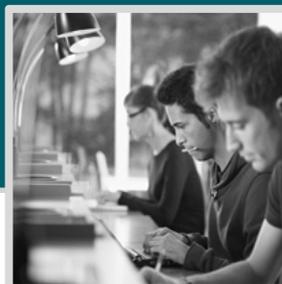
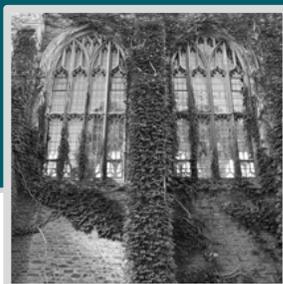


Building a Culture of Research: Recommended Practices

May 2014



In the following report, Hanover Research examines successful practices for developing a culture of research in higher education. This report also considers the essential characteristics of institutions with high levels of research productivity and profiles institutional plans for developing and maintaining cultures of research.

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EXECUTIVE SUMMARY AND KEY FINDINGS

INTRODUCTION

In the following report, Hanover Research considers successful practices for initiating and maintaining a culture of research, focusing in particular on practices in divisions without strong research traditions, such as professional schools. The report comprises three sections:

- **Section I** discusses the importance of a culture of research and addresses important characteristics of a productive research environment.
- **Section II** addresses important factors and successful steps for implementing a culture of research.
- **Section III** profiles the research development plans at three public professional schools – a law school, a medical school, and a nursing school.

KEY FINDINGS

- **A culture of research requires both institutional- and unit-based leaders to set clear research goals and communicate them effectively.** The goals must be accompanied by a well-defined plan of research success evaluation as well as any accompanying changes in compensation. Administrators should also adjust job descriptions to include statements of research and teaching expectations.
- **Institutions wishing to develop a culture of research must allocate significant resources for faculty training and support.** Faculty with minimal scholarship production experience will likely need training and personal support to become proficient. Institutions may develop continuing education courses or support services in research practices, grant writing, and grant management. These programs could be housed in either a centralized or discipline-specific research center.
- **A developing culture of research requires open and collaborative personal relationships among faculty members.** Congenial relationships among faculty members would support a successful faculty-to-faculty research mentoring initiative. Such mentorships stand to be an important element of culture establishment. Personal ties among faculty are also likely to foster collaborative research efforts, which are a hallmark of research culture success.
- **To implement cultural change, administrators must be prepared to tailor resource allocations based on faculty members' current motivations and abilities.** Those with high motivation and low ability will likely make the best

use of training and support resources. Those with low motivation would likely benefit most from developing personal relationships both within their unit and within the larger academic community.

- **A culture of research may take years to develop and, once established, requires regular maintenance.** New policies relating to research must be enforced with regularity over time before they are accepted. Once changed policies have been accepted, administrators must be prepared to meet continuing challenges, such as maintaining research funding, developing partnerships with outside institutions to expand research opportunities, and confronting institutional changes
- **Plans for a culture of research should include consideration of student involvement.** Doctoral students who are exposed to research practices early in their education are more likely to complete their dissertations. Institutions may develop student research skills through research assistantships. Faculty mentors may also provide personalized research guidance.

SECTION I: RESEARCH PRODUCTIVITY IN HIGHER EDUCATION

This section examines the essential characteristics of institutions with high levels of research productivity, and also considers the importance of developing a culture of research.

IMPORTANCE OF A CULTURE OF RESEARCH

It is difficult to recognize a uniformly satisfying definition of a “culture of research.”¹ In order to provide a broad and useful conception for this report, Hanover draws from Teresa Marchant, who characterizes culture as “**a system of widely shared and strongly held values.**”² This would make a culture of research a system that places great value on conducting and communicating scholarly research.

Andrew Cheetham of the University of Western Sydney (UWS), Australia, further notes, “The research culture is the structure that gives [research behavior] significance and that allows us to understand and evaluate the research activity.”³ So, an institution’s culture of research is not simply a group of scholars who see the importance of research. **A culture of research provides a supportive context in which research is uniformly expected, discussed, produced, and valued.**

While defining a culture of research may be difficult, it is no challenge to recognize the increasing importance of having one. Faculty at major research institutions have traditionally been expected to maintain scholarly activities, including conducting research and publishing scholarly works. But it is no secret that, in recent decades, faculty at comprehensive and “teaching” universities have also come under pressure to research and publish.⁴ This pressure continues today. **Institutions and units that have traditionally emphasized effective faculty contact with students as a criterion for success are looking to develop cultures of research and increase faculty research production.**⁵

¹ See: Evans, Linda. “Developing Research Cultures and Researchers in HE; the Role of Leadership.” Presentation at the Annual Conference of the Society for Research into Higher Education, December 11th 2007. p. 1. <http://www.education.leeds.ac.uk/assets/files/staff/papers/SRHE-paper-submission-0132.doc>

² Marchant, Teresa. “Developing Research Culture – Overcoming Regional and Historical Obstacles.” Chapter Five in *Professional Doctorate Research in Australia: Commentary and Case Studies from Business, Education and Indigenous Studies*. Lismore: Southern Cross University Press. p. 6. http://www98.griffith.edu.au/dspace/bitstream/handle/10072/32464/63376_1.pdf?sequence=1

³ Cheetham, Andrew. “Growing a Research Culture.” Address to the Academic Senate – University of Western Sydney, May, 2007. p. 5. http://www.uws.edu.au/__data/assets/pdf_file/0018/7119/Item_3.6_Building_a_Research_Culture__Tabled_Doc.pdf

⁴ Blackburn, R. T., et al. “Faculty at Work: Focus on Research, Scholarship, and Service.” *Research in Higher Education*, 32(4), 1991. p. 385.

⁵ Youn, T. I. K., and Price, T. M. “Learning from the Experience of Others: The Evolution of Faculty Tenure and Promotion Rules in Comprehensive Institutions.” *Journal of Higher Education*, 80(2), 2009. p. 205.

