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A Tracer Study of Home Economics Graduates in Botswana: A Case of the University of Botswana

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Abstract
The purpose of this descriptive cross-sectional study was to explore career paths of graduates from the Department of Home Economics Education (DHEE) at University of Botswana (UB). This tracer study involved a survey of market demands, perceived training needs and job satisfaction of participants. A purposive sample of 100 DHEE alumni in government schools and district councils were targeted, but only 63% responded. Results indicate that 82.5% and 17.5% of graduates had bachelor's degree and diploma qualifications from the UB respectively. In terms of occupations of participants, 80% were teachers while 20% were in extension services. Most graduates specialised in foods & nutrition (60%), followed by textiles & clothing (17.8%), family studies (13.3%) and housing & interior design (8.9%). Two thirds of graduates felt adequately prepared for the market. Of participants with aspirations for graduate training 29.5% preferred masters' degree training in human nutrition & dietetics, while 27.8%, 21.3%, 13.1% and 6.6% preferred textiles & clothing, foods & nutrition, child development, and general Home Economics respectively. Among other recommendations, the research proffers that the University of Botswana should offer short term training courses that cater for the demands of a technology driven employment sector.

Introduction
In most educational institutions, educational programmes are evaluated periodically to determine, among other factors, indicators of market saturation, whether the programmes match the market demands and to identify emerging employment sectors for graduates or areas of growth. This is usually done through studies in which data is collected from programme graduates. These studies are typically called tracer studies. Programme tracer studies provide information that informs institutional developments and are especially helpful when market
demands are changing rapidly. As already shown by other authors, programme tracer studies provide information that can enhance programme effectiveness (Schomberg, 2003), or enable institutions to know the whereabouts of their graduates, their working conditions, and stimulate curricular debates that may help future students (Mugabushaka, Schomburg & Teichler, 2002; Lee, 1998).

The benefits of tracer studies are not only confined to training institutions but are also enjoyed by a wide range of stakeholders such as funding agencies, communities and the employment sector. The findings of tracer studies influence the reputation of institutions, which in turn influence graduates' choice of employers (South African Graduate Recruiters Association Employer & Candidate Surveys (SAGRA), 2013). In South Africa, SAGRA conducted a survey using an online questionnaire with 1,826 new or future employees. The survey showed that while candidates made an average of six or seven applications, three-fifths were in the enviable position of having to choose between multiple job offers. In addition, the survey found out that graduate employers continue to strive for new and engaging ways to interact with students such as social networking in an effort to create a dialogue with students and to help them understand the opportunities on offer.

In Botswana, tracking of graduates needs to be improved. While programmes are developed with the intention to produce graduates that are suitably qualified for the job market, whether this noble objective is achieved has not been adequately studied. Generally programmes take long without conducting tracer studies. Without feedback information from the graduates it is difficult to ascertain whether the graduates produced have competency skills that the employment sector requires or whether the employment sector can still absorb graduates.

The Department of Home Economics Education (DHEE) at the University of Botswana (UB) is one department that has not conducted tracer studies since its establishment; yet it has graduated about 20 bachelors' degree students each year over the last ten years. Traditionally these graduates have been employed by the Ministry of
Education and the Departments of Social Services in the District/Town/City Councils. However, following the steady increase in the number of graduates and shrinking employment opportunities, some graduates have found employment opportunities in non-traditional Home Economics sectors. This trend has been growing steadily and has, as a result, prompted the researchers to examine how adequately the current Home Economics programme prepares graduates for the traditional Home Economics employment sectors. Secondly, there is a need to examine potential employment niches and growth areas that the Home Economics profession should exploit. These issues are particularly important because there is a tendency for employment opportunities in the traditional sectors to shrink over time.

