HIGHLIGHTS OF REPORT ON RECENT UWI FIRST DEGREE GRADUATE EXPERIENCE BEYOND GRADUATION – A COMPARATIVE ANALYSIS OF FOUR TRACER SURVEYS CONDUCTED IN 2009,2010, 2011 AND 2013 FOR UWI CAMPUSES GRADUATE TRACER SURVEYS - 2009, 2010, 2011 AND 2013
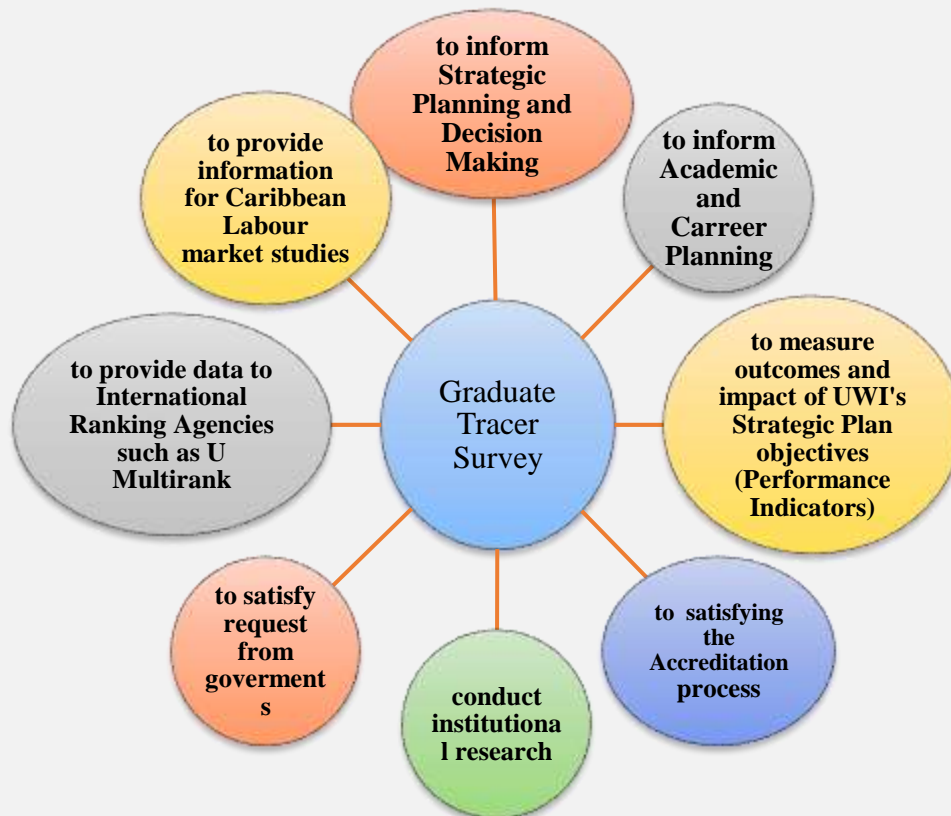
OVERVIEW

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.
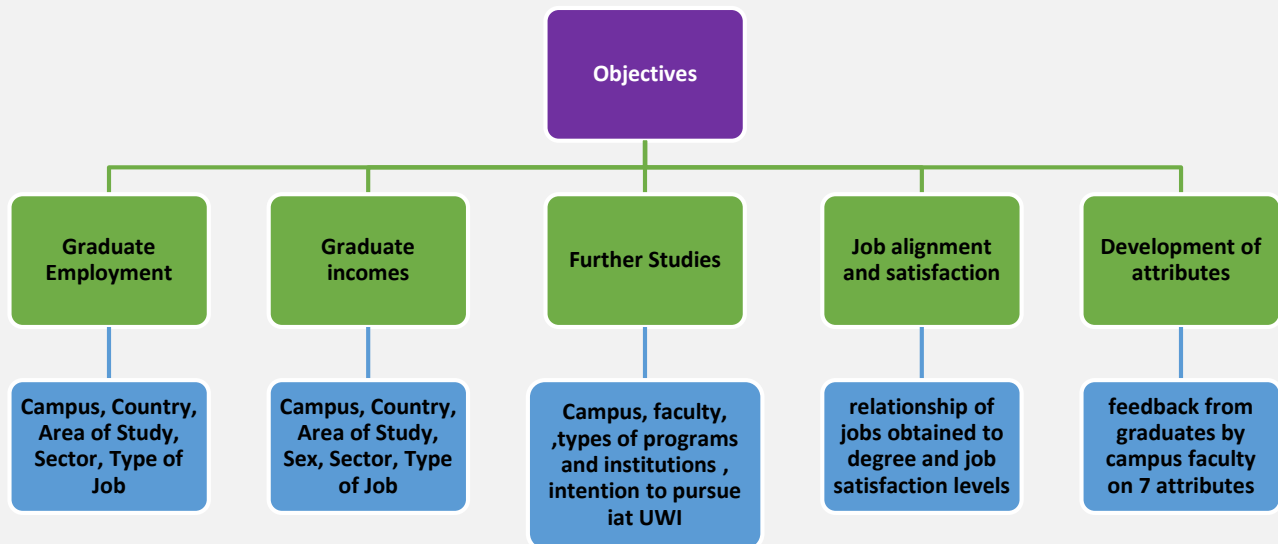
RATIONALE/OBJECTIVES

