

**Top Performers in Research, Teaching
and Service to Students at UWI, Mona**

**Strategic Transformation Team
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Introduction

The University of the West Indies, Mona, has focused, in the last three years in particular, on the changes that need to be made within the institution to enable it to take advantage of the opportunities and respond to the challenges that are created as a result of the rapidly changing tertiary education environment. In so doing, it was recognized that one of the important required changes is a better understanding of what the institution already does well. Although much information is generated and disseminated at UWI, there has been very little structured self-study of the institution. This also is changing as various UWI bodies, in particular, the Board for Undergraduate Studies and the Deputy Principal's Office (Mona), have spearheaded important self-study initiatives in recent years, but much more needs to be done.

It is against this background that the Strategic Transformation Team at UWI, Mona has been working with the Office of Planning and Institutional Research, to increase the level of institutional research conducted about the Campus and University. In particular, the project reported upon in this document provides information about efforts to assess the top performers at UWI, Mona.

Performance was assessed in the two principal areas of the University's academic responsibility: research and teaching. The assessment of research performance included publication activity, the impact of publications on the global academy, funds generated for research, and a very preliminary analysis of research in the form of technical reports. The assessment of teaching focused on student evaluations of faculty teaching performance and performance in producing doctoral students, which, of course, is an area where teaching and research performance closely interact. Although public service is an area of responsibility, the lack of any structured mechanism for evaluating the quality of public service contributions militated against identifying top performing departments in this area.

A third area of performance assessed was services to students. Some students at UWI, Mona have complained about the quality of service they receive from the institution. Against this background, it was felt that an attempt should be made to report on students' perceptions of the quality of the service they receive from particular departments on the Campus. This report was facilitated by the Student Perception of Customer Service Quality Survey conducted by the Office of the Deputy Principal.

The remainder of this document outlines the research questions the Team sought to answer in this research project, details the methodology employed, identifies the top performing units on the Campus, and discusses the factors influencing performance and the lessons that past experiences in these areas on the Campus provide for the broader, current efforts at strategic transformation.

Research Questions

This research project sought answers to the following questions:

- What units on the Mona Campus are the top performers with respect to research, teaching, including doctoral supervision, and service to students and what factors account for high differential performance in these areas?
- What lessons does an analysis of these factors provide for the current Campus-wide efforts at strategic transformation?

Research Methodology

A number of approaches were used to elicit the required data.

- The Principal of UWI, Mona wrote letters to all heads of units/departments requesting that they nominate units which they believed represented “points of excellence” on the Campus. The response to this request for nominations was, however, very poor, as only a few heads responded.
- The Team engaged in its own efforts at identifying the top performing units using various data sources: information on publications from departmental reports; the “google scholar” citation database for research impact assessment; the bursary on external research funds generated; departmental reports on technical reports produced; the Office of the Deputy Principal on teaching effectiveness and quality of services to students; and the Examinations Section for doctoral graduation statistics. Based upon these data, departments were ranked in several areas of research performance. These included per-capita publications, the mean of the top citation count, research funds generated from external sources and technical reports produced. In teaching, the focus was on the proportion of departmental staff achieving outstanding student assessment ratings (4.8 and above) over several semesters (or course rotations in the Clinical Medicine departments), and on productivity in generating doctoral students, based upon doctoral graduates over the course of the University’s history. The quality of service to students was assessed through a survey of student perceptions. These efforts were complemented with interviews with several heads of units that had performed well, in an effort to explain their performance.
- One department, Chemistry, ranked number one in the area of productivity in generating doctoral students, while featuring in the top ten departments in all areas of research performance assessed, and in service quality. The STT, in conjunction with the Chemistry Department, facilitated a symposium, which featured former heads, doctoral graduates, current and former members of staff and current doctoral students. The aim of this symposium was to identify the reasons for Chemistry’s strong performance and glean lessons that might be applicable to the entire Campus.

Top Performing Units at UWI, Mona

Based upon the above methodological approaches, the Team identified the top performing units on the Mona Campus in the areas described below.

