

Collaborative Transformation Project

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Final Focal Department Synthesis Report*

Animal Science

Chemistry

Chemical and Biological Engineering

Civil, Construction and Environmental Engineering

Ecology, Evolution, and Organismal Biology

Genetics, Development and Cell Biology

Materials Science Engineering

Physics and Astronomy

Plant Pathology

April 2011

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Findings

April 2011

Introduction

This report summarizes research from the Iowa State University ADVANCE Collaborative Transformation (CT) project, which is one of many components of ISU's ADVANCE program. ISU ADVANCE is funded by a 5 year "Institutional Transformation" grant from the National Science Foundation. The National Science Foundation awards ADVANCE Institutional Transformation grants to universities and colleges for the purpose of transforming institutional structures, cultures, and practices in ways that enhance the recruitment, retention, and promotion of women faculty, and when possible, underrepresented faculty of color in STEM disciplines. ISU's ADVANCE program goals include "top-down" initiatives, such as the creation of college-level "Equity Advisors" (in 3 colleges presently) and the development, implementation and support of university-wide policies for enhancing faculty members' work-life balance. ISU ADVANCE goals also include "bottom-up" initiatives, such as the Collaborative Transformation project. The CT project focuses explicitly on creating departmental structures, cultures and practices that enhance faculty members' satisfaction with their careers at ISU; their productivity as scholars; and their contributions to departmental efforts to recruit, retain and promote other excellent faculty members of diverse backgrounds.

The results from the ISU CT project discussed in this document are based on intensive research conducted within nine (9) Science, Technology, Engineering and Mathematics (STEM) focal departments at ISU from fall 2006 thru early spring 2011. The report also provides information about how ISU departments other than the nine focal departments can begin to assess departmental climate and take proactive measures to enhance it. These recommended strategies are based on the outcomes of strategies implemented at ISU as part of the CT project as well as findings from other U.S. ADVANCE institutions and ISU policies that are consistent with the goals of the NSF's ADVANCE IT program.

The first three departments to participate in the CT project were Ecology, Evolution, and Organismal Biology (EEOB), Genetics, Development and Cell Biology (GDCB), and Materials Science Engineering (MSE). These departments began participation in 2006. The second set of departments to participate in the CT Project was comprised of Animal Science (AN S), Chemistry (CHEM), and Civil, Construction and Environmental Engineering (CCEE). These departments began participation in 2008. The final three departments to participate were Chemical and Biological Engineering (CBE), Physics and Astronomy (PHYSA), and Plant Pathology (PL P). These departments began participation in 2009. The nine focal departments represent three (3) ISU colleges: The College of Liberal Arts and Sciences, the College of Agriculture and Life Sciences, and the College of

Engineering. Each cohort of three departments included one focal department from each of these 3 colleges.

Department Chairs and faculty in each of these departments worked together with researchers (scholars in the fields of organizational studies, women in science and professions, psychology, and higher education) and members of the ISU ADVANCE Co-PI Leadership Team and its partners to help ISU better understand how to ensure positive departmental work environments and to achieve the overall goals of the ADVANCE grant program. These departments were selected, in large part, because of their willingness to contribute to achieving greater understanding of the structures, practices, and cultures most conducive to faculty success at ISU and, collectively, among STEM disciplines. The departments selected for the ADVANCE CT project are home to many nationally prominent graduate programs and world-renowned scholars. Each of these departments and their department Chairs have dedicated considerable time and attention to the ISU ADVANCE project and are to be commended for their efforts.

Departmental climate enhancement efforts were organized by ADVANCE Professors (APs), Department Chairs and a departmental team or advisory group in each respective department. An “ADVANCE Professor” is a tenured faculty member selected by the Chair of each department in consultation with the ISU ADVANCE PI to work with ADVANCE researchers in facilitating departmental transformation efforts. ADVANCE Professors have served as primary instigators of change in their departments throughout the CT process.

The methods for gathering the in-depth qualitative data were focus groups, individualized interviews with faculty and Chairs, and the examination of departmental documents (e.g., governance documents) from each of the nine STEM departments. Average participation among the faculty across all nine departments was **74.34 percent**. Departmental response rates ranged from 63 percent to 91 percent. All interviews and focus groups were audio-recorded and then transcribed. Transcriptions of focus group and interview sessions yielded 2,444 1.5-spaced pages of raw data in addition to departmental governance documents and notes from focal departmental web sites. The data were first analyzed separately for each department. Separate reports (executive summary, findings, strategies for addressing salient issues, summary of research methods) were then written for each department so that individual departments could begin the process of addressing issues particular to their own department (Bird and Hamrick 2007a; Hamrick and Bird 2007; Bird and Hamrick 2007b; Bird 2009; Fehr 2009; Larson 2009; Bird 2010; Fehr 2010; Larson 2010; see also Bird, Constant, Janzen and Powell-Coffman 2008; Bird and Hamrick 2008; Bird, Rhoton, Fehr and Larson 2010).

The CT project is designed to “mirror back” to faculty in each department aspects of their own workplace climate that influence how positive their climate is and how effective the department’s recruitment, retention and promotion practices are. Focus group and interview data are used to better understand departmental structures, practices, and cultures. After the nine separate departmental reports were completed (as noted above), the data for all nine departments were then analyzed collectively in order to identify those issues that were salient across the nine departments. *Thus, this synthesis report is not a simple merging of all findings from the separate departments, but rather represents only the issues that were*

common to all nine departments. For example if an issue was identified as salient in only one or two departments, it was not included in the section on major findings included below. Each major finding outlined in the next section represents an issue that faculty in all nine departments addressed during focus group and interview sessions.

The seven major findings across all nine focal departments are summarized as follows: (1) collegiality and the work environment; (2) faculty recruitment and hiring structures and practices; (3) promotion and tenure structures and practices; (4) mentoring; (5) work-life balance; (6) faculty teaching loads, course distribution practices, and rewarding teaching; and (7) facilities, administrative support and technical support.