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

Figure 1 - Rationale

Figure 2 - Objectives

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                              │  Objectives  │
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│ Graduate │ │ Graduate │ │ Further  │ │Job alignment │ │Development of│
│Employment│ │ incomes  │ │ Studies  │ │and satisfac- │ │  attributes  │
│          │ │          │ │          │ │    tion      │ │              │
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| Campus, Country, Area of Study, Sector, Type of Job | Campus, Country, Area of Study, Sex, Sector, Type of Job | Campus, faculty, ,types of programs and institutions , intention to pursue iat UWI | relationship of jobs obtained to degree and job satisfaction levels | feedback from graduates by campus faculty on 7 attributes |

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 2110 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

CHART 1 - UWI GRADUATE EMPLOYMENT RATES IN SELECTED CARICOM ECONOMIES BY YEAR
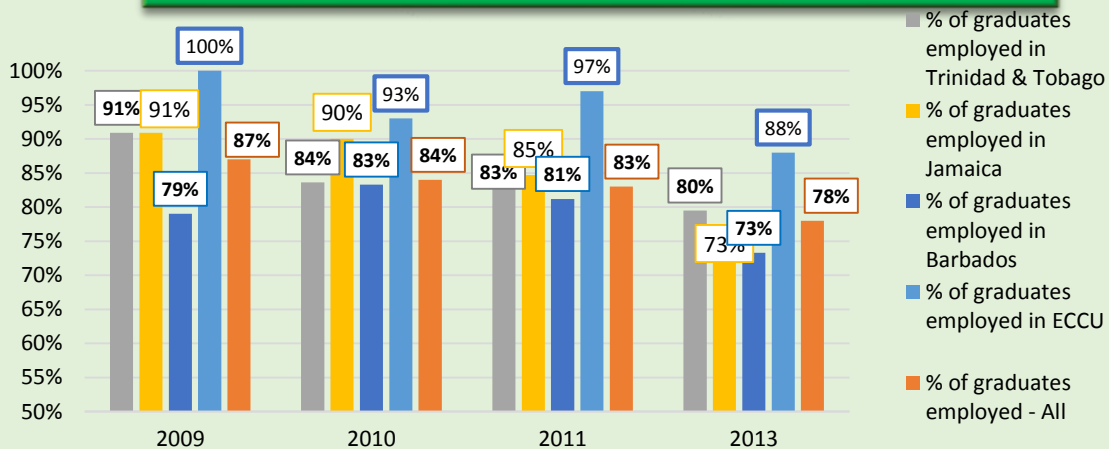
EMPLOYMENT RATES BY FACULTY/AREA OF STUDY

- 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.

