OVERVIEW

Graduate Tracer Surveys constitute one form of empirical study which provides valuable information for evaluating the results of the education and training of a specific institution of higher education. At the UWI, the Graduate Tracer Surveys provide evidenced based information and key performance indicators for analyzing and evaluating the outcomes of higher education training.

RATIONALE/OBJECTIVES

*Figure 1* below shows rationale for conducting Graduate Tracer Surveys and *Figure 2* outlines the objectives of study.

*Figure 1 - Rationale*
**Figure 2 - Objectives**

**SURVEY COVERAGE**
- **Coverage** - Four cohorts across all Campuses were surveyed over one year (12-15 months) after graduation. The breakdown by year were as follows:
  - 2007 cohort - 5,453 surveyed of which 1,309 or 26% responded,
  - 2008 cohort - 5,473 surveyed of which 1,523 or 28% responded.
  - 2009 cohort - 5,728 surveyed of which 2,110 or 37% responded
  - 2011 cohort - 5,069 surveyed of which 822 or 16% responded.

**Methods of contact**
- Mail out Questionnaires
- Telephone interviews
- Online – Survey Monkey

**Limitations**
- Contact information missing or obsolete
- Low response to online survey

**EMPLOYMENT RATES OF UWI GRADUATES BY COUNTRY**

Overall employment rates for UWI graduates between 2009 and 2013 revealed that while the majority of graduates found employment, there were still large numbers of unemployed graduates and the time series data suggest a decreasing trend in employment rates moving from an overall rate of 87% in 2009 to 78% in 2013.

Employment rates varied by country with higher rates in the ECCU countries

There was a steady decline in employment rates across CARICOM countries since 2009, particularly in the Jamaican and Barbadian economies
EMPLOYMENT RATES BY FACULTY/AREA OF STUDY

- Employment rates varied by Faculty and area of study with a clear pattern over the period examined across campuses showing above average employment rates annually for Education, Medical Sciences and Engineering while below average employment rates were observed for graduates in specific programs from Agriculture, Science and Technology, Humanities and Social Sciences across campuses.

- In is very evident from the results of the four surveys conducted that on a perennial basis graduates in specific areas of study (shown in Figure 3 below) experience less that desirable employment prospects which for many was a reality check.

Figure 3 - Level of Employment Rates by Area of Study: 2009 – 2013

High employment rates – 90% and over
- **Medical Sciences** - Medicine, Dentistry, Pharmacy, Nursing, Physical therapy, Diagnostic Imaging
- **Education**
- **Engineering** - Mechanical, Civil, Chemical and Process/Petroleum, Electrical & Computer
- **Humanities** - Creative and Festival Arts, Library and Information Studies

Moderate employment rates – between 80% and 89%
- **Social Sciences** - Management Studies,
- **Engineering** - Geometrics and land Information
- **Sciences** - Computing & Information Technology - Computer Science, Information Technology, Mathematical & Statistics, Actuarial Science
- **Agriculture** - Agricultural Economics and Extension,
- **Humanities** - Literary, Cultural & Communication Studies - Literature in English, Communication Studies, Film Studies, Latin American Studies

Low employment rates – Below 80%
- **Agriculture** - Food Production - Agriculture, Livestock, Agronomy
- **Science** - Life Sciences, Physical Sciences (Physics, Geography, Chemistry
- **Humanities** - History, Modern Languages and Linguistics,
- **Social Sciences** - International Relations, Behavioral Sciences(Sociology, Psychology), Economics
- **Law** - LLB
- **Engineering** - Geomatics & Land information
REASONS FOR NOT BEING EMPLOYED

- The majority of graduates not employed indicated that they were experiencing difficulties in getting employment due to lack of opportunities, lack of jobs related to their degree or lack of experience.
- Just over one third indicated that they were not employed because of further studies, a situation which for some of them may have been influenced by a lack of job opportunities.

CHART 2 - REASONS FOR BEING UNEMPLOYED BY YEAR - UWI

UNDEREMPLOYMENT LEVELS BY FACULTY

- A significant amount of employed graduates reported that they were employed in low level jobs that require a minimum of secondary level education particularly for graduates in Social Sciences and Agriculture and Humanities (See Chart 3 below)
- Many of these graduates were stuck in clerical or other lower level jobs suggesting a "waste" of investment in higher education skills
- Graduates were more likely to be employed in secondary level jobs if they possessed a 'pass' and to a lesser extent a 'lower second class' undergraduate degree