Findings

1. COLLEGIALITY AND THE WORK ENVIRONMENT

The term “collegiality” was used by faculty members to describe a wide array of faculty behaviors and practices. These included, for example, being able to express differing viewpoints during faculty meetings, supporting colleagues for award nominations, “pulling one’s weight” on departmental committees, and demonstrating a willingness to fill in for colleagues in cases of emergency or prolonged illness. In some cases, the term “collegiality” was also used to describe the practice of *collaborating* with other faculty. However, most faculty members distinguished between “collegial” and “collaborative” practices, using the former to refer to levels of respectfulness, civility, professionalism and shared purpose, and using the latter to refer to the act of working together with others on a specific scholarly project or research agenda. To the extent that faculty members across departments were familiar with their colleagues’ scholarly accomplishments, they expressed considerable respect for those accomplishments.

Faculty members, especially newer Assistant professors and Full professors who are nearing retirement, reported having less knowledge than Associate professors about the work and lives of departmental colleagues whose research interests differ from their own. Not all faculty members view a lack of familiarity with colleagues and colleagues’ work as equally problematic. Assistant professors expressed greater concern about low collegiality because, in their view, the fewer the opportunities they have to interact with tenured faculty, the fewer the opportunities to benefit from tenured faculty members’ insights, feedback and support.

Assistant, along with Associate professors, were also more likely to express concerns about the effects of low collegiality on their ability to understand how important departmental decisions are made and to know the criteria for promotion, tenure and pay raises. Low collegiality was associated with less clarity in all of these areas. Low collegiality, however, does not automatically result in less transparency. In departments where formal documented procedures are clearly communicated to all faculty members, issues of transparency were of less concern even if faculty members interacted only infrequently with one another.

The extent to which departmental members were spread across multiple buildings also influenced faculty views on collegiality. Departments that are spread across multiple buildings tended to report lower levels of familiarity with colleagues' scholarly activities, greater difficulty in establishing mutually agreeable faculty meeting and seminar schedules, less clarity among the faculty about how course loads and distributions are determined, less clarity among the faculty about expected levels of departmental service, and less certainty about how important departmental decisions are made. The size of the department also exacerbated some of these problems, such as finding mutually agreeable meeting and seminar times due to the need to accommodate so many schedules.

Collegiality may be a concern when one or more of the following circumstances exist:

- Minimal interaction exists between faculty members and departmental leaders or between junior and senior faculty.
- Only a small portion of the faculty actively participates during faculty meetings or on departmental committees.
- The department experiences low or declining attendance at faculty meetings or departmental seminars and events.
- Only a small subset of the faculty voluntarily accepts departmental committee assignments.
- The membership of departmental committees remains static or rotates only minimally from one year to the next.
- Faculty willingness to assist other faculty members who are temporarily unable to teach a class or fulfill committee responsibilities is low.

Addressing potential problems. Departments hoping to enhance collegiality, tap the range of faculty members' viewpoints and potential contributions, and enhance faculty members' job satisfaction and job commitment may benefit by implementing the following types of procedures:

- Holding regular faculty meetings that focus on key departmental issues and that enable newer and more junior faculty to better understand departmental operating procedures.
- Holding regular seminars at which faculty members present and discuss their research.
- Regularly reviewing/posting a list of "best practices" for efficient faculty meetings.
- Designating a faculty member at each faculty meeting to facilitate dialogue in a manner that encourages respect for colleagues and equitable opportunities for diverse ideas from the full range of faculty participants.
- Increasing transparency in decision-making regarding teaching assignments and rewards associated with teaching.
- Department Chairs may wish to have discussions with the faculty about the teaching needs of the department in conjunction with faculty input about how to meet departmental teaching needs.
- Clarifying with the faculty the process and criteria regarding tenure and promotion decisions and annual salary increases (see Finding 3 below).
- Increasing transparency in decision-making regarding faculty recruitment, hiring and retention (see Finding 2 below).
- Encouraging faculty members to proactively learn more about colleagues' research (e.g., review grant proposals, attend research presentations).

- Facilitating the development of collaborations among faculty in the department and across departmental units.
- Encouraging faculty members to schedule meetings during regular working hours so that colleagues who have children at home are able to sufficiently manage work and family/life responsibilities.
- Encouraging faculty members to become more familiar with ISU's work-life and family-friendly policies.

2. FACULTY RECRUITMENT AND HIRING

Faculty members across all departments stated that recruiting and hiring the very best faculty members is essential to the success of their department and the university. Recruitment processes involve multiple steps, including: (1) appointing a search committee; (2) developing a description of the job position; (3) posting the call for applications in appropriate outlets; and (4) encouraging excellent candidates to apply.

Hiring processes involve many additional steps, including: (5) evaluating applicants and developing an initial list of potential candidates; (6) if appropriate, holding preliminary telephone interviews with potential candidates; (7) narrowing the initial list of potential candidates to only the candidates the department wants to bring to campus for interviews; (8) the on-campus interview; (9) evaluating on-campus interview candidates and ranking the acceptable candidates; (10) extending an offer; (11) and negotiating an acceptable offer with the candidate (including the negotiation of any special circumstances).

Recruitment structures and practices. Most faculty members across departments expressed support for recruiting a diverse range of faculty members, including scholars with differing research interests, women scholars, scholars of color, and international scholars. Faculty in each department discussed the processes by which search committees are appointed, job descriptions are written and posted, and applicant pools are developed. These processes did not vary greatly from one department to the next; all aligned with university guidelines.

Viewpoints among departmental faculty members varied on the topic of how best to create applicant pools. Some of the faculty across departments (the proportion varies) expressed the view that the primary reason for the underrepresentation of women faculty or U.S. faculty of color in their department is that these groups are underrepresented among Ph.D. and post doc applicant pools. Many of these same faculty members embrace the belief that it is desirable to enhance the gender and race/ethnic diversity of applicant pools which would further diversify departmental faculty, but that they do not believe significant changes in the composition of the faculty in their departments will be made until the representation of women and underrepresented race/ethnic minorities (URMs) among the pool of qualified applicants increases.

Some faculty members across departments who support the goal of enhancing diversity among the faculty (again, the proportion varies) explained that they lack the time to engage more proactively in this effort. Other faculty asserted that there was no need to spend extra time searching for diverse applicants for open positions because their disciplinary fields are

so small that the faculty in their department already know who the qualified applicants are and whether there are women and/or URM candidates among them.