<u>Figure 3</u> - Level of Employment Rates by Area of Study: 2009 – 2013

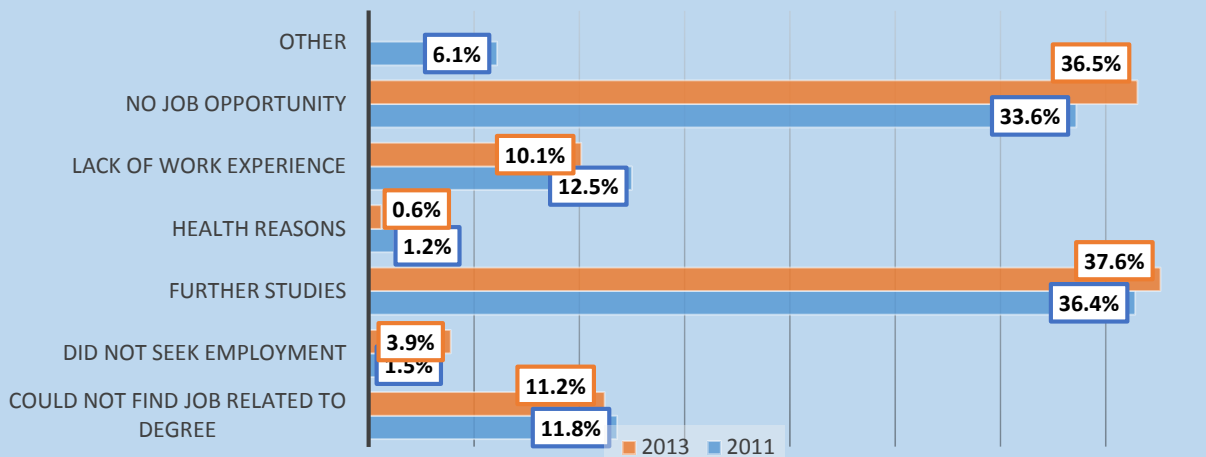| High employment rates – 90% and over	•**Medical Sciences** - *Medicine, Dentistry, Pharmacy, Nursing, Physical therapy, Diagnostic Imaging* •**Education** •**Engineering** - *Mechanical, Civil, Chemical and Process/Petroleum, Electrical & Computer* •**Humanities**- *Creative and Festival Arts, Library 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, Mathematic & Statistics, Actuarial Science* •**Agriculture** - *Agricultural Economics and Extension*, •***Humanities*** - Literary, Cultural & Communication Studies - Literatures 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.
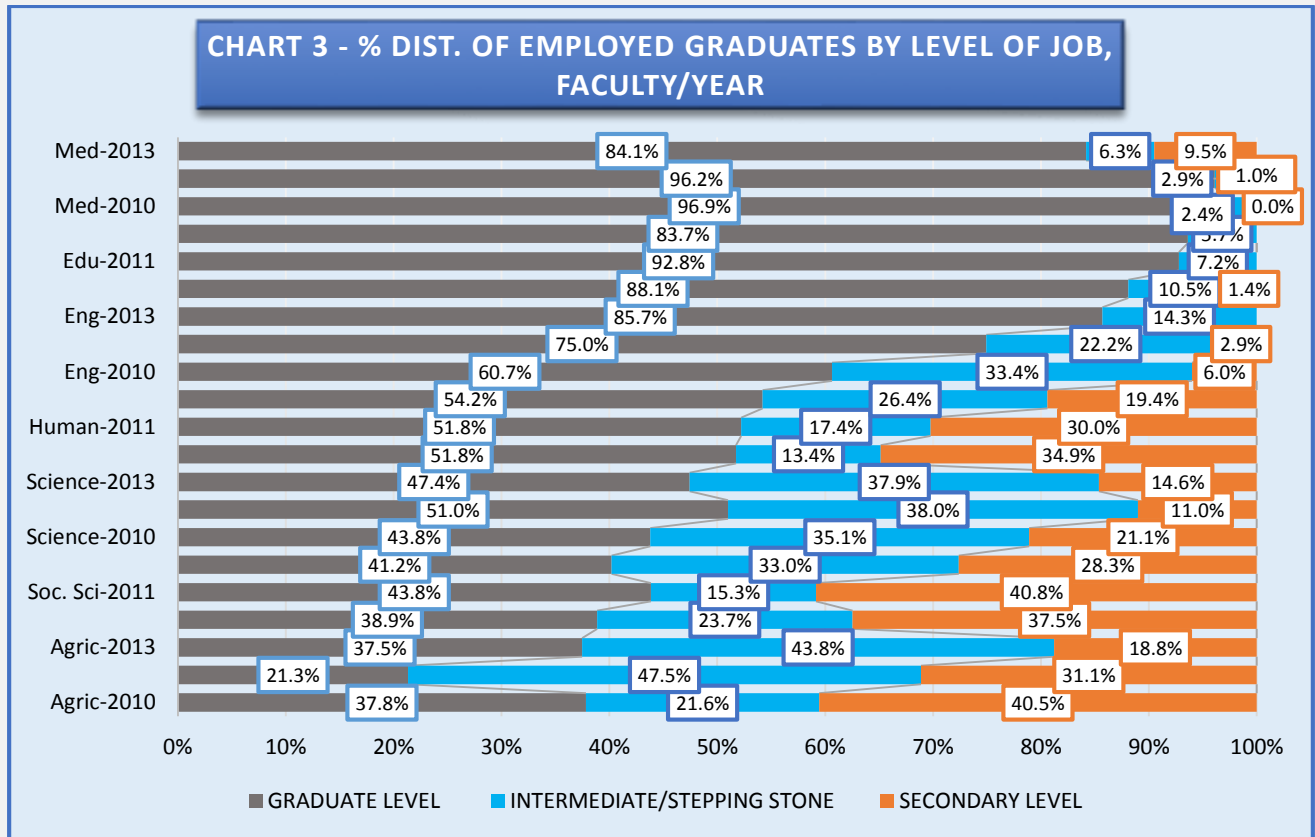
CHART 2 - REASONS FOR BEING UNEMPLOYED BY YEAR - UWI