Research and Publications

In terms of research, performance is often judged by a count of publications. This can be a useful proxy for research productivity, but it is a rather poor proxy for research excellence because of the absence of a qualitative assessment. Nevertheless, this study did begin with an examination of the level of research productivity per department, based upon information from departmental reports. The top ten departments, by this measure, for the five years from 2000 to 2005 are listed in Table 1, and the overall top ten for the period are listed in Table 2.

Table 1
Top Ten Departments by Per-Capita Publications in Each Year
(2000-2001 - 2004-2005)

2000-2001	2001-2002	2002-2003		2003-2004	2004-2005	
Dept. No.	Dept. No.	Dept.	No.	Dept. No.	Dept. No.	
TMRI 2.4	TMRI 3.1	SALISES	3.1	SALISES	4.1	Geo. 2.2
Hist. 1.5	Hist. 2.9	Geography	2.2	TMRI	2.2	OGCH 2.0
SAL 1.4	SAL 2.3	TMRI	2.2	Geography	1.8	Govt. 1.9
CGDS 1.3	Geog. 1.8	Ed. Studies	1.8	Chemistry	1.4	CGDS.1.33
Adv N.1.1	L/Eng. 1.5	Chemistry	1.5	Government	1.4	Hist. 1.33
Chem. 1.1	OGCH 1.3	History	1.4	History	1.4	Econ. 1.31
Ed. St. 1.1	Chem. 1.2	Govt.	1.3	OGCH	1.4	Chem. 1.28
Path. 1.1	Med. 1.2	L/Eng	1.2	Ed. Studies	1.3	Micro. 1.22
L/Eng. 1.0	Soc. 1.1	OGCH	1.2	Life Sciences	1.1	SAL 1.20
OGCH .84	Govt. 1.0	Ad.N.	1.1	Sociology	1.0	CH&P 1.15

Publications include all publications except abstracts, conference proceedings, newspaper articles, book reviews and forewords.

Departmental per-capita averages were determined by dividing total publications, as defined above, by full-time members of academic staff in the department at the rank of lecturer and above.

Only departments with at least four members of academic staff were included in this analysis.

Source: Departmental Reports.

Table 2
Top Ten Departments by Mean Per-Capita Publications
(2000-2001 - 2004-2005)

Rank	Department	Faculty	Mean Per-Capita Publications (2000-2001 – 2004-2005)
1.	TMRI*	FMS	2.43
2.	SALISES	FSS	2.42
3.	Geography & Geo.	FPAS	1.728
4.	Gender & Dev.	N/A	1.726
5.	History	FHE	1.71
6.	OGCH	FMS	1.35
7.	Chemistry	FPAS	1.30
8.	Government	FSS	1.26
9.	Educational Studies	FHE	1.17
10.	Literatures in Eng.	FHE	1.10

*: The average for TMRI included only the years 2000-2001 to 2003-2004, since the TMRI departmental report for 2004-2005 was unavailable to the Team at the time of this analysis.

Source: Departmental Reports.

Per-capita publication measures are deficient in that they neither provide information on the quality of publications measured, nor on their research impact. Arguably, there are two measures of research impact. One is the extent to which research has an impact on the body of knowledge (academic impact). The other is the extent to which research has impact on society (societal impact). The latter category would include, for example, research that leads directly to improved social awareness, societal self-confidence, societal welfare, governmental policy, firm-level performance, innovation, nation-building, and improved dissemination of information by enhancing the technical competence of the researcher. In this project, we were unable to measure in a structured way the societal impact of the research of UWI staff. Our assessment of impact, therefore, is focused primarily on the academic impact.

This assessment of academic impact was conducted by identifying the top citation count attributable to the research of each member of academic staff at the level of lecturer and above and determining from this information the average citation count per department. On this basis, Table 3 identifies the top 30 cited publications by UWI staff members located on the Mona Campus and the characteristics of the applicable publication