Still other faculty members (again, the proportion varies) across departments expressed the view that a “business as usual” approach to diversifying applicant pools is insufficient, and that their departments could do more to enhance the likelihood that women and people of color apply. Many of these same individuals also noted that to become personally involved in efforts to change this situation would require more time than they can spare.

A portion of the faculty in each department (the proportion varies) expressed a concern that efforts aimed specifically at increasing the percentage of women faculty or faculty of color in a department may result in the gender or ethnicity of the candidate being viewed as more important than the quality of the candidate’s scholarship. This sentiment (when expressed) is often framed as a “lowering of standards.” Many of the faculty who subscribe to this view commonly add that faculty position searches should not specifically target the hiring of candidates who fit certain demographic categories because targeted searches may result in hiring individuals who are not as highly qualified (or who are viewed as being less highly qualified even if they are not). These same faculty members commonly express a preference for “gender blind” and “race/ethnicity blind” recruitment strategies.

Faculty members who articulated the belief that targeting women and URMs in hiring processes can result in lowering standards (or the perception of lowered standards) also commonly subscribed to the belief that the proportion of women faculty and faculty of color will increase automatically as the percentages of women and people of color earning advanced degrees in STEM fields increases. Putting more effort into recruiting more women and people of color, from this point of view, will produce little added benefit because there simply aren’t enough highly qualified candidates among these groups.

Hiring structures and practices. Multiple commonalities also exist across departments in hiring processes. The topic of the hiring process was discussed at greater length and detail in focal departments that joined the ISU ADVANCE Collaborative Transformation project as part of the first cohort of departments (in late fall, 2006/early January 2007) than in focal departments that joined later in the project. First round focal departments (EEOB, GDCB, MSE), for example, discussed in greater detail how short lists for on-campus interviews are developed, how on-campus interview candidates are evaluated, whether unintentional gender and race/ethnic biases may influence these processes, and whether criteria other than those initially specified in formal job descriptions are invoked by faculty members during deliberations about the qualifications of finalists for faculty positions. Of most concern regarding hiring processes were departmental practices for evaluating on-campus job candidates. In departments where faculty members perceived that their colleagues sometimes used criteria other than those specified in the job description to make their decisions about who to support for hiring, biases were believed to influence the hiring process.

Focal departments in the 2nd and 3rd rounds of participation (beginning in fall 2008 and fall 2009, respectively) discussed hiring processes as well, including the types of practices noted above. The 2nd and 3rd round departments, however, focused less attention (overall)

on the potential effects of unintentional biases or deviations from requisite evaluation practices than on strategies for maximizing the likelihood that top candidates will choose to accept a job offer from ISU.

Recruitment and hiring practices/processes may be a concern when one or more of the following circumstances exist:

- The percentage of women faculty or underrepresented faculty of color in a department is much lower than the percentage of available Ph.D.s or post-docs in the discipline or disciplinary sub-field.
- Applicant pools are derived primarily from current faculty members' networks (without efforts to expand the pool to include candidates who are not likely to be in faculty members' networks).
- Initial applicant pools are consistently much more diverse by gender, race and ethnicity than are short lists of candidates for on-site interviews.
- Inconsistent criteria are used to evaluate candidates for inclusion on short lists or for determining which candidates to offer a job.
- Faculty members' rankings of candidates based on the sum total of specific criteria differ from faculty members' rankings of candidates conducted apart from the use of specific criteria.
- Lacking a rotation of members for departmental search committees from one year to the next (unless the lack of rotation is due simply to the fact that the department is very small).
- Candidates of specific types of backgrounds (e.g., URM, new parents, women, people who have spouses or partners who also seek jobs in academia) consistently reject offers to come to ISU as new faculty members.
- No options are made available for on-campus interview candidates to obtain information about family-friendly/work-life balance policies, mentoring for new faculty, and university and community climate for faculty of diverse backgrounds.
- The department (and thus, the university) consistently loses top candidates because, according to candidates, competing offers from other universities include better salaries, start-up packages, partner accommodations, parental leave for new parents, etc.

The attractiveness of ISU to potential job candidates may be a concern when one or more of the following circumstances exist:

- Top candidates reject job offers or leave the university voluntarily because no accommodations are made for partners or spouses.
- Top candidates reject job offers, citing insufficient start-up packages or salaries as the reason for rejecting the offer.
- Top candidates reject job offers or leave the university voluntarily because they find their departments, the university, or the local community to be unwelcoming.
- Top candidates (including post-docs) reject job offers or leave the university voluntarily because childcare options are insufficient.
- Top candidates (including post-docs) reject job offers or leave the university voluntarily because the university lacks an accessible and adequately funded program for modifying the duties of new parents.

Addressing potential problems. In departments where recruiting and hiring problems exist, the following strategies may help to address these problems:

- If applicant pools are derived primarily from current faculty members' networks and/or initial applicant pools are consistently much more diverse by gender, race and ethnicity than are short lists of candidates for on-site interviews (over the course of multiple searches), the department may wish to expand candidate pools to include candidates who are not likely to be in faculty members' networks. For more information, the department may wish to review resources for faculty recruitment provided on the ISU Office of the Executive Vice President and Provost website (<http://www.provost.iastate.edu/faculty/>) or go directly to the ISU EVPP Resource Guide for Recruiting Excellent and Diverse Faculty (<http://www.provost.iastate.edu/office/resource/appendix7.html>).
- In some cases, inconsistent criteria are being used to evaluate candidates for inclusion on short lists and for determining which candidates to offer a job. In other cases, faculty are asked to provide a rank ordering of candidates for short lists and job offers but are not being asked to provide an assessment of each candidate based on specific criteria and to then justify their overall rankings based on those specified criteria. Under either of these circumstances, the department may wish to:
 - hold faculty meetings that involve the discussion of each candidate's (or short list of candidates') strengths as well as weaknesses to help minimize the potential effects of unintended biases;
 - use ranking forms that require each faculty member to rank each candidate's criteria and to then justify the overall ranking of candidates based on these criteria;
 - review resources for faculty recruitment provided on the ISU Office of the Executive Vice President and Provost website (<http://www.provost.iastate.edu/faculty/>) or go directly to the ISU EVPP Resource Guide for Recruiting Excellent and Diverse Faculty (<http://www.provost.iastate.edu/office/resource/appendix7.html>). The Resource Guide for Recruiting Excellent and Diverse Faculty includes examples of Candidate Evaluation Rubric Forms that departments can adapt for their own purposes.
- If the department rarely rotates members of departmental search committees from one year to the next (even though the department is large enough to rotate members of such committees), the department may wish to consider rotating committee members more often.
- Use existing "best practices" for highlighting ISU's family friendly and work-life balance policies, such as those outlined in the on-line resource "ISU Policies and Guidelines for Flexible Faculty Careers: Resources for Chairs & Deans" (Harris, Carlson and Bowen 2009): <http://www.advance.iastate.edu/worklife/worklife.shtml>.
- If candidates of specific types of backgrounds (e.g., URMs, etc.) consistently turn down offers to come to ISU as new faculty members, the department, college and university may want to:
 - consider new mechanisms for ensuring that job candidates receive ample information about ISU's family-friendly/work-life balance policies, mentoring programs for new faculty, and university/community diversity organizations, programs, and activities;