**Rationale**
The purpose of this tracer study was to explore career paths of the Home Economics Education graduates, their market demands, perceived training needs and job satisfaction. The specific objectives of the study were to:

i) identify the main employment opportunities for the DHEE graduates

ii) explore the market preparedness of DHEE graduates for employment

iii) probe job satisfaction of graduates

iv) determine the short and long term training needs of DHEE graduates

v) establish whether graduates maintain communication links with the University and other alumni

**Methodology**

**Sample and sampling procedure**

A descriptive cross sectional survey methodology was used in this study. A purposive sample of 100 subjects was targeted from the Ministries of Education and Local Government. Home Economics lecturers participating in the teaching practice or internship supervision exercise delivered 100 questionnaires to Home Economics teachers in junior and senior secondary schools throughout the country and graduate staff in the Home Economics units in councils.
Each questionnaire had a cover letter explaining the purpose of the survey and requesting alumni to participate in the study. Staff members who delivered the questionnaires were instructed to record contact details of the participants who received the questionnaires to facilitate follow up. Participants were requested to complete the instrument and return it to the Home Economics staff member who delivered it. If this was not possible the participants were asked to hand over the questionnaires to the HE students on placement or mail them to the Department of Home Economics. All respondents who were not able to complete and hand over the questionnaires to the HEE staff as requested were followed up by telephone and reminded to complete and return the instruments.

Research instrument
A survey questionnaire which consisted of twenty six questions was developed by the researchers to collect data for this study. The questionnaire was divided into six parts and all questions required fixed responses. The first two sections of the questionnaire had five questions which covered respondents' demographic characteristics and formal academic qualifications. In the next two sections subjects were required to give responses about their current, previous employment and job satisfaction. Questions in the last two sections required the subjects to describe the short and long term training they undertook, if any, after graduating from UB as well as any future training plans and / or aspirations. The instrument also had questions that requested graduates to indicate whether they maintained links with the university and /or fellow graduates as well as how they communicated.

Results
Demographic characteristics of HEE graduates
Of the 100 questionnaires distributed to schools and Local Government Departments only 63 completed useable questionnaires were returned. Repeated efforts to obtain the remaining questionnaires were not fruitful. Consequently the response rate of this assessment was only 63%. This survey captured graduates from 1993 to 2007. Most instruments were completed by graduates who completed in 2007(19.7%), 2004 (14.8), 2006 (13.1%); 2003 (13.1%) and 2005
(8.2%). Only 6.6% of participants in this survey graduated in 1998, 2002 or 2003. The sample poorly captured alumni who graduated in other years.

Observations drawn from this study showed that graduates were mostly women (93.7%). Furthermore, most participants (45.9%) were between 20-24 years of age when they graduated while 22.8% and 31.5% were between 25 and 30 years or at least 31 years of age respectively. About two thirds of the participants (66.1%) reported that the Home Economics qualification they obtained through the department was their first tertiary education qualification while 33.9% had prior tertiary education qualification. Of the graduates captured in this study, 82.5% obtained a bachelor's degree qualification while 17.5% obtained diploma qualification through the Department of Home Economics Education.

**Employment areas for graduates**
The Home Economics Education degree at the University of Botswana prepares students for teaching or extension services. Within these specialisations, students also have an opportunity to select an area of emphasis from any of the following four: foods and nutrition, textiles and clothing, housing and interior design, and human development. The results from this survey showed that 80% of captured graduates had specialised in teaching while 20% were in extension services. The most common area of emphasis was food and nutrition (60%) followed by textiles and clothing (17.8%), family studies (13.3%) and housing and interior design (8.9%). These proportions are similar to the enrolment figures in the programmes' areas of emphasis and specialisations.

Of the participants who were absorbed in teaching institutions, 55.4% reported that they were expected to teach all subject areas of Home Economics, while 16.1%, 10.7%, and 3.8% were expected to teach primarily in the areas of foods and nutrition, home management and fashion and fabrics respectively. It is worth noting that the home management area requires skills in all areas of Home Economics. Consistent with the high proportion of graduates who specialised in education, most graduates were employed by training institutions.
(schools); with 62.9% and 24.2% of participants employed in community junior secondary schools and senior schools respectively. Only 12.9% of participants were employed by councils. Most graduates (73.3%) were employed within three months of their graduation, while 23.7% were employed within a year of graduation. Only about 5% were employed after a year of graduation.