CHART 3 - % DIST. OF EMPLOYED GRADUATES BY LEVEL OF JOB, FACULTY/YEAR

<table>
<thead>
<tr>
<th>Faculty/Year</th>
<th>Graduate Level</th>
<th>Intermediate/Stepping Stone</th>
<th>Secondary Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Med-2013</td>
<td>84.1%</td>
<td>60.7%</td>
<td>21.6%</td>
</tr>
<tr>
<td>Med-2010</td>
<td>96.2%</td>
<td>96.9%</td>
<td>29.7%</td>
</tr>
<tr>
<td>Edu-2011</td>
<td>83.7%</td>
<td>51.8%</td>
<td>7.2%</td>
</tr>
<tr>
<td>Eng-2013</td>
<td>92.8%</td>
<td>85.7%</td>
<td>7.2%</td>
</tr>
<tr>
<td>Eng-2010</td>
<td>88.1%</td>
<td>75.0%</td>
<td>14.3%</td>
</tr>
<tr>
<td>Human-2011</td>
<td>51.8%</td>
<td>51.0%</td>
<td>19.4%</td>
</tr>
<tr>
<td>Science-2013</td>
<td>47.4%</td>
<td>43.8%</td>
<td>14.6%</td>
</tr>
<tr>
<td>Science-2010</td>
<td>47.4%</td>
<td>43.8%</td>
<td>22.2%</td>
</tr>
<tr>
<td>Soc. Sci-2011</td>
<td>41.2%</td>
<td>43.8%</td>
<td>21.1%</td>
</tr>
<tr>
<td>Agric-2013</td>
<td>38.9%</td>
<td>37.5%</td>
<td>18.8%</td>
</tr>
<tr>
<td>Agric-2010</td>
<td>21.3%</td>
<td>37.8%</td>
<td>6.3%</td>
</tr>
</tbody>
</table>

Notes to Chart 3

a. **Level 1 - Graduate level skilled jobs** - comprise (1) Professionals and (2) Managers. These jobs usually require a minimum of a University First Degree for entry.

b. **Level 2 - Intermediate jobs or “stepping stone” jobs** - comprise (1) Technicians and Associate professionals and (2) Supervisors. These jobs usually require tertiary level vocational/technical training/associate degrees. In many instances employers may employ graduates with first degrees because of the competitive nature of the jobs market within recent times. Many university graduates use these jobs as a stepping stone to professional or managerial jobs. (This category excludes graduate trainee positions that are strictly for university first degree graduates).

c. **Level 3 - lower level jobs (underemployment)** - comprise (1) Clerical workers (2) Service and Sales workers (3) Protective Services and (4) Other unskilled. For these jobs the entry level is a minimum of a secondary level education or even less.

SOME FACTORS INFLUENCING UNEMPLOYMENT/UNDEREMPLOYMENT RATES IN CARICOM ECONOMIES

Figure 4 – Factors influencing unemployment/underemployment in the region

- Declining/stagnant economic growth
- Reliance on public sector
- Limited diversification of economies
- Mismatch between supply and demand of graduates
- Lack of work experience
- Employability skills gap

MEDIAN SALARY OF GRADUATES BY ECONOMY – NOMINAL AND REAL

- Nominal salaries remained fairly stable for Barbados and ECCU countries, increased for Jamaica and declined marginally for Trinidad and Tobago
- Real salaries declined (negative growth rates) for all graduates in all countries in the region during the period observed, with graduates working in Trinidad and Tobago having an average real growth rate for the period of -11%, followed by Jamaica with -8.8%, Barbados with -6.7% and The ECCU with -3.3%.

Table 1 Median Salaries of Graduates by Economy – Nominal and Real

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Barbados Economy (BDS$) – Nominal Value</td>
<td>3,500</td>
<td>3,200</td>
<td>3,258</td>
<td>3,500</td>
<td>0.00%</td>
</tr>
<tr>
<td>Barbados Economy (BDS$) – Real Value</td>
<td>3,704</td>
<td>3,200</td>
<td>2,978</td>
<td>3,004</td>
<td>-6.74%</td>
</tr>
<tr>
<td>Jamaican Economy (JA$) – Nominal</td>
<td>85,000</td>
<td>85,000</td>
<td>88,000</td>
<td>93,024</td>
<td>3.05%</td>
</tr>
<tr>
<td>Jamaican Economy (JA$) – Real</td>
<td>95,721</td>
<td>85,000</td>
<td>81,860</td>
<td>74,005</td>
<td>-8.22%</td>
</tr>
<tr>
<td>T’dad &amp; T’go Economy (TT$) – Nominal</td>
<td>8,500</td>
<td>8,400</td>
<td>8,000</td>
<td>8,000</td>
<td>-2.00%</td>
</tr>
<tr>
<td>T’dad &amp; T’go Economy (TT$) – Real</td>
<td>9,392</td>
<td>8,400</td>
<td>7,612</td>
<td>6,623</td>
<td>-10.99%</td>
</tr>
<tr>
<td>ECCU(EC$) - Nominal</td>
<td>3,633</td>
<td>3,303</td>
<td>3,771</td>
<td>3,780</td>
<td>1.33%</td>
</tr>
<tr>
<td>ECCU(EC$) - Real</td>
<td>3,767</td>
<td>3,303</td>
<td>3,638</td>
<td>3,408</td>
<td>-3.28%</td>
</tr>
</tbody>
</table>