Table 3
Top 30 Cited Publications by Staff Members Located on Mona Campus

Count	Nature of Study	Dept.	Authors	Publisher
940	Rheumatology	Office of VC	12	Arthritis/Rheumatism
223	Amorphous Computing	Math & Comp.	10	ACM Press, NY
213	Afro-American Genetics	TMRI	11	A.J Human Genetics
155	Human Genetics	TMRI	10	Lancet
139	Oral Zinc – Children-Dev C.	CCDC	15	J. of Pediatrics
132	Bacterial Cloning	Basic Med. Sciences	6	Plasmid
123	HTLV	Pathology	5	Lancet
115	Entrepreneurial Self-Efficacy	Management Studies	3	J. Business Venturing
112	Sustainability	ISD	1	Earthscan
108	Malaria in Honduras	Microbiology	7	J. Clinical Microb.
101	Sickle Cell & Child Strokes	Pathology	6	J. of Pediatrics
100	Fetal Growth –Jam. Children	TMRI	8	British Medical J.
100	Fetal Growth –Jam. Children	TMRI	8	British Medical J.
96	Nutrition – Jam. Children	TMRI	4	Lancet
89	Erothryocyte Deformability	Basic Med. Sciences	5	J. of Clinical Path.
78	Cervical Ripening	Adv. T/R Fert. Mgmt	5	British J. of Obs. & G
78	Cervical Ripening	Obstec., Gyne & CH	5	British J. of Obs. & G
78	Cervical Ripening	Obstec., Gyne & CH	5	British J. of Obs. & G
78	Infection in ICUs	Microbiology	4	Lancet
68	Supramolecular Chem.	Chemistry	4	Inorgan Chim Acta
64	Hypertension in Black Diasp.	Basic Med. Sc.	8	Hypertension
62	Rat Sensory Neurones	Comm. Health & Psy	4	Neuroscience Letters
55	Childhood Gastroentiritis	OGCH	28	New England J. Med.
40	HTLV	Pathology	11	J. of Infectious Dis.
40	Schizophrenia in Jamaica	Comm. Health/Psy.	2	British J. of Psyc.
36	Pressure & Birth Weight	OGCH	6	Hypertension
35	Understanding Development	Government	1	Lynne Reiner
34	Global Foreign Inv. Policy	Management Studies	2	World Bank/IFC
34	Child Protein Malnourish.	TMRI	7	Am. J. Phy, End.
33	Econ. Growth-Taiwan/Japan	Economics	1	Applied Econ. J.

Source: Google Scholar.

Using the citation data, coupled with data on the number of academic members of staff at the level of lecturer and above per department, the top ten departments per top citation count (for departments with at least four members of academic staff) are listed in Table 4. Ideally, inter-departmental citation comparisons should take into account the number of citations as a proportion of the published work examined by the citation search

engine. That is, an individual whose work has been cited by ten scholars, where there are 100 published works in the discipline is in a rather different situation than one whose work has been cited by ten scholars in a discipline where there are 1,000 published works. The available data do not, however, allow for such nuanced analyses.

Table 4
Top Departments Per Mean Citation Count

Rank	Department	Faculty	Mean Top Citations
1.	TMRI	FMS	48.5
2.	Pathology	FMS	25.5
3.	Microbiology	FMS	23.8
4.	Mathematics & Computer Science	FPAS	16.533
5.	Obstetrics & Gynaecology & Child Health	FMS	16.526
6.	Basic Medical Sciences	FMS	12.62
7.	Community Health & Psychiatry	FMS	9.2
8.	Centre for Gender & Development Studies	N/A	7.0
9.	Chemistry	FPAS	7.1
10.	SALISES	FSS	6.4

The Mean Citation Count was derived by summing the top citations of each member of academic staff at the level of lecturer and above in the department and divided by the total number of academic staff members at the level of lecturer and above in that department (05-06). The means for TMRI in this Table and in Table 5 do not include publications and staff members of TMRI's Chronic Disease Research Centre located in Barbados.

Source: Google Scholar.

One of the problems associated with this methodology is the extent to which departmental means can be heavily influenced by outliers, that is, individual staff members with top citation counts that are significantly different from the departmental mean. This was the case in a number of departments. In an effort to get a better understanding of overall departmental performance, Table 5, includes a ranking of departments by mean top citation count, excluding the department's top citation staff member, if that staff member's citation count was significantly different from the departmental mean.