- discuss, identify and implement department-level guidelines that might clarify the department's long-term commitment to a family-friendly workplace.

3. PROMOTION, TENURE AND FACULTY EVALUATION PROCESSES

Across the nine focal departments, faculty members of all ranks discussed promotion and tenure. Untenured tenure-track Assistant professors expressed greater concern about these issues than tenured faculty. Among tenured faculty, Associate professors expressed greater concern than Full professors. The issues discussed by faculty regarding promotion and tenure are outlined below.

Clarity of criteria for promotion and tenure. Some faculty noted that information sharing regarding the criteria for and processes of promotion and tenure is inadequate. Assistant professors were most apt to raise concerns about promotion and tenure, but many Associate professors expressed concerns about the clarity of criteria in promotion processes as well.

- Assistant professors commonly noted that the input that they had received from their departmental, college and university colleagues about the importance of research productivity (publications and grants) for promotion and tenure was clear, but that the importance of teaching and (to a lesser extent) service were less clear.
- Associate professors commonly believe that their understanding about the level of excellence one must achieve in publishing research, obtaining research grants, and teaching to be promoted to Full professor was sufficient. However, Associate professors were less clear in their understanding of the level of service to the institution and the profession and the level of “national and international prominence” that they would need to achieve in order to be promoted to Full professor.
- Some faculty (across ranks) noted that there isn't enough support for Assistant professors during the promotion and tenure process (e.g., regarding how to package the appropriate materials for P&T dossiers).
- Some Assistant and Associate professors expressed the need for more departmental, college and university mechanisms for faculty to compare personal accomplishments to those of other faculty of the same rank, or of the rank to which they sought promotion.
- Some faculty noted that faculty members who are asked and subsequently accept greater teaching (including advising) and service responsibilities relative to other departmental faculty members are disadvantaged in promotion and tenure processes because they are left with less time to devote to research and to pursuing external funding.

Faculty reviews and evaluations. Assistant professors, on average, reported that department Chairs provided the most helpful and consistent feedback about personal performance and about promotion and tenure expectations and processes, and that they appreciate Chairs' efforts to support their careers. Assistant professors' experiences with departmental evaluation committees that are comprised of other faculty members were described as variable (i.e., some were good, some were sufficient, and some were poor). Faculty promotion and tenure (P&T) evaluation committees were viewed as minimally helpful by Assistant professors if they communicated inconsistent expectations regarding promotion and tenure. Promotion and tenure committees were viewed as more supportive if they provided one or more of the following to the Assistant professor: consistent

messages about the expectations for promotion and tenure; feedback on grant applications; tips on managing graduate students; strategies for balancing teaching, research and service obligations; information about family-friendly and work-life balance policies; and tips on how to increase time for research activities.

Associate and Full professors' concerns about faculty reviews and evaluations centered less on the kinds of feedback that they received from departmental evaluation committees because they only rarely meet with such committees (e.g., for post tenure review).

Associate professors spoke about the need to ensure that annual faculty evaluations with the department Chair involve feedback tailored to each faculty member about what she or he is doing well and what she or he needs to do better in order to be promoted or to receive larger salary increases. Full professors also noted a need for annual evaluations with the department Chair that include tailored discussions about what each faculty member needs to achieve in order to receive salary increases.

Career flexibility policies. Not all faculty members in all departments are fully aware of family friendly policies as they relate to tenure and promotion (See also Finding 4 below). ISU policy states that faculty members have the right to extend the tenure clock for the birth or adoption of a child or for other personal and/or family-related reasons. Some faculty members, in addition, have successfully negotiated with their departments and/or colleges to modify their teaching duties during the semester or year in which a child is born or adopted into their family.

- Some faculty across departments, however, reported not knowing that the tenure clock can be extended for the birth or adoption of a child or to take care of an ailing family member.
- Among some faculty who are familiar with ISU policies that allow faculty members to extend their tenure clock, there is skepticism about whether using this policy is truly beneficial to the person who delays her/his tenure decision.
- Some faculty reported being confused about how to evaluate faculty members who have delayed their tenure clock.
- Many faculty reported that because successful promotion and tenure often relies on obtaining grant funding, the ability for faculty members to take time off is reduced due to responsibilities surrounding grant-funded research.
- Some faculty note that taking parental leave, especially if it reduces one's teaching load, places undue burden on other faculty members who may then have a more negative view of the faculty member taking time off, which in turn can impact their promotion and tenure.

Promotion and tenure structures and practices may be a concern when one or more of the following circumstances exist:

- Assistant professors express concerns to the department Chair or other tenured faculty members about the clarity of promotion and tenure expectations or processes.
- No departmental mechanisms (e.g., a handbook or orientation session) exists for providing Assistant professors with feedback regarding the relative value placed on teaching, research and service in promotion and tenure processes, and regarding their own performance in each of these areas.