N.B. Real Salaries were calculated using the Consumer Price Index as conversion factor
INITIAL EARNING LEVELS OF GRADUATES BY FACULTY/AREA OF STUDY

Generally there was a correlation between reported median monthly salaries and employment rates. The top tier of median salaries reported has consistently been graduates from the Faculty of Medical Sciences in all four surveys, followed by Education and Engineering. The mid to low tier comprised graduates from Social Sciences, Science & Technology Agriculture and Humanities.

Figure 5 - Example of Variations in Initial Earning Levels of Graduates by Faculty/Area of Study

Top Tier – above median
- Medical Sciences – Medicine, Dentistry, Pharmacy
- Education
- Engineering – Civil, Electrical Chemical, Mechanical

Mid Tier – around median
- Social Sciences – Management Studies
- Science and Technology – Mathematics, Computer Sciences
- Engineering – Geomatics and Land Surveying

Bottom Tier – below median
- Science and Technology – Life Sciences, Physical Sciences
- Humanities - History, Literary, Cultural & Communication Studies
- Agriculture – Agricultural Extension and Economics

N.B. The list here is not exhaustive

CORRESPONDENCE BETWEEN OCCUPATIONS AND ACQUIRED QUALIFICATIONS

- The relevance of the graduates’ qualification to the job they held at the time of the survey was quite low in some areas. Social Sciences (53.8%), Science & Technology (42.4%) and Humanities (43.4%) indicated that their degrees were not related to their current jobs. In terms of skills being utilised in current job the trend was similar.
- Graduates in Medical Sciences (92.3%), Education (87.3%) and Agriculture (81.3%) and Engineering (77.6%) were more likely to agree that their current job was related to their degree. In terms of skills being utilised in current job the trend was similar.

Chart 4 - Is your first degree qualification relevant to your current job? – (2013 Survey) - % Agree/Strongly Agree

<table>
<thead>
<tr>
<th>Field</th>
<th>% Agree/Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>92.3%</td>
</tr>
<tr>
<td>Medical Sciences</td>
<td>87.3%</td>
</tr>
<tr>
<td>Agriculture</td>
<td>81.3%</td>
</tr>
<tr>
<td>Engineering</td>
<td>77.6%</td>
</tr>
<tr>
<td>Science &amp; Technology</td>
<td>57.6%</td>
</tr>
<tr>
<td>Humanities</td>
<td>56.6%</td>
</tr>
<tr>
<td>Soc Sci</td>
<td>46.4%</td>
</tr>
</tbody>
</table>

**ARE YOU SATISFIED WITH YOUR CURRENT JOB LEVEL?**

- Less than half of UWI graduates were satisfied with their job level, particularly so in Science and Technology, Humanities and Agriculture
- As expected graduates employed in Level 1 (Graduate level jobs) were more likely to be satisfied as opposed to being dissatisfied and vice versa.

---

**Chart 5 - Are the skills and knowledge you acquired during your studies being used in your current job? - 2013 - %Strongly Agree/Agree**

<table>
<thead>
<tr>
<th>Field</th>
<th>2013 - %Strongly Agree/Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>92.2%</td>
</tr>
<tr>
<td>Medical Sciences</td>
<td>89.1%</td>
</tr>
<tr>
<td>Engineer</td>
<td>69.4%</td>
</tr>
<tr>
<td>Agriculture</td>
<td>68.8%</td>
</tr>
<tr>
<td>Humanities</td>
<td>59.2%</td>
</tr>
<tr>
<td>Science &amp; Technology</td>
<td>58.5%</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>52.9%</td>
</tr>
</tbody>
</table>

