Impact of Teaching & Administrative Support on Faculty's Ability to Conduct Research at Emerging Research Institutions (ERI)

Arlene Cole-Rhodes, Ph.D.
Associate Professor,
Electrical & Computer Engineering Dept.
Morgan State University.

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Institutional Background

Morgan State University (MSU) as an ERI

A Brief History of MSU

- Founded in ***1867*** as a Biblical college
  - mission to train young men as ministers.
  - mission later to train men & women as teachers.
- Renamed in
  - ***1890*** to **Morgan College**, and awarded first bachelors degree in 1895.
  - ***1938*** to **Morgan State College**, a comprehensive institution was purchased by state of MD in 1939.
  - ***1975*** to **Morgan State University**, with its own governing board and the authority to grant Doctorates.
- **1988**: Designated *Maryland's Public Urban University*, while maintaining its own governing board (outside the Univ. of MD system).

Morgan State's Profile

A Comprehensive University with 8 Academic Units

- School of ***Education*** and Urban Studies
- College of Liberal ***Arts***
- School of ***Business*** and Management
- School of ***Engineering***
- School of Computer, Mathematical and Natural ***Sciences***
- School of ***Public Health*** and Policy
- Institute of ***Architecture*** & Planning
- School of ***Graduate Studies***

Degrees awarded in:	2002	-	2006:
Total Baccalaureate:	750		766
Total Masters:	94		106
Total Doctorate:	14		40

Engineering at Morgan State

The School of Engineering

- started in 1984 with three B.Sc. Degree programs in
  - Electrical Engineering
  - Civil Engineering
  - Industrial Engineering

- First B.Sc. Degree was awarded in 1988.

The Graduate program started in 1997.

- First M.Eng. degree awarded in 1999.
- First D.Eng. degree awarded in 2002.

Faculty Duties

At MSU

Teaching

- Teaching Responsibilities (every semester)

  – 12 undergraduate credits per semester
    (i.e. 4 courses, or 3 courses + Senior Project)
  – Class size: 20+ students
  – involve
    - Course preparation
    - Course Delivery + Office Hours
    - Grading (HW / Assignments / Exams)

  Teaching Assistants are not formally available.

Administrative

- Departmental Responsibilities
  - Student Advisement
    - (Mandatory for Undergraduates)
  - Committee Meetings
    - (Department, School, University)
  - Graduate Student Academic Advising
    - (Thesis Project & Dissertation Guidance)
  - Coordinating & Supervising Technical Work in Research Lab

Research Administration

- Identify Funding sources
  - Look out for Requests for Proposals (RFP).
  - Write proposal.
  - Do Budget and route through University approval process.

  Time constraints can make this phase very difficult, i.e. writing a competitive proposal of sufficiently high quality to get funded.

- If request is successful, grant or contract is awarded to University.

Research Administration (cont.)

- Grant Administration
  - Attorneys may need to review the new Contract, and any Intellectual Property Agreements.
  - Need an Efficient, Streamlined process
    - To set up new accounts, and make funds available to the Researcher.
    - To bill granting agency for ongoing expenditures.
- Equipment and Software Purchases:
  - What is the process? - Purchase orders vs. Credit cards.
- Recruitment of Lab Assistants and Researchers
  - Student workers (Graduate and Undergraduate)
  - Ability to attract Post-Docs and Fulltime Researchers.

Research Administration (cont.)

- Technical Reporting Requirements for the Grant
  - Quarterly or Yearly?
  - May require travel, locally or out-of-state.
- Financial Monitoring of Grant
  - Accounting to keep spending within budgeted categories.
  - Travel coordination for meetings, conferences.
  - Compensation for Lab Personnel.
- Publication Support
  - Editing and Proof-reading.
- Intellectual Property & Technology Transfers
  - Advise on available resources and pathways.

Research Administration (cont.)

- *Administrative Support* is *currently provided* by
  - Office of Sponsored Programs (OSP), and Restricted Funds Office
    - At University level
  - Departmental Secretaries
    - Additional duties, such as typing up RFPs and Lab Personnel contracts, tracking of equipment, etc. cause an overload at the Department level.

Generalized Institutional Models

Two Primary Institutional Models:

Teaching

- 3 or 4 Courses (per semester).
- Undergraduate student focused.
- Primary responsibility is teaching and advising.
- Conference attendance limited.

Research

- 1 or 2 Courses (per semester).
- Graduate student focused. (Teaching and Research)
- Primary responsibility is grantmanship and publishing.

Research vs. Teaching Load Distribution

The 3 primary areas of Faculty responsibility at MSU are Teaching, Research and Service.

Consider the Hypothetical load distribution below:

	Percentage Distributions			
Teaching:	80	60	*40*	20
(# courses:	*4*	*3*	*2*	*1)*
Research:	0	20	*40*	60
Service:	20	20	*20*	20
Total:	100 %			

If the Service component remains constant, the adjustment is made between the Teaching and Research time distributions.

A 50% reduction in teaching load is the lowest currently available at MSU (with Release time).

Research & Teaching Inter-relationships

Teaching and Research can be inter-related

- where the research *stimulates* the delivery of course material, as with graduate courses in the Researcher's area of interest.
- by allowing students (undergraduate & graduate) to see the *application of ideas* in a lab environment.

A reduction in course teaching load makes it possible for Faculty to devote enough ' *focused time*' to Research projects, and this allows for a higher quality output (such as a proposal or paper publication, etc.).

Can these two Institutional models co-exist?

- Some Faculty may want to remain focused on undergraduate teaching, while others become more Research-focused.
- Research Faculty may be less available for undergraduate student support, as their focus changes to research with graduate students.
- How are Faculty evaluated in this environment.
- A Department might hire
  - Additional Faculty, who are more research-focused; or
  - Adjuncts, who are more focused on undergraduates.

Making the Transition from the Teaching to Research Model

- As more Faculty become involved in Research
  - Is there sufficient Lab space for research?
    - Teaching Lab vs. Research Lab space.
    - How many Labs allocated per Faculty member?
    - Labs may be shared by multiple Faculty.
  - Additional Office Space may be needed for non-Faculty researchers.

Resources Necessary for Effective Faculty Output

Include

- Computer Network Technical Support
  - To minimize network downtime.
  - To provide technical support for Laboratory computers.
  - To provide hardware/software upgrade support.
- Library Resources
  - Provide ability to do electronic searches.
  - Require subscriptions to electronic Journals (High cost)
- From the University
  - Streamlined approval processes, i.e. for Researcher grant administration.
  - Review of how Faculty are evaluated.