

5<sup>th</sup> Rizal Library International Conference  
Ateneo de Manila University, Philippines  
October 25-26, 2012

# **THE ROLE OF ACADEMIC LIBRARIES IN FACILITATING STUDENTS' RESEARCH**

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# Outline of Presentation

- The importance of research
- Students as researchers
- Requirements for successful research
- Role of academic libraries in facilitating research
- Implications for libraries and librarians

# Importance of Research

- Research is important
  - New products
  - New services
  - New understandings
- The buildings blocks of knowledge

# Importance of Research

- Importance of research is evident in the increase in spending by Governments on research and development (R&D)
- Gross Domestic Expenditure on Research and Development (GERD) in Europe increased by 43.5% between 2000 and 2010
- Global R&D spending is expected to grow by about 5.2% to more than US\$1.4 trillion in 2012

# Importance of Research

- Research is conducted at a variety of institutions, including universities
- Universities use the outcomes of research to publish papers, commercialize their products, improve the quality of teaching-learning, and train future researchers
- Research outputs from universities lead to patents, publications and citations, which have become important criteria in the ranking of universities and a matter of national pride

# Students as Researchers

- Within universities, students are significant producers of research
  - Capstone project during undergraduate degree
  - Senior year project
  - Students working as research assistants to faculty members
  - Graduate level students
    - Masters level (usually required)
    - Doctoral level (mandatory)

# Students as Researchers

- Graduate student populations are increasing
- Number of degrees awarded are increasing

## – USA

Year	Bachelors		Masters		Doctoral	
2010/2011	1,715,000	↑ 37.8%	718,000	↑ 51.6%	168,200	↑ 40.7%
2000/2001	1,244,171		473,502		119,585	

## – Malaysia

Year	Bachelors		Masters		Doctoral	
2011/2012	66,372	↑ 48.1%	11,332	↑ 86.6%	1,527	↑ 240.8%
2004/2005	43,826		6,074		448	