Reason	2013	2011
OTHER	6.1%	
NO JOB OPPORTUNITY	36.5%	33.6%
LACK OF WORK EXPERIENCE	10.1%	12.5%
HEALTH REASONS	0.6%	1.2%
FURTHER STUDIES	37.6%	36.4%
DID NOT SEEK EMPLOYMENT	3.9%	1.5%
COULD NOT FIND JOB RELATED TO DEGREE	11.2%	11.8%

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

Faculty/Year	Graduate Level	Intermediate/Stepping Stone	Secondary Level
Med-2013	84.1%	6.3%	9.5%
	96.2%	2.9%	1.0%
Med-2010	96.9%	2.4%	0.0%
	83.7%		3.7%
Edu-2011	92.8%	7.2%	
	88.1%	10.5%	1.4%
Eng-2013	85.7%	14.3%	
	75.0%	22.2%	2.9%
Eng-2010	60.7%	33.4%	6.0%
	54.2%	26.4%	19.4%
Human-2011	51.8%	17.4%	30.0%
	51.8%	13.4%	34.9%
Science-2013	47.4%	37.9%	14.6%
	51.0%	38.0%	11.0%
Science-2010	43.8%	35.1%	21.1%
	41.2%	33.0%	28.3%
Soc. Sci-2011	43.8%	15.3%	40.8%
	38.9%	23.7%	37.5%
Agric-2013	37.5%	43.8%	18.8%
	21.3%	47.5%	31.1%
Agric-2010	37.8%	21.6%	40.5%

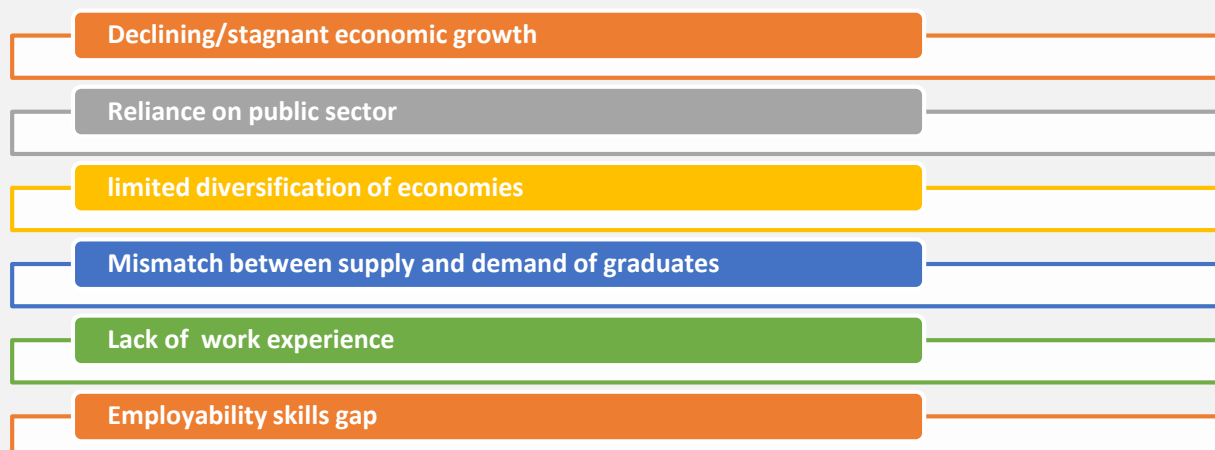Legend: GRADUATE LEVEL · INTERMEDIATE/STEPPING STONE · SECONDARY LEVEL