This change is not surprising as the increasingly competitive higher education marketplace has made faculty research production vital for success on multiple levels:

- **Institutional Reputation:** Institutional reputation among research universities is closely connected to research productivity. Namely, **increases in research productivity are connected with an increasingly favorable reputation.** Halis Dundar and Darrell Lewis note that, “research productivity of [research institutions] was highly related to their favorable reputation.”⁶
- **Faculty Advancement:** Research productivity is also important for the hiring and promotion of individual faculty members, even at traditional teaching institutions.⁷ James Fairweather notes a faculty survey on productivity in which respondents described their “production” in terms of teaching and research, but said that “what matters” is research and publications.⁸

THE PRODUCTIVE ENVIRONMENT

A 2005 study by Carole Bland and her associates presents the characteristics of units with successful faculty research production.⁹ Data were gathered from the University of Minnesota Medical School, which may make the findings particularly helpful for medical and other professional schools. However, the study’s findings align with those of other studies examining a variety of program types, suggesting they also have a broader application.¹⁰

Bland, et al.’s findings indicate that institutions with productive faculty share important characteristics on the levels of:¹¹

- The institution;
- Leadership; and
- Individual faculty members.

Success at any one level is not sufficient to account for successful research productivity. Institutions should aspire to develop relevant characteristics at all three levels.¹²

⁶ Dundar, H., & Lewis, D. R. “Determinants of Research Productivity in Higher Education.” *Research in Higher Education*, 39(6), 1998. p. 608.

⁷ [1] Youn, Op. cit., p. 205.

[2] McGill, M., and Settle, A. “Identifying Effects of Institutional Resources and Support on Computing Faculty Research Productivity, Tenure, and Promotion.” *International Journal of Doctoral Studies*, 7, 2012. p. 3. <http://ijds.org/Volume7/IJDSv7p167-198McGill348.pdf>

⁸ Fairweather, J. “The Mythologies of Faculty Productivity: Implications for Institutional Policy and Decision Making.” *The Journal of Higher Education*, 73(1), 2002. p. 31-32.

⁹ Bland, C., et al. “A Theoretical, Practical, Predictive Model of Faculty and Department Research Productivity.” *Academic Medicine*, 80(3) 2005. p. 225-237.

<http://www2.massgeneral.org/facultydevelopment/cfd/pdf/Predictors%20of%20Research%20Productivity.pdf>

¹⁰ Ibid., p. 233.

¹¹ Bulleted list adapted from: Ibid., p. 225.

The characteristics on each level provide a predictive model, not a causal model of high research productivity. The report goes on to note, however, that the findings should be considered when trying to increase faculty research production.¹³

INSTITUTIONAL CHARACTERISTICS

Bland, et al. note 15 characteristics found in institutions with high faculty research production. They are listed and described in Figure 1.1. Three themes in particular can be discerned from these characteristics:

- **Importance of Collegiality** – Many characteristics require collegiality and a singularity of purpose among faculty members. Institutions likely pursue this under any circumstances. When attained, collegiality may also contribute to other endeavors beyond increasing research production.
- **Long-Term Goals** – Some characteristics must develop over a long period of time, such as inculcating a research-based “culture” and the “recruitment and selection” of research-focused faculty members. Andrew Cheetham notes, “[Building a culture of research] cannot be accomplished either quickly or easily.”¹⁴ It could take up to 10 years in institutions that need to establish one from the ground up.¹⁵
- **Already-Present Characteristics** – Some characteristics may already be present in units that do not currently have a focus on research, such as open and clear “communication” and “assertive participative governance” within the unit.

The bolded characteristics below are the strongest predictors of research productivity.¹⁶

¹² Ibid., p. 227.

¹³ Ibid., p. 230.

¹⁴ Cheetham, Op. cit., p. 5.

¹⁵ Marchant, Op. cit., p. 2.

¹⁶ Bland, et al., Op. cit., p. 233.

Figure 1.1: Institutional Characteristics that Facilitate Research Productivity

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.
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.
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.

Source: Bland, et al.¹⁷

¹⁷ Table contents reproduced from: Ibid., p. 228.

INDIVIDUAL CHARACTERISTICS

The report lists eight characteristics of productive individuals. The characteristics are in Figure 1.2. These characteristics are the best indicators of productivity for faculty at institutions with the characteristics listed above, in Figure 1.1.¹⁸ “Motivation” is a strong individual predictor of research productivity.

Figure 1.2: Individual Characteristics that Facilitate Research Productivity

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.
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.

Source: Bland, et al.¹⁹

LEADERSHIP CHARACTERISTICS

Finally, since leaders “mediate” the impact of the institution,²⁰ Bland, et al. note four broad characteristics that are important for leadership of research-friendly institutions that house motivated faculty. These characteristics are in Figure 1.3. Bland, et al. found that having a “participative leader” is especially important.

¹⁸ Ibid., p. 231.

¹⁹ Table contents reproduced from: Ibid.

²⁰ Ibid.

Figure 1.3: Leadership Characteristics that Facilitate Research Productivity

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 and 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

Source: Bland, et al.²¹

Bland, et al. conclude that, "when individual faculty's research productivity is the goal, nothing substitutes for" four factors in particular:²²

- Recruiting faculty with a passion for research;
- Providing them with formal mentoring programs;
- Facilitating their networks; and
- Providing time for them to do research.

These and additional steps are considered in more detail in the following section.

²¹ Table contents reproduced from: Bland, et al., Op cit.

²² Bullet points quoted verbatim from: Ibid., p. 236.

SECTION II: INFLUENTIAL FACTORS FOR A CULTURE OF RESEARCH

Successful institutions provide significant support to faculty research efforts. They can choose from a variety of tactics to develop a culture of research and increase faculty research productivity. In this section, Hanover Research identifies influential factors behind the development of a culture of research, based on a review of secondary literature and institutional practices.

Research-centered institutions provide supports 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; and
- Pay that is Commensurate with Expectations.

EFFECTIVE LEADERSHIP AND CLEAR GOALS

Initiating a successful culture of research requires clear goals and effective leadership from university and unit administration. Bland, et al., noted four important characteristics that leaders of successful research environments possess. Teresa Marchant recognizes the importance of similar characteristics in leadership of units with developing cultures of research. Important actions of “high level” administration include:²³

- Including research culture development as an item on important committee agendas;
- Providing a clear and publicized articulation of institutional research goals and expectations for individual researchers;
- Aligning all levels of the university with the cultural development strategy; and
- Making use of participative governing.

Administration at the “local or sub-unit factors” should have strong leadership skills and the freedom to allocate unit resources as is necessary.²⁴

²³ Bulleted list adapted from: Marchant, Op. cit., p. 5-6.