Table 5
Top Departments Per Mean Citation Count (Excluding Outliers)

Rank	Department	Faculty	Mean Top Citations (Excl. Outliers)
1.	TMRI	FMS	33.3
2.	Pathology	FMS	19.1
3.	Obstetrics, Gynaecology & Child Health	FMS	12.4
4.	Microbiology	FMS	11.8
5.	Basic Medical Sciences	FMS	9.6
6.	Community Health & Pyschiatry	FMS	5.9
7.	Surgery, Rad, Anast, IC	FMS	4.3
8.	Life Sciences	FPAS	3.9
9.	Centre for Gender & Development	N/A	3.8
10.	Chemistry	FPAS	3.7

Source: Google Scholar.

To place the performance of the individuals and departments listed in tables 3-5 in context, in table 6 the distribution of top citations for the approximately 450 research staff located at UWI, Mona is examined, by faculty.

Table 6
**Distribution of Top Citations of Research Staff Located at UWI
(By Faculty)**

<u>Top Citations</u>	<u>FMS</u>	<u>FPAS</u>	<u>FHE</u>	<u>FSS*</u>	<u>Total</u>
> 250	1	-	-	-	1
100 – 249	9	1	-	2	12
75 - 99	6		-	-	6
50 - 74	3	1	-	-	4
30 - 49	4	-	1	3	8
15 - 29	14	5	4	2	25
10 - 14	12	8	1	5	26
5 - 9	22	15	6	17	60
1 - 4	36	19	27	28	110
0	<u>58</u>	<u>37</u>	<u>46</u>	<u>54</u>	<u>195</u>
Total	165	86	85	111	447

* For purposes of this analysis, FSS includes CGDS and Law (Mona).

Source: Google Scholar.

Research Funding

One indicator of a department's research strength lies in its ability to compete for research funds from external donors. Table 7 captures data on the top ten departments located at UWI, Mona in terms of research funds generated from external donors over the 2001-2002 to 2005-2006 period. University-wide institutes/centres were excluded from this analysis because funds would be sourced on a regional basis for these entities.

Table 7
Top Ten Departments in Generating Research Funds from External Donors
(2001-2002 -- 2005-2006)
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<u>Dept.</u>	<u>01-02</u>	<u>02-03</u>	<u>03-04</u>	<u>04-05</u>	<u>05-06</u>	<u>Total</u>
Pathology	200,282.4	-	5,946.1	7,041	6,576.2	219,854.7
OGCH	51,981.5	17,057.4	431.2	7,097.5	21,636	98,203.6
Chemistry	-	55,234.8	3,736.1	24,208.5	234	83,413.4
ICENS	23,350	30,965	-	-	25,000	79,315.0
Comm.H/Psy.	20,837.3	1,166	9,861.3	14,964	8,374	55,202.6
Life Sciences	3,559.1	-	5,910.8	6,255	24,139	39,863.9
Basic Med. Sc.	-	10,550.6	516.7	8,477.1	2,429.3	21,973.7
CARIMAC	1,930.1	-	2,218.8	7,189.7	6,203.9	17,542.5
Physics	10,590.9	1,043.6	1,211.1	-	2,148.4	14,994.0
Geog.& Geo.	8,500.0	-	-	-	3,867.1	12,367.1

Source: Special Projects Section, UWI, Mona Bursary.

As indicated earlier in this report, ideally, this project would have measured the societal impact of the research of members of UWI, Mona staff. Unfortunately, there are no indicators currently available that capture this information. One measure of the influence of research on society, however, is the demand for technical reports based upon academic research. This information has only recently been compiled at UWI, Mona, subsequent to the re-design of departmental reports arising from recommendations of the Strategic Challenges Task Force. Consequently, information on technical reports produced by UWI, Mona staff is only available, in a systematic manner for the 2004-2005 academic year. The top technical report producing departments for that year are identified in table 8.

Table 8
Top Ten Departments in Producing Technical Reports
(2004-2005)

Rank	Department	Number of Reports Produced
1.	Institute of Education	10
1.	SALISES	10
3.	Government	8
4.	Community Health & Psychiatry	7
5.	Obstetrics, Gynaecology & Child H.	5
6.	Life Sciences	3
7.	Centre for Gender & Dev. Studies	2
7.	Chemistry	2
7.	Economics	2
7.	Educational Studies	2
7.	Geography	2
7.	UWISON	2

Source: Departmental Report, 2004-2005.