- The amount of time that Assistant professors are spending on research, teaching and service activities is inconsistent with the amount of time designated in their Position Responsibility Statements (PRS) for those activities.
- The level of research productivity or teaching excellence of Assistant professors consistently falls below expected levels of productivity and excellence.
- Departmental records documenting the relative performances of faculty (by rank) or records documenting the criteria used for assessing performance levels are inconsistent or unorganized, or such documents are unavailable or difficult to access.
- Communication is lacking between the department Chair and the faculty regarding:
 - the purpose of annual evaluations between the Chair and the faculty member;
 - the purpose of meetings between annual review committees and Assistant professors; or
 - the purpose of meetings between post-tenure review committees and tenured faculty.
- The department has never or has irregularly held faculty discussions about ISU's family friendly policies, how to use them and how to evaluate those who use them.

Addressing potential problems. In departments where promotion, tenure and salary adjustment concerns exist, the following strategies may help to address these problems:

- Department Chairs may wish to meet annually/bi-annually with Assistant professors to discuss concerns that Assistant professors express about promotion/ tenure processes.
- Departments may wish to hold discussions over criteria and corresponding reward structures used for the evaluation of teaching, research, professional practice and service as these relate specifically to promotion, tenure and annual salary increases.
- Departments may wish to reassess current departmental mechanisms for providing feedback to Assistant professors regarding expectations for tenure and promotion and each faculty members' progress toward promotion and tenure.
- Departments may wish to discuss annually and perhaps outline in their departmental governance document (or a departmental faculty handbook) department-specific steps involved in, and general expectations for, tenure and promotion (which must be consistent with college and university guidelines), including:
 - minimum criteria for research, teaching, professional practice and service competency for tenure, promotion to Associate, and promotion to Full;
 - relative value placed within the department on research, teaching, professional practice, and service;
 - relative value placed among faculty within the department regarding different publication outlets; and
 - relative value placed within the department on different forms of external funding.
- Department Chairs may wish to evaluate with each faculty member in the department his/her PRS to ensure that it corresponds accurately with each faculty member's scholarly contributions to teaching, research, service and other forms of professional practice.
- Departments may wish to annually discuss at a faculty meeting current ISU work-life and family friendly policies, how to use them and how to appropriately evaluate those who use them.

- Departments may also wish to discuss (or invite an ADVANCE Equity Advisor (see p. 2 for a list) to come and speak about) the potential benefits and costs to the faculty member associated with using these policies (given each faculty member's current career stage and career goals).
- Departments may also wish to discuss the benefits of work-life and family friendly policies to the department itself (e.g., enhancing recruitment and retention of faculty and increasing faculty job satisfaction).
- For more information, see the on-line resource "ISU Policies and Guidelines for Flexible Faculty Careers: Resources for Chairs & Deans" (Harris, Carlson and Bowen 2009): <http://www.provost.iastate.edu/fad/docs/flexiblefacultycareersresource.pdf>. Department Chairs may want to develop and implement measures for tracking and comparing faculty members' annual productivity levels in key performance areas.
 - Departmental grids (for comparing relative performance levels) may be developed that include indicators for the number of courses/students taught, number of graduate students/post docs funded/graduated, number/ amount of grants, number of research publications, and number of departmental/college/university committees.

4. MENTORING FACULTY

Faculty members across ranks discussed mentoring. Most of these discussions focused on the formal and/or informal mentoring of Assistant professors. Focus groups and interviews revealed that, although mentoring is viewed differently across departments, faculty mentoring practices of some kind exist in each of the nine focal departments. Assistant professors commonly state that they believe mentoring is or would be useful to them. Some Associate professors also expressed a desire for mentoring (regarding promotion to Full professor). Mentoring for Assistant professors is much more common than mentoring for Associate professors. Most tenured faculty in the nine focal departments explained that whether they support formal mentoring or not, they are happy to give advice to Assistant professors in their departments when they are asked.

Although most departments support the participation of Assistant professors in formal mentoring relationships and help new Assistant professors to identify suitable faculty mentors, some department cultures emphasize informal over formal mentoring relationships, and are less consistent in their efforts to nurture formal mentoring arrangements. Current mentoring relationships between Assistant professors and their faculty mentors thus varies considerably across and within departments.

Some Assistant professors and newly tenured Associate professors reported that they had very good mentoring whereas others noted that mentoring—formal or informal—had been generally absent for them. Assistant and newly tenured Associate professors explained also that at least a few excellent and committed mentors exist in every department (though not usually enough of them to go around). Faculty across the nine departments and across ranks (the proportion varies) expressed the belief that mentoring need not be completely structured in order to work.

One reason for inconsistencies in mentoring across and within departments is that faculty offices, labs, and classrooms (in the nine focal departments) are often spread across

multiple buildings on campus. Spatial proximity, in particular, influenced Assistant professors' experiences with obtaining relevant information about tenure and promotion from senior colleagues. Assistant professors who had consistent and frequent opportunities to interact formally and informally with senior departmental colleagues reported having more opportunities and greater comfort in visiting with senior colleagues about promotion and tenure and other issues pertinent to academic success.

Another reason for the reported inconsistencies in mentoring across and within departments is that departmental cultures and subcultures have different expectations about the level of preparedness of new Assistant professors for career success. Some departmental cultures/subcultures expect that if a department hires only highly qualified faculty members then additional assistance for new faculty in the form of mentoring will not be needed. Other departmental cultures/subcultures, however, embrace the idea that mentoring is necessary to ensure that all new professors understand the expectations for tenure, whom to ask questions of regarding the various aspects of their job, and how to successfully manage their research, classrooms and labs, graduate students and service obligations.

In departments where formal mentoring between tenure-track Assistant professors and tenured faculty members is not emphasized, other mechanisms for helping Assistant professors to understand performance expectations commonly exist. The most consistent form of mentoring across departments is annual performance reviews conducted by the department Chair with each faculty member. Faculty members across ranks report that this practice enables them to better understand departmental performance expectations and, to some extent, the criteria by which salary increases are awarded.

Other practices that help faculty members to understand the criteria by which performance is measured include: (a) sharing departmental promotion and tenure portfolios with anyone who wishes to review them; and (b) appointing a departmental committee (annually) comprised of a large number of the faculty (including Assistant professors) to review the CVs of all departmental faculty members and provide feedback to the department Chair regarding the relative annual accomplishments of departmental faculty. In departments where few or no structured mechanisms for helping the faculty understand the criteria for promotion and tenure exist, faculty members were more likely to state the need for (and support) a formal mentoring program for Assistant professors.