²⁴ Bulleted list adapted from: Ibid.

Those in leadership roles must also recognize the limits of administrative action for implementing cultural change. Marchant warns that a culture of research will not be successfully inculcated through authoritarian top-down demands for change.²⁵

Leadership may change policies, but it takes acceptance and enforcement of changed policies over time to change culture. Marchant notes that, “culture is maintained and transmitted by organization practices that keep it alive,” such as:²⁶

- Human resource policy, particularly recruitment;
- Socialization;
- Performance management; and
- Leadership.

TRAINING AND SUPPORT

Successful development of a culture of research within a teaching-focused academic unit will include the introduction of education, formation, and funding opportunities for faculty members. These may include:

- Mentoring programs;
- Continuing education courses;
- Grant-writing support;
- Research funding; and
- Support for terminal degree attainment.

MENTORING PROGRAMS

Mentoring programs encourage experienced faculty members with research skills to share their expertise with those who need assistance developing their competence for research.²⁷ Andrew Cheetham notes, “It is the intersection and interaction of... research mentoring networks that builds and strengthens the research culture.”²⁸ A mentorship program has the potential to support a unit’s culture of research by:²⁹

- Building departmental research capacity;
- Fostering strong personal and professional relationships among colleagues in the context of research development; and
- Providing recognition of faculty with excellent research skills.

²⁵ Ibid., p. 7.

²⁶ Bulleted list adapted from: Ibid.

²⁷ Cheetham, Op. cit., p. 6.

²⁸ Ibid.

²⁹ Bulleted items adapted from:

[1] Bland, et al., Op. cit.

[2] Hammond, S., Madsen, S., and Fenton, J. “Strategically Increasing Faculty Productivity.” *Academic Exchange Quarterly*, 8(4), 2004. Accessed at: <http://rapidintellect.com/AEQweb/5jun2821z4.htm>

Mentorship in research skills may be particularly important in professional fields where younger faculty may have had less training in research and its importance. A recent study of research mentorships for junior medical faculty at a “large academic institution” found that junior faculty had “considerable interest” in being mentored, and concluded that mentoring physicians “seeking to add research skills and academic productivity” holds significant promise as a way to develop new investigators. Both mentors and mentees participating in the program noted that “institutional support is vital for promoting mentorship.”³⁰

CONTINUING EDUCATION

Continuing education courses provide a formal setting in which experienced faculty researchers can train less experienced faculty members. As with mentorship, research suggests that there may be a particular need for such training in professional fields. For instance, a survey of junior faculty in U.S. schools of pharmacy found that many reported a “lack of formal training in most research skills during their postgraduate training” – while these faculty members felt well prepared to meet the “teaching, clinical, and service expectations of their departments,” they were less confident about meeting research expectations.³¹

Although such deficiencies may be best addressed through changes to postgraduate preparation in these fields, institutions have also had success in providing training to young academics once they are employed as faculty. Hofstra University’s North Shore-Long Island Jewish School of Medicine, for instance, has recently implemented a program of research development, both to increase the “scholarly activity” of residents and to enhance the “research focus” of the faculty.³²

The “multifaceted intervention” employed by the school has included a “formalized research curriculum,” as well as:³³

- A needs assessment
- Appropriate of dedicated research staffing
- Development of tracking tools and policies
- Additional research time for residents

³⁰ Ragsdale, J. et al. “Characterizing the Adequacy, Effectiveness, and Barriers Related to Research Mentorship Among Junior Pediatric Hospitalists and General Pediatricians at a Large Academic Institution.” *Hospital Pediatrics*. March 2014. <http://www.ncbi.nlm.nih.gov/pubmed/24584979>

³¹ Lee, K. et al. “Evaluation of Research Training and Productivity Among Junior Pharmacy Practice Faculty in the United States.” *Journal of Pharmacy Practice*. December 2010. <http://www.ncbi.nlm.nih.gov/pubmed/21507862>

³² Merwin, S. et al. “A Preliminary Report on the Initiation of a Clinical Research Program in an Orthopaedic Surgery Department: Roadmaps and Tool Kits.” *Journal of Surgical Education*. January/February 2014. <http://www.ncbi.nlm.nih.gov/pubmed/24411423>

³³ Ibid.

Together, these interventions “invigorated faculty and trainees” to begin generating more research inquiries. And along with an increase in “institutionally-required research training for faculty/residents” has come an increase in the time faculty spend on research and the amount of research produced, such as abstracts submitted for national meetings. Overall, the program has been “effective in transforming the focus of a clinical department into one with a nascent clinical research program.”³⁴

Similar approaches can be effective in other disciplines as well. When the School of Business at Utah Valley State College (UVSC) was seeking accreditation by the Association to Advance Collegiate Schools of Business, it needed to improve its faculty research production. In response, UVSC developed a course, “Writing for Scholarly Publication,” for a small group of faculty in need of training, and faculty members responded positively.³⁵

Similarly, within the field of social work, a survey of around 100 graduate programs around the country found multiple types of research-related training being offered by a majority of the programs (Figure 2.1). Grant-related support was found to be the most common, but assistance with writing and research methods was found to be relatively common as well.

Figure 2.1: Training and Support Opportunities for Social Work Faculty

TRAINING AND SUPPORT	PREVALENCE
Announcements of External Funding Opportunities	97.0%
Grant Preparation Assistance	91.9%
Grant-Writing Seminars	77.1%
Data Analysis Seminars	55.7%
Manuscript-Writing Seminars	54.6%
Literature Review Assistance	43.8%
Manuscript Preparation Assistance	39.6%

Source: Freedenthal, et al.³⁶

³⁴ Ibid.

³⁵ Hammond, S. et al. Op. cit.

³⁶ Freedenthal, S., Potter, C., and Grinstein-Weiss, M. “Institutional Supports for Faculty Scholarship: A National Survey of Social Work Programs.” *Social Work Research*, 32(4), 2008. p. 226.

RESEARCH FUNDING

In addition to providing support for grant production, institutions wishing to develop and maintain a culture of research may provide more **direct support of faculty research**. Institutions may:

- Allocate funds directly to research;
- Adopt a generous sabbatical policy to enable frequent and/or extended research time; and
- Facilitate access to high-class research libraries, computers, updated laboratories and other facilities.