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

Country	Median Salary – 2009	Median Salary - 2010	Median Salary - 2011	Median Salary - 2013	Ave. Growth rate
Barbados Economy (BDS$) – Nominal Value	3,500	3,200	3,258	3,500	0.00%
Barbados Economy (BDS$) – Real Value	3,704	3,200	2,978	3,004	-6.74%
Jamaican Economy (JA$) – Nominal	85,000	85,000	88,000	93,024	3.05%
Jamaican Economy (JA$) – Real	95,721	85,000	81,860	74,005	-8.22%
T'dad & T'go Economy (TT$) - Nominal	8,500	8,400	8,000	8,000	-2.00%
T'dad & T'go Economy (TT$) - Real	9,392	8,400	7,612	6,623	-10.99%
ECCU(EC$) - Nominal	3,633	3,303	3,771	3,780	1.33%
ECCU(EC$) - Real	3,767	3,303	3,638	3,408	-3.28%

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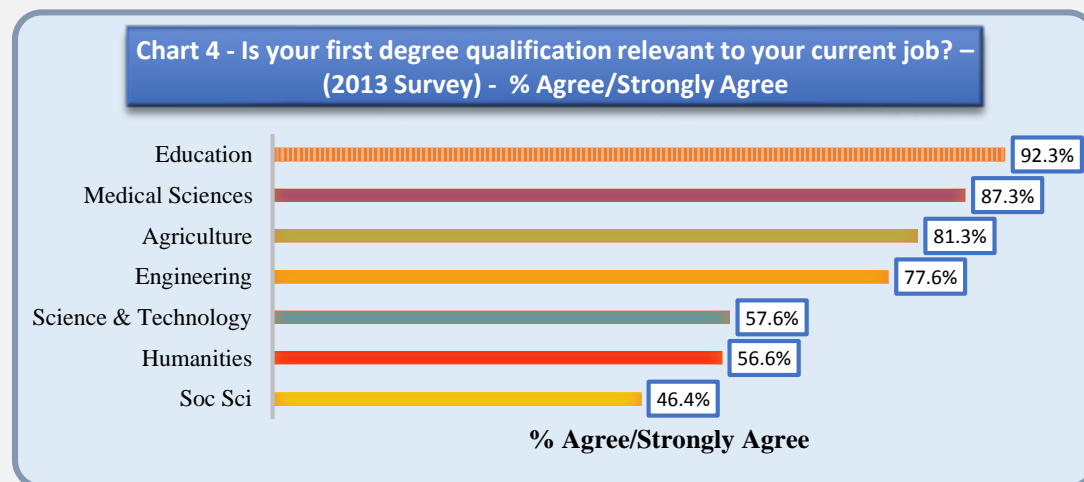
Figure 5 - Example of Variations in Initial Earning Levels of Graduates by Faculty/Area of Study

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*

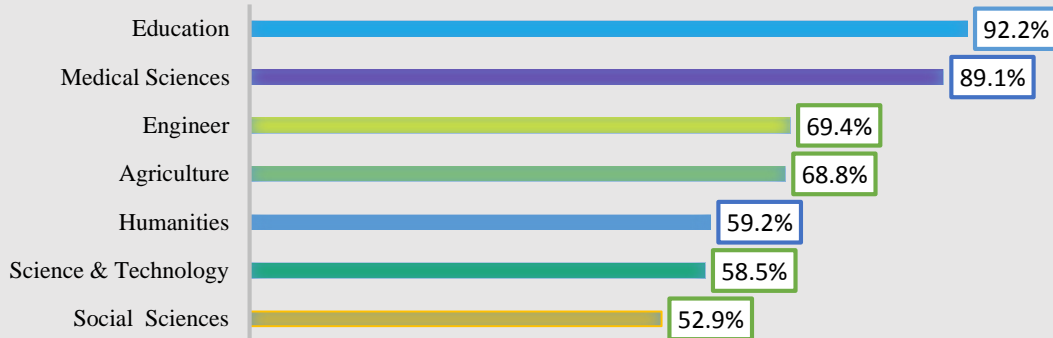N.B. The list here is not exhaustive

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

Faculty/Area	% Agree/Strongly Agree
Education	92.3%
Medical Sciences	87.3%
Agriculture	81.3%
Engineering	77.6%
Science & Technology	57.6%
Humanities	56.6%
Soc Sci	46.4%

% Agree/Strongly Agree

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

Faculty	%
Education	92.2%
Medical Sciences	89.1%
Engineer	69.4%
Agriculture	68.8%
Humanities	59.2%
Science & Technology	58.5%
Social Sciences	52.9%

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.