**Graduate preparedness for the job market**

Table 1 shows subjects' perceptions about the adequacy of their training at UB. As displayed in the table, 68.8% felt that their pre-service training adequately prepared them for the job they do, while 29.5% felt that they were not adequately prepared. This observation was more likely to be reported by older graduates \((28-34 \text{ years versus } 22-27 \text{ year}\ (x^2 = 57 \ p < .01))\) and graduates who had a university qualification from other institutions before they enrolled at the University of Botswana \((x^2 = 7.219 \ p, .01)\). There are several explanations for these observations. First, in this study almost all younger participants were first time graduates and were therefore less likely to be required by their employers to work in areas outside their areas of specialisation \((p < 01)\). On the other hand, 37% of older graduates had a university qualification from other institutions before enrolling in the current programme. It is therefore plausible that participants with experiences from other programmes were probably comparing this programme with others. It is also likely that older graduates felt inadequately prepared because their employers assigned them tasks they would otherwise not assign a first time job entrant because of their prior qualifications. Whatever the reasons, there is need for the programme to strive to improve graduates' preparedness for the work place.

**Table 1**

**Perceived adequacy of training**

<table>
<thead>
<tr>
<th>Adequacy of training</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very adequate</td>
<td>18.0</td>
</tr>
<tr>
<td>Adequate</td>
<td>50.8</td>
</tr>
<tr>
<td>Not adequate</td>
<td>29.5</td>
</tr>
<tr>
<td>Poor</td>
<td>1.6</td>
</tr>
</tbody>
</table>
**Graduate's perceived job satisfaction**

When asked to respond to questions about different jobs, 77.1% of participants reported that they found it easy to fit into their new positions (Table 2). Furthermore, 81.7% and 98.3% felt that their immediate supervisors knew their competencies and were satisfied with their performance respectively. However, the proportion of participants who found their job fulfilling was somewhat low (73.7%), given that 98.3% had competencies which pleased their supervisors. The proportion of participants who felt that the pay structure for Home Economists was gratifying was even lower (20%).

Table 2

*Perceptions at areas of work*

<table>
<thead>
<tr>
<th>Reaction</th>
<th>It was easy to fit into my job</th>
<th>Supervisor knows my competencies</th>
<th>Supervisor satisfied with competencies</th>
<th>HE job very satisfying</th>
<th>Pay structure gratifying</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>19.7%</td>
<td>26.7%</td>
<td>28.3%</td>
<td>9.8%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Agree</td>
<td>57.4%</td>
<td>55.0%</td>
<td>70.0</td>
<td>63.9%</td>
<td>18.3%</td>
</tr>
<tr>
<td>Disagree</td>
<td>21.3%</td>
<td>13.3%</td>
<td>1.6</td>
<td>21.3%</td>
<td>48.3%</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>0.0%</td>
<td>5.0%</td>
<td>0.0%</td>
<td>4.9%</td>
<td>31.7%</td>
</tr>
</tbody>
</table>

**Training aspirations of participants**

Following didactic training, 25.4% of participants reported undertaking short term skills-oriented on-the-job training. These courses were on various Home Economics subject areas. All short term courses were offered in Botswana and were financed by the employer. The duration of the courses ranged from 1 day to 4 months. However, most courses (35%) were one week long followed by other courses (23.5%) which were two weeks long. Of the few who had the opportunity to go for short term training, 76.5% felt that the courses assisted them tremendously in performing their jobs, while 23.5% felt that they were just helpful.

Compared to short term training, very few participants (8%) have had the opportunity to pursue long term training following their initial...
graduation from the University of Botswana. Only 2% obtained a masters degree in social work from the University of Botswana, while 6% obtained a bachelors degree from the faculty of education from the same university.