Freedenthal, et al. note that special supports may be put in place especially for new junior faculty, including the allocation of research start-up funding.³⁷

TERMINAL DEGREE ATTAINMENT SUPPORT

Support for terminal degree attainment fosters a culture of research by facilitating attainment of research training as well as advanced academic credentials for current faculty with insufficient scholarly training. UVSC provided institutional support to faculty who were willing to pursue terminal degrees in their fields, including a year-long sabbatical and a reduced teaching load for two years after the sabbatical.³⁸ This support was offered to faculty who were five years or more from retirement.

RESEARCH CENTERS

Research centers may be established to house some or all of the training and support programs listed above. Teresa Marchant suggests that, in addition to a centralized research unit, each discipline or unit should ideally have its own research center, which directs resources for faculty research.³⁹ Andrew Cheetham agrees, but indicates that a specialized or unit-specific research center may be best implemented where a culture of research has already begun to take hold, as center funding may be difficult to gain for units with unproven research success.⁴⁰

The use of unit-level research centers to enhance a culture of research, particularly in a traditionally non-research-intensive field, can be seen at Indiana University, where the School of Journalism's current strategic plan includes the objective to "strengthen and enhance our research influence and productivity at all levels of the curriculum." Of the six actions the school intends to take towards this objective, fully half entail creating a research center, including:⁴¹

³⁷ *Ibid.*, p. 221.

³⁸ Hammond, et al., *Op. cit.*

³⁹ Marchant, *Op. cit.*, p. 5.

⁴⁰ Cheetham, *Op. cit.*, p. 6.

⁴¹ "Strategic Plan 2010-2015." Indiana University School of Journalism. <http://journalism.indiana.edu/about-us/strategic-plan-2010/>

- A media research lab funded by grants and foundation support.
- A center within political communication, which will “emphasize academic research for both graduate and undergraduate programs.”
- A center within life science communication with an emphasis on health that includes both undergraduate and graduate study.

RESEARCH RECOGNITION

Unit- and institution-wide recognition of research excellence is also an important element for developing a culture of research. An institution’s faculty awards and discussion of faculty successes reflect the characteristics that are most important to an institution. Successful strategies associated with researcher recognition include:⁴²

- Publishing a journal to highlight the successes of faculty researchers;
- Circulating regular newsletters, memos, or emails with faculty publishing successes; and
- Creating faculty awards in recognition of achievements in research.

Yonghong Xu’s research indicates that this type of recognition may contribute to retaining productive nursing research faculty.⁴³ However, financial considerations remain very important in this field.

NETWORKS AND COLLABORATION

A culture of research is supported by faculty interaction and research collaboration.⁴⁴ Bland, et al. note that successful researchers have a network of like-minded scholars with whom to discuss their projects. They go on to note that this network does not need to be within a given faculty member’s unit or institution.⁴⁵

Institutions support the development of faculty networks through activities including:

- Sponsoring faculty participation in scholarly conferences;
- Hosting conferences and symposia; and
- Establishing institutional relationships with other universities, professional associations, and government bodies.

⁴² Bulleted list adapted from:

[1] Hammond, et al., Op. cit.

[2] Xu, Y. J. “Faculty Turnover: Discipline-Specific Attention is Warranted. *Research in Higher Education*, 49 (1), 2008. p. 57-58.

⁴³ Xu, Op. cit.

⁴⁴ [1] McGill, Op. cit., p. 169.

[2] Marchant., Op. cit., p. 8.

⁴⁵ Bland, et al., Op. cit., p. 230.

For example, New York University (NYU) established a Faculty Resource Network (FRN), which has the mission to “foster connection, collaboration, and collegiality through a partnership of colleges and universities dedicated to faculty development.”⁴⁶ In support of this mission, the FRN provides faculty enrichment seminars, hosts national symposia, and offers visiting scholar programs.⁴⁷

TIME AND PAY

Developing a culture of research within a teaching-focused unit will likely entail **reducing teacher course loads to give faculty more time for scholarly productivity.** James Fairweather found that, “for most faculty members, generating high numbers of student contact hours diminishes publication rates, and vice versa.”⁴⁸ Bland, et al. similarly find that faculty with fewer teaching hours tend to produce more research.⁴⁹

Institutions seeking to ensure faculty put a balanced effort into teaching and research must establish criteria for pay increases, promotions, and other advancement that reflect this balance.⁵⁰ An institution may also consider incentivizing pay for research production. A recent study of salary incentive policies at Canadian medical schools finds that **payment increases tied to research production yield increased scholarly output.**⁵¹

CHALLENGES

While institutions may take steps to develop a culture of research, they will likely be pressed by difficulties throughout the process. Three noteworthy challenges are discussed below.

FACULTY MOTIVATION AND ABILITY

The fruitful research environment modeled by Bland, et al. stipulates that faculty are motivated and capable researchers. While institutions seeking to develop a culture of research will adapt their hiring practices to add faculty members with research production potential, current faculty may lack the interest or skills to contribute meaningfully to the developing culture. **To implement cultural change, administrators must be prepared to tailor solutions to faculty members’ current motivations and abilities.**

⁴⁶ “About Us.” New York University – Faculty Resource Network. <http://www.nyu.edu/frn/about.us/>

⁴⁷ “Programs and Events.” New York University – Faculty Resource Network. <http://www.nyu.edu/frn/programs.events/around.the.network.html>.

⁴⁸ Fairweather, “The Mythologies of Faculty Productivity: Implications for Institutional Policy and Decision Making,” Op. cit., p. 44.

⁴⁹ Bland, et al., Op. cit., p. 230.

⁵⁰ Fairweather, James. “Beyond the Rhetoric: Trends in the Relative Value of Teaching and Research in Faculty Salaries.” *The Journal of Higher Education*, 76(4), 2005. p. 418.

⁵¹ Akl, E., et al. “Effects of assessing the Productivity of Faculty in Academic Medical Centres: A Systematic Review.” *Canadian Medical Association Journal*, May, 2012. p. 5. Accessed at: <http://www.cmaj.ca/content/early/2012/05/28/cmaj.111123.full.pdf+html>

When the School of Business at Utah Valley State College required increased faculty research production, Hammond, et al. recognized four categories of faculty member based on their motivations and abilities for research. They concluded that a “one size fits all” allocation of resources was not appropriate for faculty and suggested customized approaches.⁵² The faculty categories and recommended resource allocations are in Figure 2.2.