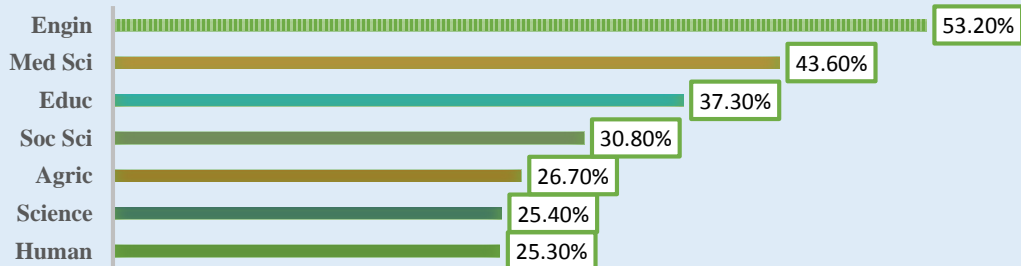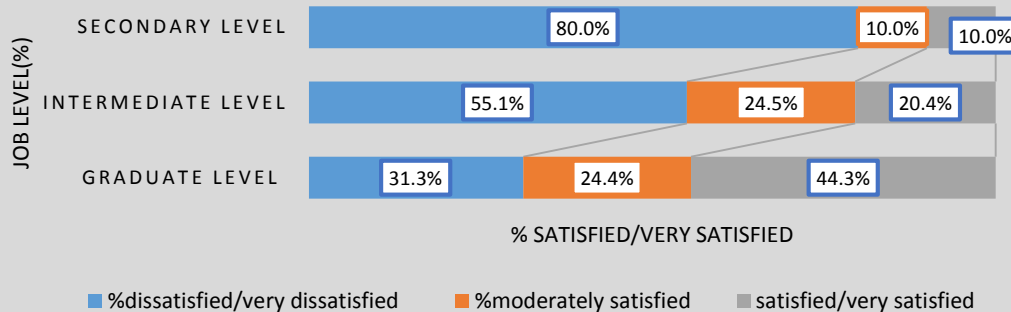**CHART 6-SATISFIED WITH CURRENT JOB LEVEL BY FACULTY - %STRONGLY AGREE/AGREE**

Faculty	%
Engin	53.20%
Med Sci	43.60%
Educ	37.30%
Soc Sci	30.80%
Agric	26.70%
Science	25.40%
Human	25.30%

CHART 7 - SATISFACTION LEVELS BY LEVEL OF JOB

JOB LEVEL(%)	%dissatisfied/very dissatisfied	%moderately satisfied	satisfied/very satisfied
SECONDARY LEVEL	80.0%	10.0%	10.0%
INTERMEDIATE LEVEL	55.1%	24.5%	20.4%
GRADUATE LEVEL	31.3%	24.4%	44.3%

% SATISFIED/VERY SATISFIED

■ %dissatisfied/very dissatisfied   ■ %moderately satisfied   ■ satisfied/very satisfied
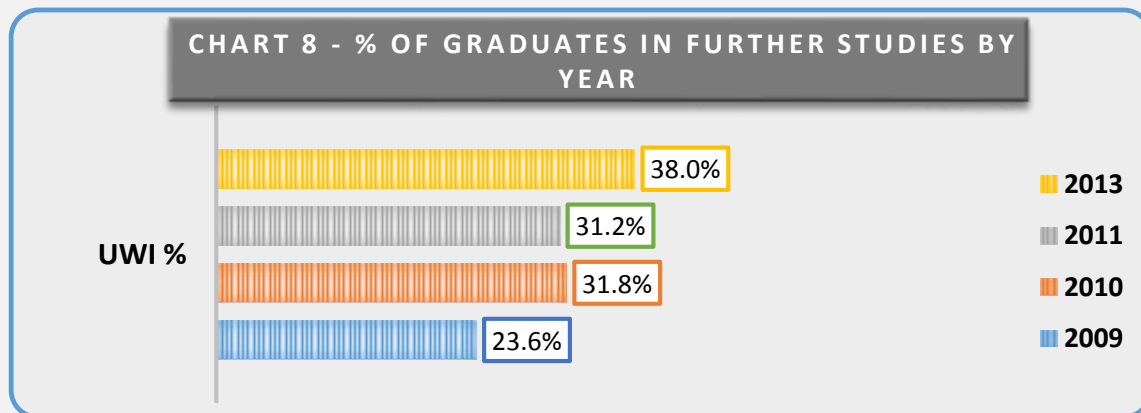
EMPLOYMENT BY SECTOR