A large proportion of participants (80%) expressed desire to pursue a master’s programme in Home Economics related areas. The preferred areas of training at graduate level were human nutrition and dietetics (29.5%), textiles and clothing (27.8%), foods and nutrition (21.3%), child development, and general Home Economics (6.6%). When asked to indicate the sector for which the graduate programme should prepare them, most felt that the programme should prepare them for the industrial sector (33.9%), followed by extension work (27.1%), teaching (23.7%), and policy orientation (11.9%).

<table>
<thead>
<tr>
<th>Preferred field of training at master’s level</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human nutrition and dietetics</td>
<td>29.5</td>
</tr>
<tr>
<td>Textiles and clothing</td>
<td>27.8</td>
</tr>
<tr>
<td>Foods and nutrition</td>
<td>21.3</td>
</tr>
<tr>
<td>Child development</td>
<td>13.1</td>
</tr>
<tr>
<td>General Home Economics</td>
<td>6.6</td>
</tr>
</tbody>
</table>

**Perceived importance of linkages with graduates**

Table 4 summarises subjects' perceptions about the importance of linkages between programme graduates and the DHEE, fellow students and lecturers. Over 60% of participants strongly agreed that it was important for programme graduates to maintain linkages with the Department and their peers. However, much lower percentages of participants either strongly agreed that they maintained contact with the Department (5.2%) or with their peers (30.6%). There was much disparity between subjects' perceptions and actions relating to linkages with the DHEE. While several explanations are possible, it is conceivable that the lack of an established communication modality, such as newsletter, between programme graduates and the Department may have been one of the challenges.
Table 4

*Perceived importance of linkages with DHEE*

<table>
<thead>
<tr>
<th>Reaction</th>
<th>It is Important to maintain contact with the DHEE</th>
<th>It is Important to maintain contact with lecturers</th>
<th>It is Important to maintain contact with classmates</th>
<th>I maintain contact with the DHEE</th>
<th>I maintain contact with classmates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>60.7%</td>
<td>61.3%</td>
<td>67.2%</td>
<td>5.2%</td>
<td>30.6%</td>
</tr>
<tr>
<td>Agree</td>
<td>37.7%</td>
<td>34.9%</td>
<td>31.1%</td>
<td>41.4%</td>
<td>62.9%</td>
</tr>
<tr>
<td>Disagree</td>
<td>1.6%</td>
<td>3.2%</td>
<td>1.6%</td>
<td>44.8%</td>
<td>4.8%</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>8.6%</td>
<td>1.6%</td>
</tr>
</tbody>
</table>

**Discussion**

The DHEE was established with the main purpose of qualifying graduates to work as Home Economics teachers. Consistent with this purpose, observations show that 80% of respondents are in the teaching profession. It was also noted that after completing the programme, graduates get employment within a short period (three to twelve months). This period is similar to that reported in the Kenyan tracer study (Karugu & Otiende, 2001). Consistent with general international trend of tracer studies in Home Economics, observations in this study show that participants were mostly females who graduated between the ages 20-24 years.

While most participants thought that the programme prepared them adequately, one third of the participants felt inadequately prepared. Although this proportion is much smaller than the proportion of the participants who felt adequately prepared, it raises a red flag in terms of the programme's ability to produce graduates who meet the market
demands and are also confident about their skill level. It is clear from participants' responses that the market expects graduates in Home Economics to be proficient in all Home Economics subject areas. It is therefore imperative for the Home Economics programme at UB to strive to meet these expectations; otherwise the programme runs the risk of producing graduates whose skills and competencies are discordant with the demands of the employment sector. Future programme reviews should align streams with various market needs.

In spite of the perceived inadequacies raised by a third of the participants, most graduates report no challenges at work. Furthermore, 98.3% of their supervisors are satisfied with their competencies. Altogether, therefore, observations from this study suggest that the graduates are job - ready for the traditional Home Economics positions. While factors that made the graduates feel underprepared are unclear, such factors though desirable, are less likely to be core home economics skills and competencies.