Those with high motivation and low ability will likely make the best use of training and support resources. Those with low motivation would likely benefit most from developing personal relationships within the unit and within the larger academic community.

Figure 2.2: Customized Resource Dedication for Faculty

FACULTY CATEGORY	SUGGESTED RESOURCE DEDICATION
High Motivation - High Ability	<ul style="list-style-type: none"> ▪ Teaching load reductions ▪ Summer faculty research grants ▪ Conference funding ▪ E-letter published regularly to highlight scholarly successes ▪ Recognition and support was offered for those willing to mentor other faculty
High Motivation - Low Ability	<ul style="list-style-type: none"> ▪ Mentor program ▪ Workshops focusing on basic research skills ▪ Terminal degree completion support ▪ Continuing education opportunities ▪ E-letter published regularly to highlight scholarly successes
Low Motivation - High Ability	<ul style="list-style-type: none"> ▪ Individual attention dedicated to create social ties with faculty
Low Motivation - Low Ability	<ul style="list-style-type: none"> ▪ Clear articulation of department goals and department confidence in faculty success. ▪ Individual attention from department chairs to develop a plan for expectations and progress. ▪ Maintain previous teaching and citizenship activities ▪ Terminal degree completion support ▪ Continuing education opportunities

Source: Strategically Increasing Faculty Productivity⁵³

MEASUREMENT

The demand for increased research productivity within a developing culture of research is attended by the challenge of effectively measuring scholarly output. Institutions may consider a variety of factors in a number of different ways. This is not surprising, though, since measurements of progress and success must change as institutions develop.⁵⁴

⁵² Hammond, et al., Op. cit.

⁵³ Ibid.

⁵⁴ McGill, Op. cit., p. 169.

Universities or their units, including professional schools, may use one or more of the following factors to measure research productivity:⁵⁵

- Funded research
- Unfunded research
- Quantity of publications, grants, and presentations
- Research impact factor
- The value of grants/gifts relative to base salary
- Regularity of being “principal investigator” on a research grant

Multiple institutions have made use of a point-based evaluation systems developed by departmental committees.⁵⁶

In measuring publications, various bibliometrics may be used to assess the quality as well as the quantity of a researcher’s output. Such measures may include the weighting of publications based on the quality of the journal or counts of the number of times other researchers cite a publication.⁵⁷ These may be briefly defined as follows:

- **Weighted journal publication citations:** This measurement gives high value to an article that is published in a journal the articles of which are cited regularly. By this measure, the most successful articles are published in well-cited or “prestigious” journals.⁵⁸
- **Work citations:** This measurement gives higher value to an article the more times it has itself been cited. This measure does not reflect the “prestige” of the journal in which an article is published.⁵⁹

Both types of measurement may have benefits and drawbacks, but at least one study recommends using weighted journal publication measurements.⁶⁰

Measures of individual research success provide helpful indicators of a unit’s capable researchers, but **the success of a culture of research may be better measured at other levels.** If a unit lightens certain faculty members’ teaching loads for research, additional course responsibilities may fall to other faculty members, who would have

⁵⁵ Akl, et al., Op. cit., p. 4.

⁵⁶ Ibid.

⁵⁷ Henrekson, M. and Waldenström, D. “How Should Research Performance Be Measured? A Study of Swedish Economists.” A working paper published by the Research Institute of Industrial Economics. 2007. p. 3. <http://www.ifn.se/wfiles/wp/wp712.pdf>

⁵⁸ Ibid., p. 4.

⁵⁹ Ibid., p. 7.

⁶⁰ Ibid., p. 13.

less time to produce scholarship. The success of a developing culture of research may be better reflected in unit-level measurements of productivity.⁶¹

Additionally, higher-level evaluation metrics may become more relevant as a unit implements a culture of research. If a unit is successful in establishing collaborative relationships among colleagues, the unit's increased research productivity may well come through "group solutions" rather than faculty members working individually.⁶²

DECREASE IN TEACHING RESOURCES

A final challenge in creating a culture of research is to preserve a unit's effectiveness in other areas, particularly teaching, as the dedication of additional resources to supporting research may decrease those available to support teaching. Ted Youn indicates that **shifts in resource allocation from teaching to research initiatives may have detrimental long-term effects on institutions with important teaching missions**, such as comprehensive universities.⁶³ It is possible that similar concerns could apply to units within a research institution that have traditionally focused on teaching, such as professional schools.

GRADUATE STUDENTS IN A CULTURE OF RESEARCH

An institution's policies, administration, faculty, and staff are the primary factors behind the development of a culture of research. Nonetheless, an institutional culture of research will naturally impact students' educations, as well.⁶⁴ Research indicates that **instructor mentoring facilitates student dissertation completions**.⁶⁵ It is likely that a culture of research that is built, in part, through faculty to faculty mentor relationships could implement a faculty to student mentorship program with relative ease.

Even if a formal mentorship program is not feasible, students will likely benefit from being immersed in a culture of research. One study notes that **graduate students have fewer difficulties completing dissertations when they have been introduced to research practices early on in their studies**.⁶⁶ Faculty in a culture of research are regularly engaged in research projects. Any student research assistants they use stand to gain valuable experience and knowledge.

⁶¹ McGill, Op. cit., p. 169.

⁶² Fairweather, "The Mythologies of Faculty Productivity: Implications for Institutional Policy and Decision Making," Op. cit., p. 44.

⁶³ Youn, Op. cit., p. 231.

⁶⁴ Shah, Mubarak. "Creating a Culture of Research." University of South Florida. *Faculty Focus*, 10(2), 2011. pp. 6-7. http://vision.eecs.ucf.edu/news/Faculty_Focus.pdf

⁶⁵ Grasso, M., Barry, M., and Valentine, T. "A Data-Driven Approach to Improving Doctoral Completion." Council of Graduate Schools. p. 30. http://www.cgsnet.org/ckfinder/userfiles/files/Paper_Series_UGA.pdf

⁶⁶ Ibid., p. 31.