Some Associate professors (the proportion in each department varies) also expressed a desire for mentoring regarding promotion to Full professor. The primary reasons cited by Associate professors for needing mentoring were inconsistent messages (or a complete lack of feedback) from Full professors in the department about whether their professional accomplishments were sufficient for promotion and about *when* to seek promotion to Full. Some Associate professors also noted that a reasonable alternative to formal mentoring for Associate professors would be for Associate professors to regularly review the CVs and/or dossiers of faculty members recently promoted to Full professor in one's own department and other disciplinarily-related departments.

The Assistant and Associate professors who are MOST satisfied with the level of mentoring that they received were: (a) those who (by their own accounts) received

consistent messages from senior faculty and the department Chair regarding expectations/requirements for tenure and/or promotion; (b) those who perceived departmental documents regarding tenure and promotion to be transparent; and (c) those whose colleagues had gone through the tenure and/or promotion process and had communicated to other, more junior faculty that the process was transparent and fair.

Full professors reported that that they were not generally involved in the formal mentoring of Associate professors, and that they viewed discussions about promotion and career advancement for Associate professors (with the exception of formal post-tenure review processes) to be a responsibility of the department Chair.

Mentoring of Assistant professors may be a concern when one or more of the following circumstances exist:

- The department has no guidelines or orientation procedures in place for helping new faculty to understand basic departmental functions, including:
 - where to obtain support for enhancing teaching skills;
 - procedures by which departmental decisions about teaching assignments and the advising of undergraduates (if applicable) are made;
 - whom to ask about issues pertaining to graduate students;
 - where to direct questions about grant writing;
 - which departmental support personnel are responsible for various support functions; and
 - how to direct requests regarding office, laboratory and classroom space.
- The department has few or no formal mechanisms for enabling faculty members to accurately assess for themselves whether they are meeting performance expectations in key areas of evaluation (e.g., teaching, research, securing grant funding, service, professional practice), or to determine for themselves how well they are performing in their positions relative to other faculty members of the same rank.
- The department has Assistant professors who report that they lack basic information about departmental functions, about how to balance the different areas of job responsibilities, or about the criteria for promotion and tenure.
- The department consistently has Assistant professors who go up for tenure and promotion but fail to obtain tenure and promotion.
- Faculty offices, laboratories and/or classrooms are spread across multiple buildings on campus and departmental faculty gather only infrequently for meetings, colloquia, etc.
- The department widely embraces the notion that as long as a department hires only highly qualified faculty members, no formal mentoring is needed, and is characterized by any of the points previously noted above.

Mentoring of Associate professors may be a concern when one or more of the following circumstances exist:

- Associate professors remain in rank as Associate professor more than 6-7 years, AND:
 - the department has few or no formal mechanisms for enabling faculty members to assess for themselves how well they are performing in their positions relative to other faculty members of the same rank;
 - the department has few or no formal mechanisms for enabling faculty members to accurately assess whether they are meeting performance expectations in key areas

of evaluation (e.g., teaching, research, securing grant funding, service, professional practice).

Addressing potential problems. In departments where mentoring concerns exist, the following strategies may help to address these problems:

- If the department has no formal mentoring or uneven/insufficient mentoring for Assistant professors and would like to enhance mentoring practices, the faculty may wish to discuss ISUs “Mentoring Support for New Tenure-Eligible Faculty” document and related documents found on the ISU Office of the Executive Vice President and Provost website:
 - <http://www.provost.iastate.edu/faculty/newfaculty/EVPPMentoringProgramBrochureNov2010.pdf>
 - <http://www.provost.iastate.edu/faculty/newfaculty/>
- If the department has no formal mentoring or uneven/insufficient mentoring for Associate professors and would like to enhance mentoring practices for this group of faculty, the department may wish to explore different options for mentoring Associate professors regarding promotion to Full professor:
 - encourage faculty to attend college and university-sponsored workshops regarding promotion to Full professor (when possible);
 - explore options for developing department-level mentoring groups or pairs specifically for Associate professors (some departments across campus are already engaged in this practice).
- In addition to existing mentoring efforts, departments may wish to make promotion and tenure portfolios available to any faculty member who wishes to examine them; this contributes positively to faculty members’ understandings of criteria for promotion, tenure and annual salary increases.
- Departments may consider appointing a large (6-8 faculty) departmental committee comprised of an annually rotating group of faculty members of all ranks to review the CVs of all departmental tenure-track and tenured faculty members each year. In so doing the department can help to ensure that all faculty gain a firm understanding of departmental expectations for promotion and tenure.
 - The department Chair may, in addition, ask this committee to provide basic feedback regarding faculty members’ performance (e.g., categorizing faculty productivity as relatively ‘above average’, ‘average’, or ‘below average’ each year) making sure that Assistant as well as Associate and Full professors are represented on the committee.
- The department Chair may wish to develop and use a matrix for comparing faculty members’ annual performance and make the matrix available to the all departmental faculty.
 - The matrix would ideally include specific performance criteria based on those areas of performance that influence outcomes including teaching loads, faculty pay raises, promotion, and tenure.
- The department may wish to develop a guide or manual for new faculty members that outlines departmental procedures, the responsibilities of all departmental support staff, and where to obtain support for teaching, grant writing, professional practice, and research.

- Departments may also wish to establish annual or bi-annual meetings among departmental mentors to share information about mentoring and mentoring strategies.
- Departments may also wish to advocate for more college- or university-wide mentoring workshops for Assistant and Associate professors, and college-wide or university-wide training for mentors.

5. WORK-LIFE BALANCE AND FAMILY FRIENDLY POLICIES

Most all faculty (across ranks) support, in principal, the idea that university work cultures and structures should not impede faculty members' efforts to effectively balance work and other life responsibilities. Much less agreement exists, however, over what constitutes this "balance." Four primary factors shaped individual faculty members' notions of appropriate work-life balance in the nine participating STEM departments: (1) managing/seeking on-going grant-funded research; (2) departmental culture; (3) being a primary caretaker of young children/adolescents; and (4) being a primary caregiver to aging or sick relatives.

