

Building a Culture of Research: Recommended Practices

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Building a Research Culture

- ◆ Overall (more formal) remarks
- ◆ My story

Importance of a Culture of Research

- ◆ A culture of research provides a supportive context in which research is uniformly expected, discussed, produced, and valued
- ◆ The increasingly competitive higher education marketplace has made faculty research production vital for success on multiple levels:
 - **Institutional Reputation:** An institute's reputation is closely connected to research productivity
 - **Faculty Advancement:** Research productivity is important for faculty hiring and promotion

The Productive Environment

- ◆ Productive faculty share important characteristics on multiple levels:
 - Institutional
 - Leadership
 - Individual
- ◆ Institutions must develop relevant characteristics for all three levels

Institutional Characteristics

- ◆ “Building a Culture of Research: Recommended Practices” (HanoverResearch.com), 2014
- ◆ Characteristics of institutions with high faculty research production
- ◆ Three themes:
 - Importance of Collegiality
 - Long-term Goals
 - Already-Present Characteristics

CHARACTERISTIC	DESCRIPTION
Recruitment and selection	Great effort is expended to recruit and hire members who have the training, goals, commitment, and socialization that match the institution.
Clear coordinating goals	Visible, shared goals coordinate members' work.
Research emphasis	Research has greater or equal priority than other goals.
Culture	Members are bonded by shared, research-related values and practices, have a safe home for testing new ideas.
Positive group climate	The climate is characterized by high morale, a spirit of innovation, dedication to work, receptivity to new ideas, frequent interaction, high degree of cooperation, low member turnover, good leader/member relationships, and open discussion of disagreements.

Institutional Characteristics (cont'd)

- ◆ “Building a Culture of Research: Recommended Practices” (HanoverResearch.com), 2014

Mentoring	Beginning and midlevel members are assisted by and collaborate with established scholars.
Communication with professional network	Members have a vibrant network of colleagues with whom they have frequent and substantive (not merely social) research communication, both impromptu and formal, in and outside of the institution.
Resources	Members have access to sufficient resources such as funding, facilities, and especially humans (e.g., local peers for support, research assistants, technical consultants).
Sufficient work time	Members have significant periods of uninterrupted time to devote to scholarly activities.
Size/ experience/ expertise	Members offer different perspectives by virtue of differences in their degree levels, approaches to problems, and varying discipline backgrounds, the group is stable, and its size is at or above a "critical mass."
Communication	Clear and multiple forms of communication such that all members feel informed.

Institutional Characteristics (cont'd)

- ◆ “Building a Culture of Research: Recommended Practices” (HanoverResearch.com), 2014

Rewards	Research is rewarded equitably and in accordance with defined benchmarks of achievement; potential rewards include money, promotion, recognition, and new responsibilities.
Brokered Opportunities	Professional development opportunities are routinely and proactively offered to members to assure their continued growth and vitality.
Decentralized organization	Governance structures are flat and decentralized where participation of members is expected.
Assertive participative governance	Clear and common goals, assertive and participative leadership where active participation of members is expected, and effective feedback systems are utilized.

Leadership Characteristics

- ◆ Leaders “mediate” the impact of the institution

CHARACTERISTIC	DESCRIPTION
Scholar	Highly regarded as a scholar; serves as a sponsor, mentor, and peer model for other group members.
Research oriented	Possesses a "research orientation"; has internalized the group's research-centered mission.
Capably fulfills all critical leadership roles	<ul style="list-style-type: none">▪ Manager of people and resources▪ Fund-raiser▪ Group advocate▪ Keeps the group's mission and shared goals visible to all members▪ Attends to the many individual and institutional features that facilitate research productivity
Participative leader	<ul style="list-style-type: none">▪ Uses an assertive, participative style of leadership▪ Holds frequent meetings with clear objectives▪ Creates formal mechanisms and sets expectations for all members to contribute to decision making▪ Makes high-quality information readily available to the group▪ Vests ownership of projects with members and values their ideas

Individual Characteristics

- ◆ Motivation is the best indicator of productivity for faculty

CHARACTERISTIC	DESCRIPTION
Socialization	Understands the values, norms, expectations, and sanctions affecting established faculty (e.g., beneficence, academic freedom).
Motivation	Driven to explore, understand, and follow one's own ideas, and to advance and contribute to society through innovation, discovery, and creative works.
Content knowledge	Familiar - within one's research area - with all major published works, projects being conducted, differing theories, key researchers, and predominant funding sources.
Basic and advanced research skills	Comfortable with statistics, study design, data collection methods, and advanced methods commonly used in one's area.

Individual Characteristics (cont'd)

- ◆ Motivation is the best indicator of productivity for faculty

Simultaneous projects	Engaged in multiple, concurrent projects, so as to buffer against disillusionment if one projects stall or fails.
Orientation	Committed to both external activities (e.g., regional and national meetings, collaborating with colleagues) and activities within one's own organization (e.g., curriculum planning, institutional governance).
Autonomy and commitment	Has academic freedom, plans one's own time and sets one's own goals, but is also committed to and plays a meaningful role within the larger organization.
Work habits	Has established productive scholarly habits early on in one's career.