Two of the three schools profiled in the next section, The College of Nursing at Stony Brook University and the Maurer School of Law at Indiana University-Bloomington, explicitly incorporate student participation into unit research plans:

- **Stony Brook University’s School of Nursing** – This school’s strategic plan notes that, “Active programs of research provide opportunities for students to participate in a variety of ways that will enhance their educational experience and be congruent with the Carnegie philosophy of introducing students to research early in their curriculum.”⁶⁷ Faculty should seek funding for student assistants.⁶⁸
- **Maurer Law School** – This school’s plan notes, “We will enhance the connection between our scholarship and our teaching by integrating our scholarship into our teaching, by involving students in our scholarly activity, and by supporting student scholarly efforts.”⁶⁹

⁶⁷ “School of Nursing Strategic Plan 2010-2015.” Stony Brook University. p. 8.

http://nursing.stonybrookmedicine.edu/sites/default/son/SON_StrategicPlan.pdf

⁶⁸ Ibid.

⁶⁹ “The Strategic Plan.” Maurer School of Law. p. 7. http://law.indiana.edu/about/doc/strategic_plan.pdf

SECTION III: INSTITUTIONAL PROFILES

In this section, Hanover Research profiles the strategic plans for developing or maintaining cultures of research within professional schools at several research institutions. The profiles illustrate important goals professional schools strive to achieve in supporting a culture of research. The plans also indicate the steps these schools take in order to achieve their research productivity goals. Professional schools from three different institutions are considered:

- Stony Brook University, School of Nursing;
- Emory University, Department of Medicine in the School of Medicine;
- Indiana University-Bloomington, Maurer School of Law.

The analysis pays special attention to each unit’s mission, research goals, and strategies for goal attainment.

STONY BROOK UNIVERSITY – SCHOOL OF NURSING

Stony Brook University is a large public research university with a School of Nursing (SON) that has recently begun to develop a research program. The school’s strategic plan for 2010 to 2015 is the “initial platform” for this initiative⁷⁰ and provides an overview of the first steps a professional school might take in fostering a culture of research and increasing faculty research productivity.

MISSION

The primary element of the SON’s mission is providing high-quality education to future nurse leaders.⁷¹ Program implementation, however, requires faculty with strong commitments to education as well as commitment to:⁷²

- Clinical practice;
- Scholarly activity; and
- Research.

The SON hopes to become, “a destination public ivy” not only for students, but for faculty and other researchers as well.⁷³

⁷⁰ “School of Nursing Strategic Plan 2010-2015,” Op. cit., p. 2.

⁷¹ Ibid., p. 6.

⁷² Bulleted list copied from: Ibid.

⁷³ Ibid.

RESEARCH GOALS

The strategic plan envisions a research competency at the SON that will make it a “research school of distinction.” In order to realize this strategic initiative, the SON distinguished three goals:⁷⁴

- Increase research activity and grant submission within the SON;
- Secure grant funding for the SON; and
- Establish an Institute for Quality, Safety, and Team Science.

The goals were developed not only to improve research activities among faculty members, but also to provide opportunities for students. The plan notes that active faculty research activities, an element of the first goal, will likely include student participation.⁷⁵ Students can be introduced to research practices and start developing effective research habits from the beginnings of their educations if faculty members are engaged in research projects.⁷⁶

The second goal also includes specifications aimed at improving students’ educational experiences. Funding for research should be sought for student assistants at the undergraduate, graduate, and doctoral levels.⁷⁷ Financial support provided to students through research grants will allow ambitious students even from economically challenged backgrounds to participate and contribute to the school’s culture of research.⁷⁸

STRATEGIES

In order to attain its research goals, the SON has identified three sets of strategies or tactics. The tactics associated with each goal are provided in Figure 3.1. The SON’s goals and strategies for developing a culture of research include many of the influential factors addressed above in Section II. Among other steps, the SON plans to:⁷⁹

- Hire effective researchers;
- Establish a foundation for nursing research;
- Provide resources to aid in grant preparation and management;
- Recognize faculty accomplishments; and
- Encourage collaboration.

⁷⁴ Bulleted items copied verbatim from: Ibid, p. 8.

⁷⁵ Ibid.

⁷⁶ Ibid.

⁷⁷ Ibid.

⁷⁸ Ibid.

⁷⁹ Bulleted list adapted from: Ibid., pp. 8, 10.

The Institute for Quality, Safety, and Team Science is designed to provide grant support for faculty, as well as to:⁸⁰

- Track research productivity;
- Identify research support mechanisms; and
- Assist investigators in negotiating processes necessary for conducting research.

The most notable elements lacking from the SON’s strategies are a faculty mentoring program and any sort of continuing education or training for researchers.

Figure 3.1: Research Development Goals and Strategies/Tactics

Goal	Strategies/Tactics
Increase research activity and grant submission	<ul style="list-style-type: none"> ▪ Recruit Associate Dean for Research as well as faculty with established research programs ▪ Identify current research activity, interest, and funding availability ▪ Identify and analyze infrastructure to support research ▪ Increase grant submission and submission of one or more foundation grants ▪ Collaborate on interdisciplinary grants ▪ Establish a foundation for research in School of Nursing ▪ Develop a Ph.D. program in nursing by 2015
Secure grant funding	<ul style="list-style-type: none"> ▪ Initiate NIH P20 Center grant application ▪ Increase submissions and secure NIH funding ▪ Increase number of research-based publications ▪ Disseminate research findings ▪ Support formal postdoctoral fellowship for School of Nursing faculty member ▪ Submit proposal for Ph.D. program
Establish an Institute for Quality, Safety, and Team Science	<ul style="list-style-type: none"> ▪ Broaden scope of research activities to include multicenter studies ▪ Join interdisciplinary research consortium at Stony Brook University ▪ Admit first cohort of Ph.D. students

Source: Stony Brook University – School of Nursing⁸¹

⁸⁰ Bulleted list adapted from: Ibid., p. 8.

⁸¹ Ibid.

EMORY UNIVERSITY – DEPARTMENT OF MEDICINE

Emory University’s School of Medicine (SOM) is a successful research medical school, ranking in the top quarter of U.S. News and World Report’s national rankings.⁸² The SOM houses a Department of Medicine (DOM), which receives 20 percent of the SOM’s external funding for research, which is the highest of any SOM department.⁸³ The DOM notes, however, that the department’s high level of research activities began less than 30 years ago and have increased dramatically since 2000,⁸⁴ indicating that the DOM’s current culture of research, while established, is relatively young. This department’s research goals and strategies illustrate a successful culture of research that is still looking to grow.