- 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

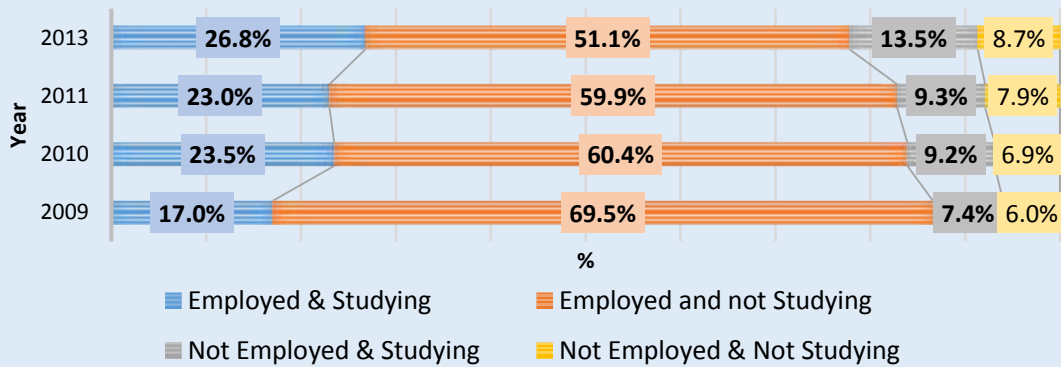| Sector	JAMAICA				TRINIDAD & TOBAGO			
	2009	2010	2011	2013	2009	2010	2011	2013
Private	33%	36%	37.5%	37.3%	28%	30%	27.1%	35.5%
Public	59%	56%	53.6%	52.1%	63%	58%	66.4%	56.6%
Other	8%	8%	8.9%	10.7%	9%	12%	6.5%	7.8%
	BARBADOS				ECCU			
Private	48%	57%	49.1%	53.2%	15.2%	13.8%	33.3%	25.6%
Public	45%	33%	43.1%	38.3%	82.6%	79.3%	60.6%	71.8%
Other	7%	10%	7.8%	8.5%	2.2%	6.9%	6%	2.6%

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

CHART 8 - % OF GRADUATES IN FURTHER STUDIES BY YEAR

UWI %

Year	%
2013	38.0%
2011	31.2%
2010	31.8%
2009	23.6%

Chart 9 - DIST. OF GRADUATES – EMPLOYED, UNEMPLOYED and FURTHER STUDIES- UWI

Year	Employed & Studying	Employed and not Studying	Not Employed & Studying	Not Employed & Not Studying
2013	26.8%	51.1%	13.5%	8.7%
2011	23.0%	59.9%	9.3%	7.9%
2010	23.5%	60.4%	9.2%	6.9%
2009	17.0%	69.5%	7.4%	6.0%

■ Employed & Studying   ■ Employed and not Studying
■ Not Employed & Studying   ■ Not Employed & Not Studying

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

Chart 10 - Rate the impact of your UWI education on the development of each of the following attribute? - - UWI - % saying strong/very strong