Doctoral Supervision

The top departments with respect to doctoral supervision were assessed based upon the number of doctoral graduates produced by the Department during the course of the University's history. Between 1966 and 2005, UWI, Mona initially under the umbrella of the University of London, through which all degrees were granted until the University received its own degree granting powers in 1960, graduated 584 individuals with Ph.Ds. The departments with the highest number of Ph.D. graduates over this period are listed in Table 9.

Table 9
Department **Number of Ph.D. graduates (1966-2005)** **Rank**

Chemistry	96	1
Zoology & Botany (now LS)	69	2
Agriculture	57	3
Education	57	3
Biochemistry	37	5
Geography & Geology	25	6
History	23	7
English & Linguistics	21	8
Nutrition	20	9
Physics	20	9

Source: UWI Graduation Statistics, Various Years.

It is important to note that UWI began training doctoral students long before 1966. Indeed, in all probability, 1952 marks the year of the completion of the first individual to complete doctoral studies at the then UCWI.

UWI's graduation records did not list doctoral graduates until 1966, but the Chemistry Department alone records thirteen doctoral graduates between 1952 and 1966. These include the 1952 graduate, Alfred Lippman, whose research disproved an important finding of the founding Principal of UCWI, Dr. Taylor; and other notable graduates such as Wilfred Chan, who went on to become professor, head of department at Mona and founding head of department at St. Augustine; Trevor McMorris, later to become a professor at UCLA; E.V. Ellington, who became the Jamaican Government Chemist; Kenneth Magnus, later to become professor of Applied Chemistry and head of department; Alfred Sangster, who later became President of the College of Arts, Science and Technology; Gerald Lalor, later to become Professor, Head of Department, Pro-Vice Chancellor and Principal; and Baldwin Mootoo, later to become Professor and Pro-Vice Chancellor, Research. Eight of the first nine individuals gaining Ph.Ds in Chemistry graduated between 1952 and 1959 and were trained by the founding chair of the Department, Cedric Hassall.

Teaching

The proxy used to assess the quality of teaching was the scores from the student assessment of teaching surveys. Again, this is an inadequate measure of teaching effectiveness, but it is the only common measure available and, despite its limitations, is used at many institutions, including UWI, as one measure for assessing the effectiveness of teaching. The departments that have had the highest proportion of staff scoring in excess of 4.8 on student evaluations are listed in tables 10 and 11. Table 11 consists of clinical medicine evaluations only as these evaluations are conducted based on periodic rotations rather than semesters.

Table 10

**Top Ten (Non-Clinical Medicine) Departments Ranked by Outstanding Lecturer Effectiveness
(2002-03 – 2005-06)**

Department	02-03	03-04	04-05	05-06	Avg %
Philip Sherlock	1/2	3/4	1/2	2/4	58
Modern Lang.	4/44	15/78	11/85	16/88	15.6
Life Sciences	1/29	7/51	5/45	3/45	9.4
Ed. Studies	6/65	10/113	8/104	9/93	8.8
Gender & Dev.	2/4	0/7	0/6	0/6	8.7
CARIMAC	0/29	4/80	6/78	10/81	7.5
Physical Therapy	0/19	1/46	5/35	4/44	6.9
Library & Info.	1/10	3/19	0/22	1/23	6.7
Physics	1/22	1/38	4/35	2/30	6.4
Language, Ling.	4/103	19/217	9/173	14/248	6.2

The data represent the number of times staff members scored 4.8 or above in student evaluations as a proportion of the number of evaluations conducted. The year 02-03 involved only one semester of evaluations, while all other years represent first and second semester evaluation exercises.

Source: Student Evaluation Reports, Office of the Deputy Principal.

Table 11

**Top Clinical Medicine Departments Ranked by Outstanding Lecturer Effectiveness
(Rotation Periods: 2004-2006)**

<u>Department (Unit)</u>	<u>Proportion of Outstanding Ratings to Total</u>	<u>%</u>
Comm. Health & Psy.	51/224	23.0
Surgery	20/94	21.3
Emergency Medicine	68/326	20.8
Medicine	8/58	13.8
Microbiology	4/29	13.8
Anesthetics	13/156	8.3
OGCH	10/126	7.9
Pathology	46/769	6.0

Source: Student Evaluation Reports, Office of the Deputy Principal.