**Chart 6 - Satisfied with current job level by Faculty - %Strongly Agree/Agree**

<table>
<thead>
<tr>
<th>Faculty</th>
<th>% Strongly Agree/Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineer</td>
<td>53.20%</td>
</tr>
<tr>
<td>Med Sci</td>
<td>43.60%</td>
</tr>
<tr>
<td>Educ</td>
<td>37.30%</td>
</tr>
<tr>
<td>Soc Sci</td>
<td>30.80%</td>
</tr>
<tr>
<td>Agric</td>
<td>26.70%</td>
</tr>
<tr>
<td>Science</td>
<td>25.40%</td>
</tr>
<tr>
<td>Human</td>
<td>25.30%</td>
</tr>
</tbody>
</table>

**Chart 7 - Satisfaction Levels by Level of Job**

<table>
<thead>
<tr>
<th>Level of Job</th>
<th>% Dissatisfied/Very Dissatisfied</th>
<th>% Moderately Satisfied</th>
<th>% Satisfied/Very Satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary</td>
<td>80.0%</td>
<td>10.0%</td>
<td>10.0%</td>
</tr>
<tr>
<td>Intermediate</td>
<td>55.1%</td>
<td>24.5%</td>
<td>20.4%</td>
</tr>
<tr>
<td>Graduate</td>
<td>31.3%</td>
<td>24.4%</td>
<td>44.3%</td>
</tr>
</tbody>
</table>

% Satisfied/Very Satisfied

EMPLOYMENT BY SECTOR

- Over the period, the Public sector had consistently been the largest employer of UWI graduates in Trinidad and Tobago, Jamaica and the ECCU while in Barbados more graduates were usually employed in the Private sector
- This implies limited private sector employment opportunities in most CARICOM economies
- Low levels of employment in the Private sector are due to structural underdevelopment (lack of diversification) of CARICOM economies and can only be fully addressed in the medium to long term

Table 2 – Employed Graduates by Sector by Country by Year

<table>
<thead>
<tr>
<th>Sector</th>
<th>JAMAICA</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>33%</td>
<td>36%</td>
<td>37.5%</td>
<td>37.3%</td>
<td>28%</td>
<td>30%</td>
<td>27.1%</td>
<td>35.5%</td>
</tr>
<tr>
<td>Public</td>
<td>59%</td>
<td>56%</td>
<td>53.6%</td>
<td>52.1%</td>
<td>63%</td>
<td>58%</td>
<td>66.4%</td>
<td>56.6%</td>
</tr>
<tr>
<td>Other</td>
<td>8%</td>
<td>8%</td>
<td>8.9%</td>
<td>10.7%</td>
<td>9%</td>
<td>12%</td>
<td>6.5%</td>
<td>7.8%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sector</th>
<th>BARBADOS</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>TRINIDAD &amp; TOBAGO</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>48%</td>
<td>57%</td>
<td>49.1%</td>
<td>53.2%</td>
<td>15.2%</td>
<td>13.8%</td>
<td>33.3%</td>
<td>25.6%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public</td>
<td>45%</td>
<td>33%</td>
<td>43.1%</td>
<td>38.3%</td>
<td>82.6%</td>
<td>79.3%</td>
<td>60.6%</td>
<td>71.8%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>7%</td>
<td>10%</td>
<td>7.8%</td>
<td>8.5%</td>
<td>2.2%</td>
<td>6.9%</td>
<td>6%</td>
<td>2.6%</td>
<td></td>
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</tr>
</tbody>
</table>

EXTENT TO WHICH GRADUATES ARE PURSUING FURTHER STUDIES

- The proportion of graduates going on to further studies (mostly taught masters) has increased from 23.6% in 2009 to 38% in 2013
- Shrinking employment prospects have left many graduates with no alternative but to try to ride out the recession by extending their studies. This trend masks extent of unemployment among graduates
- There was an increasing number of students opting to work and study at the same time and this has implications as to the way these programmes should be structured and delivered

IMPACT OF UWI EDUCATION ON THE DEVELOPMENT OF EACH OF THE FOLLOWING ATTRIBUTE

- Graduates were asked to rate the impact of their UWI education on each of the seven attributes outlined in the UWI 2012-17 Strategic Plan
- Low ratings indicating these were problematic areas were given to 'Innovative and Entrepreneurial Skills' and 'Information Technology skills'.
- Greater focus needs to be placed in strengthening these skills since creating wealth and developing innovation for a knowledge based economy requires a skilled labour force with these key attributes

IMPACT OF UWI EDUCATION ON THE DEVELOPMENT OF EACH OF THE FOLLOWING ATTRIBUTE? – YOUNG VS MATURE GRADUATES

When the data was analysed to determine whether there were differences in the opinion of young graduates (under 30 years of age) and mature graduates (30 years and over) it is observed that there are significant

Differences in most instances. As shown in Chart 11 young graduates gave lower ratings for Critical Ratings, Communication and Interpersonal Skills, Socially Responsible, Globally Aware and Ethical Values. On the other hand, the ratings for Information Technology and Innovative and Entrepreneurial were much closer between the two groups with a gap that was significantly less.