Faculty members who have on-going, grant-funded research projects (or who are consistently seeking funding and doing research) tend to view the boundaries between "work life" and "home life" as weak and more permeable. This is especially true in departments that embrace long and often irregular work hours as part of their culture. As long as these faculty members are not primarily responsible for the care of small children or have no aging or sick relatives for whom they must provide care, however, they are often quite satisfied with the work-life "balance" that they maintain—even if they are working long and irregular hours. If, however, faculty members who have on-going, grant-funded research and are a part of work culture that supports long hours also have small children or other relatives to care for, they are often dissatisfied with the "balance" between work and family life because they perceive one or the other of these aspects of life to be suffering. Furthermore, even in those departments having a work culture that supports the idea that work hours should not be so extensive that they interfere with faculty members' abilities to successfully fulfill family responsibilities, some faculty were more satisfied with the level of work-life balance in their lives than others. Faculty with small children and/or aging or sick relatives for whom they must provide care were less satisfied with the level of work-life balance in their lives than were other faculty. Faculty members' use of ISU's work-life/family friendly policies helped to moderate negative perceptions of work-life balance; but use of these policies does not appear to completely erase the concerns that some faculty members have about work-life balance.

Iowa State University's efforts to address work-life balance issues over the past decade have been notable. ISU, for example, has implemented a policy for extending the number of years that an Assistant professor can stay in rank before applying for promotion to Associate professor in the event that the Assistant professor must take time away from her or his academic work to care for children, family members or attend to personal health issues. ISU has also developed a policy for officially modifying the teaching duties of faculty members who must attend to the needs of newly born or adopted children. And although this policy has yet to be approved by the Iowa Board of Regents, ISU colleges and departments continue to try to find ways to accommodate individual faculty members who seek to temporarily modify their teaching duties. ISU also has implemented a part-time

tenure policy for faculty seeking to reduce their appointment to a less-than-full-time position so that they may obtain a better balance between work and family life, and has actively sought to accommodate newly employed faculty members who have spouses or partners who seek employment at the university.

Data from the CT focus groups and interviews reveal that faculty who are familiar with ISU's family friendly policies believe that Iowa State has made progress on these issues. These faculty members were able to cite examples of using these policies personally or of colleagues successfully using ISU's family friendly and work-life balance policies.

The CT data also reveal, however, that the extent to which faculty are aware of ISU's existing work-life/family friendly policies varies considerably across departments, as do levels of support (in practice) for using the policies. A portion of the faculty in most departments was either unaware of ISU's work-life and family friendly policies, aware of only a portion of ISU's policies, or unsupportive of these policies. Data further reveal that:

- Many faculty assert that delaying a tenure clock or taking time off of from work is not feasible given the research and travel demands of their academic discipline.
- Some faculty believe that delaying the tenure clock is viewed as “unprofessional” in their department because it places undue burden on other faculty members having to teach for an individual taking time off.
- Some faculty believe that faculty should not be allowed to delay their tenure clock for any reason.
- Some faculty believe that their department has a “workaholic” culture that will never support tenure-clock delays or “special” time off to care for one's family.
- Many faculty asserted that family leave requests have been handled on a case by case basis and that decisions have been inconsistent. (This was more true, however, among departments that began CT participation in 2006 than in departments that began in 2008 or 2009, however, suggesting that over time, family leave requests are being handled more consistently.)
- Some faculty noted that hiring temporary instructors for faculty on leave is not financially possible for the department (especially given ISU's recent budget cuts).
- Some faculty expressed concern over how faculty will be evaluated when it comes time for tenure and promotion if they have taken a leave or delayed a tenure clock.
- Some faculty expressed concern that unless the same work-life and family friendly policies are extended to post-docs, ISU will be less competitive with other research-intensive universities in recruiting future faculty.

Work-life balance and use of ISU's family friendly policies may be a concern when one or more of the following circumstances exist:

- ISU work-life and family friendly policies have not been discussed with the faculty at a faculty meeting in recent memory.
- Departmental faculty members rarely or never ask the department Chair for information about or assistance in using ISU's work-life or family friendly policies.
- The department regularly schedules departmental meetings early in the morning, late in the afternoon, on weekends, or during holidays and faculty members with children living at home or other family care responsibilities irregularly or never attend.

- Departmental promotion and tenure evaluation committees never or irregularly discuss university guidelines for evaluating faculty members who are on part-time faculty appointments, who utilize ISU's policy for delaying the tenure clock or who negotiate to have their teaching duties modified temporarily so that they can take care of a newly born or adopted child.
- Faculty members who use ISU's family-friendly policies are denied tenure/promotion.

Addressing potential problems. In departments where work-life and family friendly policy concerns exist, the following strategies may help to address these concerns:

- Departments may wish to review annually during faculty meetings the current university procedures for extension of the tenure clock, part-time tenure, modifying teaching duties for faculty who have small children, and partner accommodations. For more information, see the on-line resource "ISU Policies and Guidelines for Flexible Faculty Careers: Resources for Chairs & Deans" (Harris, Carlson and Bowen 2009): <http://www.provost.iastate.edu/fad/docs/flexiblefacultycareersresource.pdf>.
- Departments may wish to hold discussions aimed at developing department-specific guidelines for providing release time during periods of family leave.
- Departments may wish to draft guidelines for providing family leave to faculty within the context of university guidelines.
- Departments may wish to hold faculty discussions about how work-life issues affect faculty members whose parents and other extended family members require care for prolonged illnesses and other life events.
- Departments may wish to hold faculty discussion about ISU's guidelines for evaluating faculty who utilize ISU's work-life and family friendly policies, especially those who delay the tenure clock or are on a part-time tenure appointment.
- Departments may wish to avoid scheduling departmental meetings (or meetings of departmental committees) during times that are impossible or extremely difficult for parents of children who are still living at home to attend.