MISSION

The DOM’s mission is simple and broad, “To serve humanity by improving health.”⁸⁵ The department’s vision points to three areas of competency in which the DOM wishes to “lead” and “innovate”:⁸⁶

- Discovery;
- Patient care; and
- Education.

The DOM’s strategic plan notes with more specificity that “academic departments have a mandate to perform basic, translational and clinical research related to physiology, pharmacology and disease.”⁸⁷ This is only one element of the department’s tri-partite mission.

RESEARCH GOALS

In order to fulfill its mission and realize its vision, the DOM’s strategic plan addresses major goals in five areas, including enhancing the department’s research impact.⁸⁸

The DOM’s analysis of the current research program’s strengths, weaknesses, opportunities, and threats (SWOT) indicates that the department recognizes itself as a productive research environment. Most research strengths refer to faculty

⁸² “Best Medical Schools: Research - 2014.” U.S. News and World Report. <http://grad-schools.usnews.rankingsandreviews.com/best-graduate-schools/top-medical-schools/research-rankings>

⁸³ “Strategic Plan 2012-2017: Department of Medicine.” Emory University. p. 4. <http://medicine.emory.edu/documents/dom-strategic-plan-2012>

⁸⁴ *Ibid.*, p. 18.

⁸⁵ “Our Mission & Vision.” Emory University – Department of Medicine. http://medicine.emory.edu/about_us/who_we_are/mission_vision.html

⁸⁶ Bulleted list adapted from: *Ibid.*

⁸⁷ “Strategic Plan 2012-2017: Department of Medicine.” *Op. cit.*, p. 18.

⁸⁸ *Ibid.*, p. 13.

members' abilities to attain research funding. Strengths also include the following departmental characteristics:⁸⁹

- Possesses “multiple investigators with high scientific impact;”
- Is home to “vibrant and diverse basic research;” and
- Is an “extremely collaborative environment.”

The department's research weaknesses are primarily tied to insufficient research infrastructure and information resources. The strategic plan also indicates that little support is available “to support new awards.”⁹⁰

The DOM's research opportunities include:⁹¹

- Developing research projects based on current departmental competencies;
- Fostering relationships with other medical institutions; and
- Developing interdisciplinary research.

These weaknesses and opportunities, self-identified at a highly ranked medical school, indicate that some elements of a successful research environment, such as establishing and maintaining institutional relationships, require regular attention. The department's four initiatives for improving the DOM's research impact also reflect this. The DOM's initiatives include:⁹²

- Support innovation, integration and translation of basic discoveries into clinical care and health care delivery;
- Enable future discovery by enriching the scientific and administrative platforms for basic and clinical research;
- Streamline research administrative procedures; and
- Advocate and facilitate the adoption of an effective, user friendly, and integrated IT infrastructure.

These initiatives reflect the need for continuous developments and refinements that an institution with a culture of research must attend to. These initiatives are designed to support and strengthen a culture of research already in place.

STRATEGIES

To achieve its goals, the DOM has identified a number of strategies, each with associated action items, which are shown in Figure 3.2. Notable recommendations include:

⁸⁹ Bulleted items copied verbatim from: Ibid., p. 19.

⁹⁰ Ibid.

⁹¹ Bulleted items adapted from: Ibid.

⁹² Bulleted items copied verbatim from: Ibid.

- Encouraging collaboration by providing grant money for projects with two investigators who have not worked together before;
- Publicizing faculty research through a department website;
- Incentivizing grant pursuit by offering matching funds;
- Providing training in medical experimentation methodology; and
- Establishing extensive IT support for research projects.

Figure 3.2: Initiatives and Action Items to Support Research Productivity

INITIATIVE	ACTION ITEM
Support innovation, integration and translation of basic discoveries into clinical care and health care delivery.	<ul style="list-style-type: none"> ▪ Create pilot seed grants with two principal investigators who have never worked together before. ▪ Create groups to promote new research ideas and collaborations. ▪ Create an “Internal Visiting Professor Program” to share research interests. ▪ Create a comprehensive, user-friendly website to showcase research, promote collaboration and collate research administration best practices.*
Enable future discovery by enriching the scientific and administrative platforms for basic and clinical research.	<ul style="list-style-type: none"> ▪ Create a space policy by which space is allocated according to research success. ▪ Provide matching dollars for successful programs. ▪ Increase biostatistical support, availability and training.
Streamline research administrative procedures.	<ul style="list-style-type: none"> ▪ Work with offices and departments within the institution to improve research administration. ▪ Create post-award reporting mechanism that is data-driven and user-friendly.
Advocate and facilitate the adoption of an effective, user friendly, and integrated IT infrastructure.	<ul style="list-style-type: none"> ▪ Expand IT resources within the DOM to support basic and clinical research. <ul style="list-style-type: none"> ◦ Increase DOM IT budget to support research IT and infrastructure upgrades. ◦ Appoint a Vice Chair for IT and create an IT advisory team to prioritize and facilitate IT efforts within the department. ◦ Research, collate and advertise IT solutions currently available. ◦ Expand videoconferencing capabilities and support. ▪ Work towards creating common platforms for patient data that can be queried by varied investigators.

Source: Emory University – Department of Medicine⁹³

*This action item supports all four initiatives.

⁹³ Table contents adapted from: Ibid., p. 20.

The DOM recommends additional action items in support of a productive research environment while addressing the distinct goal of cultivating an “environment of excellence” for employees.⁹⁴ The DOM had a mentorship program in place for some faculty, already, which this plan recommends expanding to additional faculty.⁹⁵ The mentor program is career-focused, not primarily research-focused. However, in a culture of research, a career-focused mentor will provide research support.

The DOM also seeks to, “realign compensation to encompass all three missions of the department.”⁹⁶ This appears to be a continuing challenge for Emory University’s DOM, and will likely be a prominent challenge for any unit working to revise its mission to reflect the importance of both teaching and research. Two action items recommended to support this initiative at the DOM include:⁹⁷

- Reviving and implementing citizenship metrics; and
- Providing non-salary compensation to reward employees and improve moral, e.g., vacation time.