The participating graduates expressed desire for further training. However, very few had the opportunity to pursue graduate training following their undergraduate qualification at UB. The fact that very few had the chance to pursue long term training for higher degrees, calls for the introduction of advanced degree programme in Home Economics related areas. This is therefore a potential growth area for the university. In terms of prioritisation, it would be reasonable for the university to introduce a master's degree in foods and nutrition at first as this is the area of specialisation that was preferred by most participants.

Observations in this study also show that there is need to improve linkages with alumni. A higher proportion of programme alumni think that it is important to maintain continued contact with their former lecturers. Such continued engagement can enable alumni to suggest ways in which programmes can be improved as they have valuable experience from the field. This is consistent with observations from other studies. In Mexico for example, a two year follow-up study of a public vocational school is reported to have helped improve the curriculum so that it can suit the changing markets (Lee, 1998). In other studies the findings have revealed that vocational skills do not
necessarily assure employment after graduation Lauglo (2004) and these results have helped the concerned institutions to revisit the issue of vocational subjects.

In another tracer study by Karugu and Otiende (2001), the findings were used to depict changes in the labour market. These tracer studies revealed that while graduates of 1985-1989 were employed within three months, graduates of 1993-1995 waited for up to one year before securing employment. Such findings suggest changes in the labour market and possibly the need for advanced degrees. In this study, 80% of the graduates had not undertaken any further training since graduation. Furthermore, 93% of those employed had not changed their jobs, possibly because of favourable working conditions or lack of suitable alternatives.

Continued engagement with alumni can also be used to benefit the graduates. For example, the Japan Student Services Organisations (JASSO) tracer studies in Japan are not only used for the purpose of improving programme or checking employability of graduates but for further development of the alumni. In such programmes, alumni are periodically recalled by universities to be involved in joint research with relevant faculty members. Without such efforts, linkages between graduates and their institutions can gradually die. JASSO also dispatches research advisors to visit international students who have returned to their countries after having studied in Japan. The research advisors provide advice and academic support to students who are currently engaged in education or research at their schools (JASSO, 2013).

In another study in Malawi, Zembere and Chinyama (1996) established that 70 percent of the respondents had no contacts with the university. Lastly and as expected the study succeeded in reaching alumni in traditional employment sectors for Home Economics, with all 63% of respondents in such employment sectors. Future studies should extend to alumni in non-traditional employment sectors for Home Economics as their feedback may guide the Department into new employment sectors with potential for more growth. This is important because there
is a general concern that tracer studies are not representative, as almost invariably, alumni in non-traditional work places of their qualifications are often not easy to reach. During their tracer study, Zembere and Chinyama (1996) experienced the same challenges as they received only 29.4% of questionnaires, most of which were from alumni in traditional employment sectors.

A challenge in this study was the lower response rate, hence future studies should strive to reach and retain more participants.

**Recommendations**

From this study the researchers have come up with the following recommendations:

- Alumni tracer study is an important tool that should be carried out from time to time as it provides information to the Department so that the programme is tailored to meet the needs of the market.
- The DHEE should respond to the perceived weaknesses of the programme so that these can be rectified early.
- The DHEE needs to establish strong linkages with graduates and between graduates as this will help to develop and improve the programmes offered.
- The university should also strive to carve a niche in the short term courses market. With about a quarter of alumni having attended at least one short term training course at other competing institutions and about 35% of participants expressing the helpfulness of short courses, this can be a lucrative opportunity for the university. The university, with its credibility in higher education, is best placed to influence the quality standards in short courses where public concerns about quality continually make headlines in the national newspapers.

**Conclusion**

Clearly there is a need for advanced degrees in Home Economics Education specialisations. There are two major reasons the Department should especially prioritise a master's degree programme in human nutrition, foods and nutrition and dietetics. Firstly, there are many
alumni with foods and nutrition as an area of specialisation. Secondly, over 50% of surveyed participants expressed interest in pursuing a master's degree in human nutrition and dietetics (29.5%) or foods and nutrition (21.3%). Other areas where interest has been expressed by larger percentages of alumni are masters' degree in clothing and textiles (27%), and child development (13.1%).
References