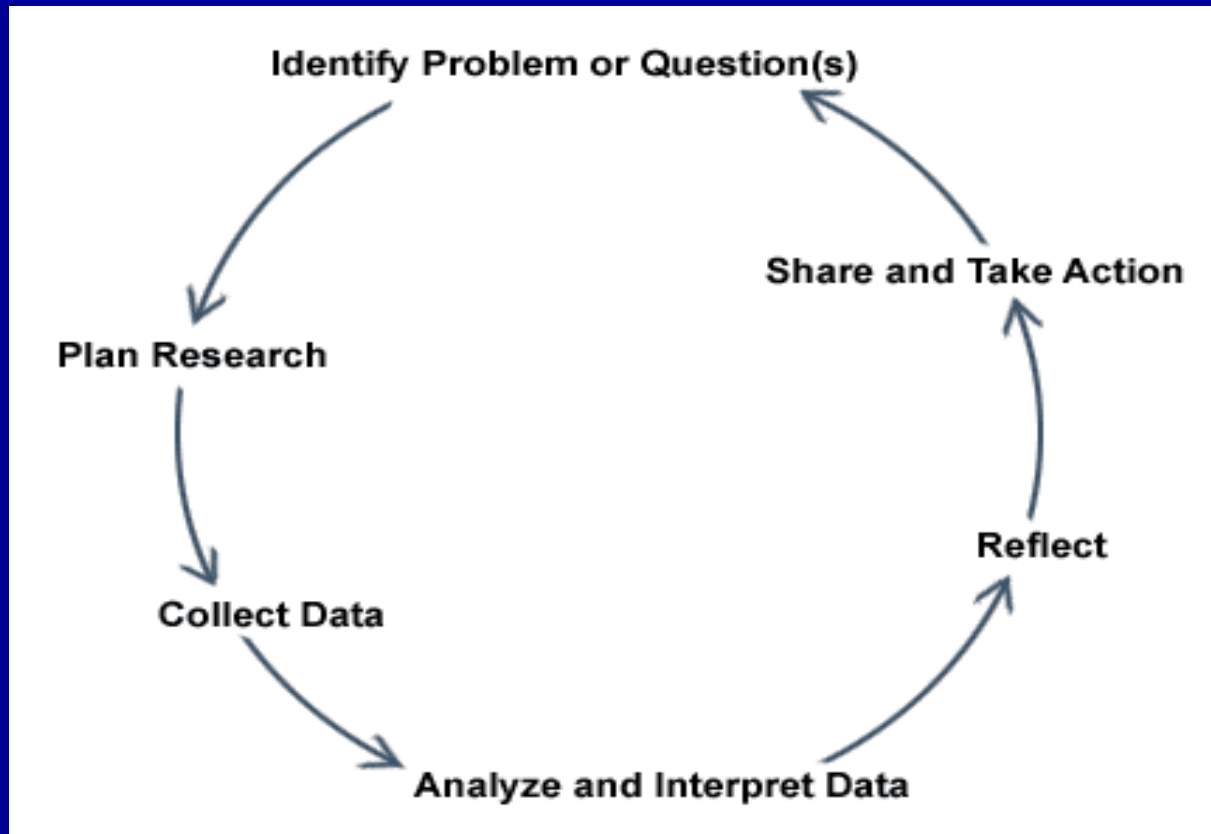
# Students as Researchers

- Many graduate programs require students to carry out a research project and write a report as fulfillment of their degree program
- These students need support to conduct their research
  - Relatively inexperienced in research
  - Lack of guidance due to faculty time constraints
  - Lack of experience in finding and using resources



# Students as Researchers

## Stages in research



Source: Drawn to Science Education. Available at <http://www.drawntoscience.org/educators/action-research/classroom-action-research-1.html>

# Requirements for Successful Research

- Successful research requires
  - Knowledge
  - Skills
  - Attitude
  - Guidance
  - Use of appropriate resources