Support from Successful Institutions

- ◆ Successful institutions provide support to faculty research efforts including:
 - Effective Leadership and Clear Goals
 - Faculty Training and Support Programs
 - Research Centers
 - Recognition of Research Production
 - Encouragement of Faculty Collaboration
 - Balanced Teaching and Research Responsibilities
 - Pay is Commensurate with Expectations
- ◆ These help develop research culture and increase faculty productivity

Effective Leadership and Clear Goals

- ◆ Initiating a successful culture of research require clear goals and effective leadership from university and unit administration
- ◆ Important actions of “high level” administration in developing a culture of research:
 - Including research culture development as an item on committee agendas
 - Providing research goals and expectations for individual researchers
 - Aligning all levels of the university with the cultural development strategy
 - Making use of participative governing

Effective Leadership and Clear Goals

- ◆ Leadership must recognize the limits of administrative action for implementing cultural change
- ◆ Leaders may change policies, but it takes acceptance and enforcement of changed policies over time to change culture

Training and Support

- ◆ Education and funding opportunities help develop a research culture:
 - Mentoring programs
 - Continuing education courses
 - Grant-writing support
 - Research funding
 - Support for advanced degree attainment

Mentoring Programs

- ◆ Encourage research-experienced faculty to share expertise
- ◆ Mentorship programs:
 - Build departmental research capacity
 - Foster relationships among colleagues for research development
 - Provide recognition of faculty with excellent research skills

Continuing Education

- ◆ Provide a formal setting for research training

Research Funding

- ◆ In addition to providing support for grant production, institutions may provide more direct support of faculty research:
 - Allocate funds directly to research
 - Adopt sabbatical policy to enable extended protected time
 - Facilitate access to high-class research facilities

Advanced Degree Attainment Support

- ◆ Fosters a research culture by facilitating research training, as well as advanced academic credentials for faculty with insufficient scholarly training

Research Centers

- ◆ To house the training and support programs mentioned
- ◆ Disciplines or units could have their own interdisciplinary research center (maybe after research culture already in place)

Research Recognition

- ◆ Strategies include:
 - Publishing a journal to highlight the success of faculty researchers
 - Circulating regular newsletters, memos, or emails with faculty publishing successes
 - Creating faculty awards in recognition of achievements in research

Networks and Collaboration

- ◆ Research culture is supported by faculty interaction and collaboration
- ◆ Institutions support the development of faculty networks through:
 - Sponsoring faculty participation in scholarly conferences
 - Hosting conferences and symposia
 - Establishing institutional relationships with other universities, professional associations, and government bodies

Time and Pay

- ◆ Reduce course/clinical loads to give more time for scholarly productivity
- ◆ Establish criteria for pay increases, promotions, and advancement

Challenges

◆ Faculty Motivation and Ability

- To implement cultural change, administrators must tailor solutions to faculty members' current motivations and abilities
 - High motivation will make best use of training and support resources
 - Low motivation will benefit most from developing relationships within the unit and larger community

Challenges

◆ Measurement

- Universities or units may use the following factors to measure research productivity:
 - Funded research
 - Unfunded research
 - Quantity of publications, grants, and presentations
 - Research impact factors
 - The value of grants/gifts relative to base salary
 - Regularity of being “principal investigator” on a research grant
 - Various bibliometrics

Challenges

- ◆ Decrease in Training Resources
 - Preserving research culture and effectiveness in other areas (e.g., teaching)
 - Shifts in resource allocation from teaching/clinical to research may have detrimental long-term effects on institutions with important teaching/clinical missions

Key Findings

- ◆ A culture of research requires both institutional- and unit-based leaders to set clear research goals and communicate them effectively.
- ◆ Institutions or units wishing to develop a research culture must allocate resources for faculty training and support.
- ◆ A developing research culture requires open and collaborative personal relationships among faculty members.
- ◆ To implement cultural change, administrators must be prepared to tailor resource allocations based on faculty members' current motivations and abilities.
- ◆ A research culture may take years to develop and, once established, requires regular maintenance.
- ◆ Plans for research culture should include trainee involvement.

My Story

- ◆ 3 years research as undergrad at Columbia U. (Richard Skalak, Ph.D.)
- ◆ Ph.D. at Columbia (Van Mow, Ph.D.)
- ◆ Assistant Professor, University of Michigan (1991-1997)
 - First NIH R01 grant (1995); Second (1997)
- ◆ Associate Professor, University of Michigan (1997)
- ◆ Associate Professor, University of Pennsylvania (1997-2004)
- ◆ McKay Lab Director (1997-2015), Vice Chair (2002-)
- ◆ Professor (2004-), Center Director (2006-), Endowed Chair (2008-)
- ◆ Associate Dean (2015-)

Resources

- ◆ Location, location, location..., I mean grants, grants, grants
- ◆ Start-up
- ◆ Departmental support
- ◆ Institutional support
- ◆ Philanthropy
- ◆ Entrepreneurial activities
- ◆ And did I mention grants (and not just “NIH R” grants)

Plan and Strategy

- ◆ 3-5 year plan for your lab/program and yourself (and this year's plan too), with regular re-evaluation
- ◆ Know who needs to be involved, persuaded, etc (all about the team)

Recruiting

- ◆ Location, location, location..., I mean best person, best person, best person
- ◆ Need research (and business!) plan
- ◆ Need mentoring (at every level, even us endowed chair profs)

Environment and Mentoring

- ◆ Individual, Department, School Level: People
- ◆ Individual, Department, School Level: Mentoring and training programs and opportunities
- ◆ Individual, Department, School Level: Space, Facilities, Resources
- ◆ Individual, Department, School Level: Quality of trainees, access

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Thanks