Quality of Service to Students

In the engagement activities associated with the development of the 2007-2012 strategic plan, several students bemoaned the poor quality of the service they receive at the University. In order to monitor the quality of service provided to students by departments, the Office of the Deputy Principal has been carrying out a student perception survey. Departments are ranked in Table 12 based upon the responses received in the January 2007 survey.

Table 12
Top Ten Departments in Quality of Service to Students
(January 2007)

Rank	Department	Average Student Satisfaction Score
1.	Literatures in English	4.1
2.	Gender Studies	3.8
2.	Mathematics & Computer Science	3.8
4.	Management Studies	3.6
4.	Modern Languages	3.6
6.	Chemistry	3.5
6.	Geography	3.5
6.	Humanities & Education Faculty Office	3.5
6.	Office of the Deputy Principa	3.5
10.	Geography & Geology	3.4
10.	History & Archaeology	3.4
10.	Social Sciences Faculty Office	3.4

Source: Planning Officer, Office of the Deputy Principal

Explaining High Performance at UWI, Mona

The information provided in Tables 1 to 12, and other data gleaned during the course of this project allow for a discussion about the factors that influence high performance at UWI, Mona in the areas of research, teaching, doctoral supervision and services to students.

Research

The data on research performance measured by per-capita publications in table 2 suggest that the top two performing departments are primarily research institutes and that all four faculties on the Campus are represented in the top ten performing departments. In terms of academic research impact, the data in Tables 3 & 4 provide additional information. The publications of staff members located at UWI, Mona that have had the greatest academic impact, as proxied by the extent to which other academics have relied on these publications in their work, have several notable characteristics. *These publications have tended to focus on issues of interest to a broad swathe of the global academy. The dominant method of investigation has been collaborative work, with academics around the globe, often located in prestigious academic institutions, and the research has been published in organs that have a global reach.*

This does not mean that UWI staff members whose research has had high academic impact have not focused on issues of importance to the region. *Indeed, in most instances of medical research done at UWI, Mona that have had high impact, the research has focused on issues for which the region provides a natural advantage, for example, genetics and hypertension in the black diaspora, nutritional problems facing children in developing countries, the relationship between sickle cell and child stroke. But the researchers have typically engaged in these studies while linking their regional research with researchers in other regions who have similar interests, and by ensuring that the research is published in organs with global reach. It is notable that all of the top thirty cited publications were published outside of the region.*

The dominance of medicine in the top citation counts is instructive. *As noted in Table 3, twenty-three of the top thirty cited publications are in the field of medicine, while five are in the Social Sciences and two are in the Pure and Applied Sciences.* None of the seven top cited publications from the faculties of Social Science and Pure and Applied Science involved research that was specific to Jamaica or the Caribbean region. The top cited publication in Humanities and Education is number 31 on the Campus, with a citation count of 32, on the subject of perceived vulgarity in Jamaican Dance Hall Culture and is published by Macmillan and Duke University Press.

Departments in the Faculty of Medicine also take six of the top ten positions in Table 4 and seven of the top ten positions in Table 5. Relatedly, the Tropical Medicine Research Institute's (TMRI) impact on the academy is significantly beyond that of any other department located on the Mona Campus. *The TMRI has been most advanced in the development of collaborative global research using as its competitive advantage local Jamaican medical circumstances, which are of interest to medical researchers in other parts of the world.*

The dominance of medicine in the top citation counts might imply that this is not a measure that can be useful in assessing the impact of research on the academy in other disciplines. Table 6, however, provides information suggesting that citation counts can be used across the Campus, as all faculties have scholars whose work has been cited frequently, although Table 6 also demonstrates that the modal average of top citations among members of academic staff at UWI, Mona, and for each faculty, is 0. At the same time, the data also imply that work in the Social Sciences and Humanities, which tends to focus more closely on local social conditions and culture, and which tends to be published within the region, is unlikely to have the same level of resonance with a global academy, while this work has a potentially critical societal impact.

The implication is that while staff members at UWI, should, in the future, be expected to indicate the global impact of their research by identifying how often it has been cited, the University needs to consider carefully how to develop measures for assessing the societal impact of the work of its staff members.