![Chart 11 - Graduates' Opinion on Development of Attributes - Young vs Mature – UWI (% saying Strong/Very Strong)](image)

ISSUES AND RECOMMENDATIONS

**Issue # 1: Unemployment, underemployment and key attributes not sufficiently developed**

**Recommendation:** Reduce the gap between graduate employability skills and employer needs by building on existing good practice within the University. This would include among other things:

- Curricular innovation - discipline-specific and transferable skills (attributes)
- Extra-curricular activities leading to certification
- Work placements and internships
- Enhance multidisciplinary content
- Support for Personal Development Planning
- Establishment of advisory committees
- Opportunities for volunteering and placement experience overseas
- Employer engagement in curriculum reform
- Marketing packages of services to employers

**Issue # 2: Limited generation of systematic real time labour market intelligence data to meet labour market needs and make strategic interventions.**

**Recommendation:** Build / strengthen capacity to monitor real time labour market needs in the region.

• Encourage capacity building and institutionalisation in this area at UWI. UWI can become a hub for Labour market information studies.
• Strengthen the capacity of national statistical agencies across the region with regards to labour market statistics

Issue # 3: Survey results suggest an oversupply of graduates in particular areas and high demand in other areas

Recommendation: Reallocate scarce resources to correct the labour market disequilibrium

• Consider where possible strategic reallocation of scarce resources to areas to fill gaps that are in demand and are critical to development and/or aligned to the needs of the labour market
• Reduce areas where there is a glut in the supply of graduates to optimum levels

Issue # 4: Young graduates are not prepared for the competitive and harsh labour market conditions due to lack of proper career guidance advice

Recommendation: Institutionalization and strengthening of dedicated career advice and placement services particularly to young graduates

• Strengthen and build current capacity in this area
• Target secondary school and UWI new entrants.
• Expand internships opportunities for graduates

Issue # 5: Graduates feel that their entrepreneurial and innovative skills were not sufficiently developed. Being ‘Innovative and Entrepreneurial’ is one of the key attribute a UWI should possess.

Recommendation: Create an Innovative and entrepreneurial culture that would enhance the levels of self-employment and stimulate economic activity

• Continue developing courses, programs and initiatives that help develop students into innovative, entrepreneurial thinkers and global citizens.
• Lobby governments and private sector businesses to remove barriers and provide incentives for graduates to start up their own business

Issue # 6: The absorptive capacity for the number of graduates coming out of UWI is limited particularly in the private sector and the problem here is mainly structural

Recommendation: Expand UWI’s role in Economic transformation of Caribbean Countries

• The University must have a greater impact by conducting research and studies that will impact national policy making, analysis and evaluation particularly as it relates to economic transformation and diversification.
• Continue to formalize/strengthen links and partnerships with industry and commerce in key specific areas

Issue # 7: Graduates feel that their IT and Information skills were not sufficiently developed.

Recommendation: Close the Technology gap in teaching, learning and research

• Continue developing courses, programs and initiatives that help develop students IT and Information skills
• Examine ways to integrate tools such as the social networking phenomena, virtual reality websites, enhancing mobile learning(m-learning) and online video repository and delivery websites to further enhance the learning experience and improve productivity through flexible learning environments

Issue # 8: Widening of the gap between the tertiary educated workforce and occupational opportunities could only serve to worsen migration of tertiary educated workforce

• Recommendation: Conduct further research that addresses the brain drain problem
• conduct new studies that can provide reliable data as well as measure impact on the region through the loss of human capital

**Issue # 9:** Survey results indicate an increasing number of local and regional TLI’s as well as foreign universities are now competing for our best graduates.

**Recommendation:** Address competition from other TLI’s for enrolling in postgraduate programmes

• Ensure that higher degree programmes are more competitive or attractive and aligned with market needs.
• Enhance current as well as further expand articulation agreements with other tertiary institutions in the region and elsewhere

**Issue # 10:** Increasing number of graduate students who work full-time and further study at the same time.

**Recommendation:** Flexible delivery of postgraduate programmes to accommodate the busy work schedule of graduates is needed

• Deliver in a flexible mode that combines innovative class scheduling and online courses
• Full implementation of the Single Virtual University Space(SUVS) - The vision of the Single Virtual University Space is to utilize technology to enable an environment which allows students from anywhere in the university to take classes from a single basket of programmes and courses.

*Prepared by Anand Dass, Senior Planning, University Office of Planning and Development, April 2016*