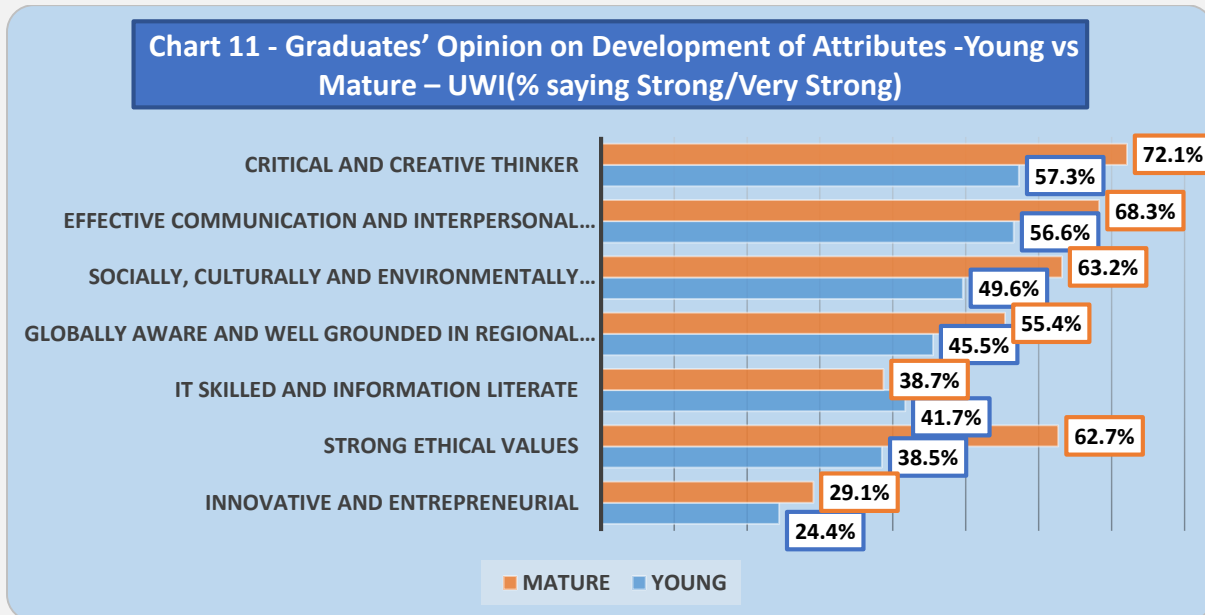| Attribute	%
Critical and creative thinker	61.3%
Effective communication and interpersonal skills	59.8%
Socially, culturally and environmentally esponsible	53.3%
Globally aware and well grounded in regional identity	48.2%
Strong ethical values	45.1%
IT Skilled and information literate	40.9%
Innovative and Entrepreneurial	25.6%
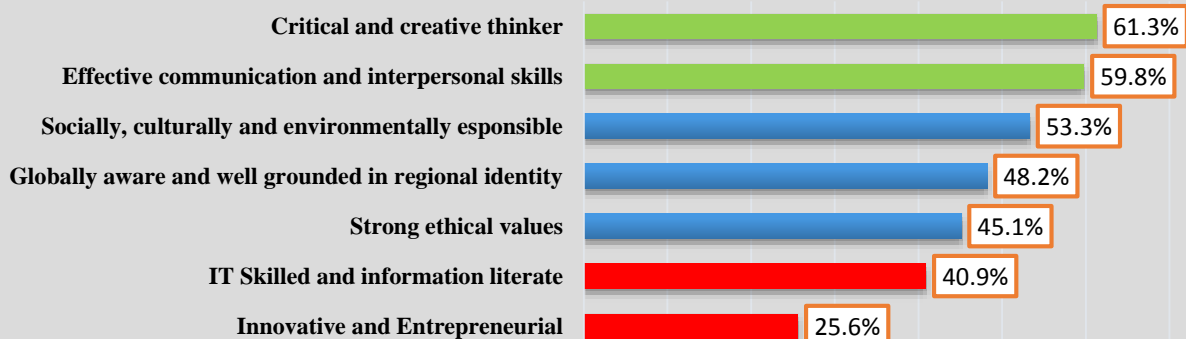
IMPACT OF UWI EDUCATION ON THE DEVELOPMENT OF EACH OF THE FOLLOWING ATTRIBUTE? – YOUNG VS MATURE GRADUATES

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)

Attribute	MATURE	YOUNG
CRITICAL AND CREATIVE THINKER	72.1%	57.3%
EFFECTIVE COMMUNICATION AND INTERPERSONAL…	68.3%	56.6%
SOCIALLY, CULTURALLY AND ENVIRONMENTALLY…	63.2%	49.6%
GLOBALLY AWARE AND WELL GROUNDED IN REGIONAL…	55.4%	45.5%
IT SKILLED AND INFORMATION LITERATE	38.7%	41.7%
STRONG ETHICAL VALUES	62.7%	38.5%
INNOVATIVE AND ENTREPRENEURIAL	29.1%	24.4%

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.

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