The data on research funding suggest that top performers are located in the faculties of medicine and pure and applied sciences, which require much higher levels of funding to conduct research than is the case in the Social Sciences and Humanities and Education. These data do, however, permit important intra-faculty comparisons. They also show up the work of a unit, such as CARIMAC, the lone non-science unit in the top ten performers in funding attraction, which has made attracting external funding one of its areas of strategic focus.

Doctoral Supervision

The data on doctoral supervision show that Chemistry leads in this category. Attempts to explain the success of Chemistry in supervising doctoral students was an important element of the 2006 STT/Chemistry Symposium. The interchange suggested that the Department's success had much to do with strong leadership, beginning with its first professor, Cedric Hassall, departmental autonomy, a culture of staff-student relations that emphasized close ties and mutual respect, but demanded high levels of student performance, strong ties between the department and industry, and a history of international collaboration and international benchmarking of its research processes.

Teaching

The data on teaching effectiveness imply that small classes are critical to top teaching performance. The leading unit in teaching performance was the Philip Sherlock Centre. Note that while departments in the Faculty of Medical Sciences, with their small student rotations, dominated in high teaching assessment scores, the Faculty of Social Sciences, which has featured the largest class sizes on the Campus for decades, was the only faculty that did not produce a single department that featured in the top ten in teaching. Heads of departments who performed well in teaching emphasized the close interaction between lecturers and students in their departments.

Small class sizes is not, however, the only relevant variable. It is hard not to surmise that student passion also plays a role in appreciation of the learning process. This is another area in which the FSS suffers, in that this faculty probably includes the largest proportion of students who have entered the University for occupational reasons, rather than because they feel passionately about their subject of study. Other important variables include the quality of incoming students, a strategic balance between, and the integration of, teaching and research, departmental leadership and departmental encouragement of lecturers to use the services of the IDU.

Services to Students

The data suggest that top-performing departments in services to students are primarily academic. Of the twenty-nine departments featured in the January 2007 survey, seven were administrative, yet only one administrative department, the Office of the Deputy Principal, featured in the top ten, and the administrative department with the lowest rating, 2.5, was 'Customer Service.' *Although departments catering to relatively small numbers of students, such as Gender Studies, ranked well, it is interesting that two of the departments catering to the largest number of students, Management Studies and the Faculty of Social Sciences Office, also featured in the top ten.* It is instructive that both of these departments have office hours that cater to evening students and have placed a strategic focus on enhancing the quality of the student services they provide.

Recommendations

1. **The University must continue to engage in a process of institutional research that identifies its top performing units and individuals** and uses this information to reward performance and to challenge those units and individuals who are performing at lower levels.
2. **The University must develop performance indicators that capture both the academic and societal impact of the research of UWI staff. Staff members seeking promotion to senior levels should provide, in promotion dossiers, information on both the societal and academic impact of their research.** In so doing, one must recognize the possibility of conflict between societal impact (especially regional) and academic impact, with UWI as an institution balancing between both dimensions of impact.
3. **Efforts to improve the academic impact of the research of UWI scholars must take account of the factors that have been important in successes to date.** These factors focus on international collaboration, careful topic selection, building on the institution's natural competitive research advantages and publication in organs that have global reach. UWI publishing organs are, generally, tied into search engines such as "google" but they still have limited global visibility or are accepting research that has limited global interest. Efforts need to be made to improve in these areas, while appreciating the challenges raised in point 2 above.
4. **UWI's efforts in assessing teaching effectiveness must move beyond student assessment to more comprehensive measures of assessment. In seeking to improve the quality of the student experience, the University must recognize the importance of close staff-student interaction in effective teaching.** The balance between student expansion targets and the quality of the student experience must be considered. Information technology may assist in reducing the possible conflict between expansion and the quality of student experience, but it is unlikely to eliminate this conflict. Yet, the information on the performance of departments with respect to student services suggests that strategic focus on service by departments can lead to a high quality of service even when the population of students to be served is large.
5. **Effective doctoral supervision must take into account lessons such as the importance of close staff-student interaction, demanding of doctoral students high standards, international collaboration and effective departmental leadership.**