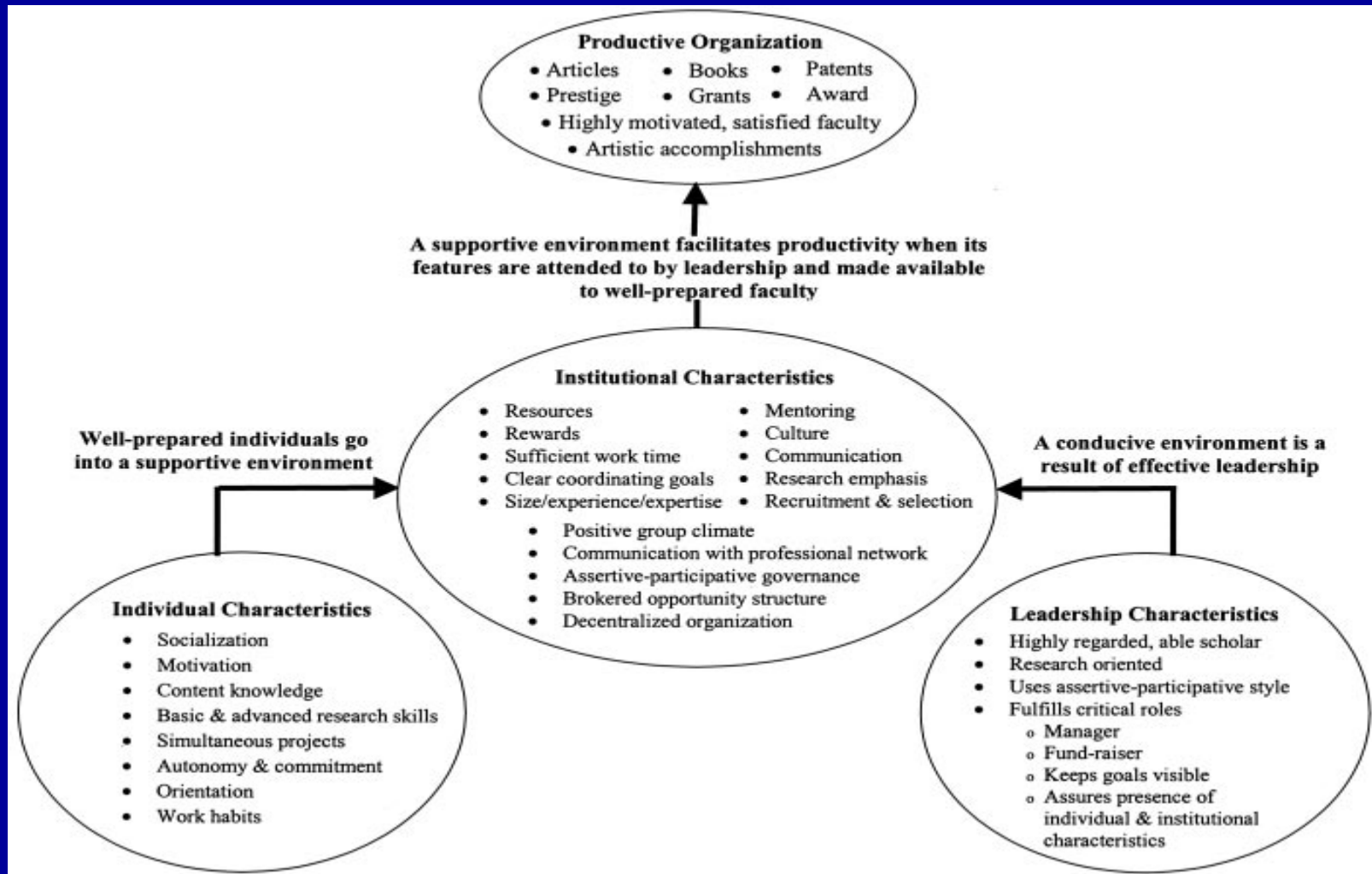
# Requirements for Successful Research

## Characteristics that facilitate research productivity

Individual	Institutional	Leadership
Socialization Motivation Content knowledge Research skills Simultaneous projects Orientation Autonomy and commitment Work habits	Recruitment and selection Clear goals Research emphasis Departmental culture Positive group climate Mentoring Communication with professional network Resources Rewards	Scholar Research oriented Fulfills critical leadership roles Participative leader

Source: Bland, C. J. *et al.* 2005. A Theoretical, Practical, Predictive Model of Faculty and Department Research Productivity. *Academic Medicine*. 80(3): 225-237.

# Requirements for Successful Research



# Requirements for Successful Research

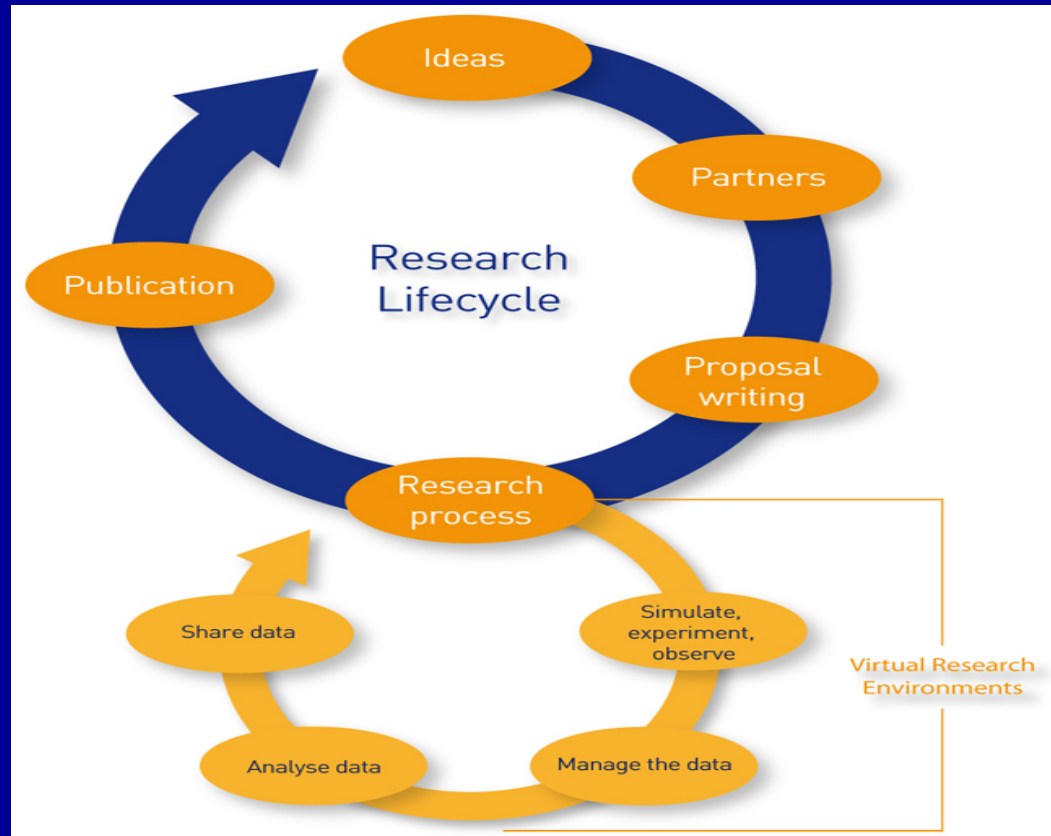
- Libraries have a critical role to play in successful research
- Traditional role of the library has been to provide collections of resources, supplemented by programs in helping users find the resources, e.g. information literacy programs, 1-to-1 reference services,
- Is that enough?