INDIANA UNIVERSITY-BLOOMINGTON – SCHOOL OF LAW

The Maurer School of Law (SOL) at Indiana University-Bloomington (IUB) ranks among the top 30 schools in the nation and among the top 15 public law schools, according to U.S. News and World Report.⁹⁸ The SOL’s strategic plan notes the school’s important role within “one of America’s great research universities” and includes a plan to develop the SOL’s research productivity. The SOL’s 2005 strategic plan illustrates research initiatives of a school developing its culture of research. A list of follow-up initiatives from 2012 point to continuing challenges for establishing and maintaining a culture of research.

MISSION

The SOL seeks to “increase the knowledge and understanding of the law” through:⁹⁹

- The scholarship of the faculty;
- Public service; and
- Teaching.

The statement lists faculty research as the first method the school uses to achieve its mission, making it clear that scholarship is an important element for the success of the SOL.

⁹⁴ Ibid., p. 12.

⁹⁵ Ibid., p. 28.

⁹⁶ Ibid., p. 27.

⁹⁷ Bulleted items adapted from: Ibid., p. 28.

⁹⁸ “Best Law Schools.” U.S. News and World Report. <http://grad-schools.usnews.rankingsandreviews.com/best-graduate-schools/top-law-schools/law-rankings/page+2>

⁹⁹ “The Strategic Plan,” Op. cit., p. 1.

The SOL's vision does not explicitly mention research, but sees the school as housing faculty, students, and graduates who advance knowledge in the state, nation, and world.¹⁰⁰ The advancement of knowledge includes scholarly research, as the strategies for achieving the SOL's mission reflect.

RESEARCH GOALS

The first broad goal that supports the school's mission, "Enhancing our intellectually exciting community of engaged, influential scholars,"¹⁰¹ addresses the SOL's plan of faculty research. This goal encompasses three areas of research development:¹⁰²

- **Scholarship** – Faculty will regularly publish original, creative, and important scholarship in prominent scholarly journals, publications by leading presses, and other highly influential venues.
- **Intellectual Community** – The SOL will build and maintain an intellectual community that supports innovative and important scholarship, and that attracts and retains outstanding and influential scholars.
- **Interdisciplinary and Collaborative Research and Teaching** – The SOL will encourage and support interdisciplinary and collaborative research and teaching, particularly in cooperation with other schools and centers of the Bloomington campus.

STRATEGIES AND PROGRESS METRICS

The SOL provides recommended actions and indicators of progress for each area. These are provided in Figure 3.3. Similarly to the plans already examined, the SOL's plan looks to foster a culture of research through many of the approaches discussed in the sections above. The SOL plans to:

- Adjust faculty compensation, as well as teaching and administrative demands, to reflect the importance of research production;
- Hire new faculty with research potential;
- Develop collaborative research networks within the department and with other IUB units;
- Develop research centers; and
- Seek external funding for research.

IUB's plan does not call for faculty mentoring or professional development programs.

¹⁰⁰ Ibid., p. 4.

¹⁰¹ Ibid., p. 5.

¹⁰² Bulleted Items copied verbatim from: Ibid. p. 6-8.

Figure 3.3: Research Production Strategies and Indicators of Progress

AREA OF DEVELOPMENT	ACTION	INDICATOR OF PROGRESS
Scholarship	<ul style="list-style-type: none"> ▪ Provide faculty members with sufficient time to produce substantial scholarship of high quality. ▪ Adopt a salary structure that encourages the hiring and retention of excellent scholars. 	<ul style="list-style-type: none"> ▪ Increased quantity of placements of articles and books in prominent scholarly journals, publications by leading presses, and other highly influential venues ▪ Increased influence of faculty scholarship, including number of citations to faculty work, adoptions of case books and other teaching materials, reviews, published responses, and invitations to present work outside the Law School ▪ Improvements in nationally recognized rankings of law schools and law faculties, including the U.S. News academic and practitioner survey rankings
Intellectual Community	<ul style="list-style-type: none"> ▪ The faculty appointments process will place primary emphasis on hiring productive scholars who will have a significant impact on their respective fields. ▪ Reach out to the Indiana University community in related areas to bring the perspectives of other disciplines to our work. ▪ Develop programs and opportunities for intensive intellectual exchange within our faculty as a whole and in smaller communities of learning. 	<ul style="list-style-type: none"> ▪ Hiring and retention of faculty members who are or will be leaders in publishing original, creative, and important scholarship in prominent scholarly journals, publications by leading presses, and other highly influential venues ▪ Increased success in competition for hiring and retention of faculty members among peer schools ▪ Maintenance of a low student: faculty ratio
Interdisciplinary and Collaborative Research and Teaching	<ul style="list-style-type: none"> ▪ Support the creation of interdisciplinary research centers and projects, courses, and programs of individual research. ▪ Invest resources in collaborative programs and centers based on existing faculty strengths and cooperation with other IUB units. ▪ Strengthen our joint degree programs and add new ones as valuable opportunities present themselves. ▪ Build on the Law School’s traditional strength in the study of Law & Society through research support and faculty recruitment. ▪ Seek external funding for research, programs, and centers, and we will evaluate the continuing viability of centers, by their ability to attract external support or otherwise to serve an important institutional interest. 	<ul style="list-style-type: none"> ▪ Greater quantity of interdisciplinary scholarship published in prominent scholarly journals, publications by leading presses, and other highly influential venues ▪ Expanded student participation in joint degree and other interdisciplinary programs ▪ Increased external and university funding for research by the law faculty. ▪ Greater recognition of law school programs in relevant national rankings and surveys. ▪ Creation of new centers in strategic areas, such as constitutional democracy and environmental law and policy.

Source: Maurer School of Law¹⁰³

¹⁰³ Table contents reproduced from: Ibid.

The SOL's updated initiatives for 2012-2015 reflect the school's satisfaction with the steps it took due to the 2005 strategic plan.¹⁰⁴ Further recommended steps include:¹⁰⁵

- Increasing opportunities for interdisciplinary and collaborative work;
- Developing infrastructure to facilitate funded research;
- Maintaining financial incentives for research productivity; and
- Increasing the visibility of faculty scholarship.

¹⁰⁴ "2012-2015 Initiatives, Building on Success: A Roadmap for the Future." Maurer School of Law. p. 8-9.
<http://law.indiana.edu/about/doc/FinalStrategicInitiativeswithIndicators--10.8.12.pdf>

¹⁰⁵ Bulleted list adapted from: Ibid.

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