited local journals</td>
<td>68</td>
<td>26%</td>
</tr>
</tbody>
</table>

Findings reveal that lack of mentors is the main factor (98%) affecting lecturer research output. The finding supports claims by Nherera (2000) and Ntiamoah-Baidu (2008). I deduced that the effect of time had no effect on the lack of mentors as a factor. During interviews respondents explained that if mentors assisted them develop computer skills (55%) then there will be less derogative comments from reviewers. It is interesting to note that none of the participants identified funding as a factor. One can deduce that lecturers in new universities are concerned with small scale research for publication and tenure rather than research for funds. The majority of lecturers (87%) proposed the development of students’ research projects to publishable papers.

A follow up discussion to the issue of large classes revealed that one of the lecturers and one teaching assistant had a class of 870 undergraduate students. They assigned two individual assignments and one group assignment for coursework. They reported that they were stuck with marking and had no time for research for publication or improve the quality of their teaching content.
Recommendations

On the basis of these findings the study recommends that:

1. The university reduces its enrolment number to a maximum ratio of one lecturer to 50 students or that it recruits more teaching assistants for large classes.

2. Some courses can be offered on an alternating semester basis so that lecturers involved have at least a semester without a class which they can use for research and development.

3. Director of Research appoints willing capable research mentors for each school. These could be from within the university or outside. Willing lecturers can be attached to mentors as assistant researchers to learn how to gather data analyse and publish.

4. Scheduled group research activities should be encouraged. Lecturers can present their research activities for peer evaluation at such forums.

5. Workshops be held in which reviewers and editors:
   (a) Spell out publishers' expectations
   (b) Identify main research report weaknesses
   (c) Assist lecturers review each other's research work.
   (d) Encourage lecturers to read and evaluate by identifying strengths and weaknesses of sections of published research articles.
   (e) Assist lecturers identify journals which can publish research articles of their passion.
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