# Role of Academic Libraries in Facilitating Research

- Is that enough ?
  - Environment is changing
  - New technologies and communication are being used
  - Information is available any time, anywhere (*for a price*)
  - Increasing demands of users
- Question of not only “*what services do we offer?*” but also “*how do we move all services to an e-platform in order to support scholars in the research life cycle?*”

# Role of Academic Libraries in Facilitating Research

- Research Life Cycle



Source: Joint Information Systems Committee. Available at  
<http://www.jisc.ac.uk/whatwedo/campaigns/res3/jischelp.aspx>

# Role of Academic Libraries in Facilitating Research

- What support can be provided at the “zones of need” in the research life cycle?
  - Resources and services that are most likely to assist in making the research tasks more efficient, or by supporting new methods of research
  - Resources and services that provide economies of scale across genres of information, disciplines of research, and/or across institutions



# Role of Academic Libraries in Facilitating Research

- Need to think and work beyond traditional library models
- Need to re-examine certain assumptions
  - The Google generation can find information
  - More choices are better
  - Advisors are up-to-date
  - Traditional search approaches (author, title, subject, keyword) are adequate
  - Traditional hours of service are sufficient

# Implications for Libraries and Librarians

- Libraries and librarians have to take on new roles
- Providing collections and services for learning will continue
- But success will be measured by ability to meet the needs of researchers at the various stages of research

# Implications for Libraries and Librarians

- Understanding the research process
  - Closer links with researchers
  - Conducting research themselves
- Understanding students' research behavior, needs and existing services
  - From enrolment to graduation
- Develop appropriate policies and procedures that meet the needs of research students

# Implications for Libraries and Librarians

- Study by Rasul and Singh (2010) on *Perceptions of Postgraduate Students on the Role of Academic Libraries in Facilitating their Research*
- Survey of 375 graduate students in 4 research universities in Malaysia
- **Main findings**
  - Students perceive that academic libraries are playing a relevant role in their research activities
  - Students were generally satisfied with the resources and services which were available at their libraries

# Implications for Libraries and Librarians

- Study by Rasul and Singh (2010) (contd.)
- Main findings (contd.)
  - Electronic resources had the highest value for research, low rating on these collections and print resources
  - There exists a gap between what students perceive as being important, and their level of satisfaction with existing resources and services
  - Overall satisfaction level was lower than students' expectations

# Implications for Libraries and Librarians

- Study by Rasul and Singh (2010) (contd.)
- Main recommendations from the study
  - Libraries should continue to provide a comfortable physical environment with longer opening hours
  - Academic libraries need to continually enhance their electronic and print collections
  - Academic libraries need to conduct research themselves to understand researchers' needs, and then provide services according to the requirements
  - Libraries should provide support at appropriate “zones of need”

# To Summarize

- Research is important
- Universities are among the bigger producers of research
- Students are increasing producers of research
- Academic libraries need to support students in the research process

# To Summarize

(contd.)

- Success is measured not by provision of resources and services, but use and value placed by researchers
- Libraries need to understand students' research behavior and services needed
- Libraries should provide assistance at appropriate “zones of need”



*Thank you !*

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