6. FACULTY TEACHING LOADS, COURSE DISTRIBUTION PRACTICES AND REWARDING TEACHING

Faculty members across ranks and across all nine focal departments stressed the importance of excellence in teaching and take pride in teaching. Across departments, some faculty of all ranks also stressed the need for greater transparency in:

- The ways in which teaching assignments (courses and loads) are made.
- The criteria by which "excellence" in teaching is determined.
- The extent to which excellence in teaching influences tenure and promotion decisions and annual salary increases.
- How credit for teaching and teaching-related activities (e.g., advising, teaching large vs. small sections, etc.) is allocated.

Faculty members' perceptions of transparency in teaching assignments, loads, and rewards varied across departments. Perceptions of transparency were greater in some departments than in others. Overall, Assistant, Associate and Lecturer/Adjunct faculty expressed greater concern about teaching-related issues than Full professors.

Faculty perceptions of transparency in how decisions about teaching are made were related to faculty perceptions of *fairness* in the distribution of teaching assignments and teaching-related rewards. The more transparency that faculty members perceived, the more apt they were to believe that teaching assignments, loads, and rewards were fair. Faculty members who have been in their departments longer tended to have a better understanding of how teaching assignments were made. Faculty members who were newer to the department were less likely to have had a clear understanding of these processes.

Faculty concerns about how teaching decisions are made were greater among Round 2 departments than among the other 6 departments. Round 2 focal department members' concerns about teaching coincided with university announcements about university budget cuts. The university's reaction to state level cuts in funding to higher education in 2009-2010 included discussions about the need to have faculty teaching more students. This may have led many faculty members in Round 2 focal departments to spend more time in the CT focus groups and interviews discussing the necessity of increased teaching loads and/or course sizes and the processes by which decisions about increased teaching loads/course sizes would be made. Faculty in Round 2 focal departments (as well as those in Round 3) expressed less resistance to the idea that ISU faculty would likely have to teach more students than they were to an anticipated lack of transparency in how decisions about teaching would be made.

Finally, some faculty across departments and across ranks (the proportion varies) expressed concerns about perceived contradictions between ISU's stated commitment to teaching excellence and a system of faculty evaluation (for merit raises as well as promotion and tenure) that assigns less value to teaching excellence than to excellence in research and grant funding. Some faculty, especially at the Assistant professor rank, explained also that the standards by which teaching "excellence" is assessed in their departments are vague.

Faculty teaching loads, course distribution practices and rewarding teaching may be a concern if one or more of the following circumstances exist:

- Faculty members are unaware of the university's rationales for increasing course loads.
- Procedures for determining course loads and course distribution practices are not discussed regularly with departmental faculty.
- Faculty members in the department do not have Position Responsibility Statements (PRS) that accurately reflect the level of contribution to departmental teaching that they are expected to make.
- Faculty members whose teaching loads are higher than the departmental average receive annual performance evaluations in which the weight given to teaching is less than the faculty member's PRS indicates that it should be.
- Faculty members in a department have different course loads because their position responsibilities (PRS) are not the same, but the department does not regularly have discussions with the faculty about the fact that different faculty members have different responsibilities.
- The criteria by which "excellence" in teaching is evaluated are neither stated in departmental documents nor communicated verbally to all departmental faculty on a consistent basis.

- No mechanisms exist within the department for rewarding excellent teaching or for helping faculty who need to improve their teaching to understand how to do so or where to go for assistance.
- Gaps in understanding or differing assumptions exist among departmental faculty members regarding how teaching assignments are made, course loads are determined, and/or the *relative value of* and *reward structures for* teaching (especially as they pertain to promotion and tenure or salary decisions).

Addressing potential problems. In departments where faculty teaching loads, course distribution practices and/or rewards for teaching are a concern, the following strategies may help to address these problems:

- Departments may benefit from sharing information regarding: average teaching loads for faculty (by rank) within the department, and the number and type of courses taught by each faculty member each year.
- Departments may benefit from rotating faculty through curriculum committees (if departments have such committees).
- Departments that share information regarding faculty teaching responsibilities would be advised to also *contextualize* work responsibilities of faculty members, keeping the following issues in mind:
 - not all faculty members share the same kind of academic appointment (i.e., Personal Responsibility Statements (PRSs) vary);
 - not all faculty members are supported at the same level by grants and contracts;
 - not all faculty members serve on the same number of university, department and student committees;
 - not all faculty members support/work with the same number of graduate students, or advise undergraduate students;
 - not all courses taught by faculty require the same time and effort investment (e.g., larger vs. smaller enrollment courses, courses with and without lab sections).
- Departments may wish to discuss in a faculty meeting the criteria by which “excellence” in teaching is evaluated.
- Departments may wish to create departmental awards to document and publicly recognize especially meaningful contributions in service or teaching.
- Departments may benefit from the development of a departmental strategic plan, developed with wide faculty participation (to ensure broad ownership of the plan), that describes concretely the values placed on research, teaching, outreach and service.
- Departments may benefit from a review of all faculty position responsibility statements to ensure that they accurately reflect the level of contribution to departmental teaching that each faculty member is expected to make.

In addition, departments may wish to consider implementing strategies that help newer faculty members to establish excellent teaching skills. These strategies may include:

- Assigning newer faculty to teach the same course repeatedly (e.g., 2-3 years) rather than assigning them to new preparations each semester.
- Taking proactive steps to orient new faculty with regard to the processes by which courses and course loads are assigned and how course release time (if applicable) may be acquired.

- Communicating low departmental/college/university service expectations during the first few years so that each faculty member has the time to establish their teaching as well as their research program.

7. FACILITIES, ADMINISTRATIVE SUPPORT AND TECHNICAL SUPPORT

While many faculty (the proportion in each department varies) report feeling satisfied with the office, lab, teaching and meeting spaces offered by their departments, others report that improvements in these areas would enhance their teaching, research, and overall job satisfaction. Meeting and socializing spaces were noted as an important aspect of work facilities because of the opportunities that physical building spaces can provide for enhancing collegiality and informal mentoring practices.

- Some faculty noted that the dispersion of faculty across multiple buildings makes the establishment of mutually agreeable meeting times (e.g., for faculty meetings and research colloquia) and the development of intellectual community difficult, which in turn affects information sharing, collaboration, mentoring and socializing.
- Some faculty noted that inadequate classroom space exists for the size and types of classes taught (for example, the need for specialized classrooms).
- Some faculty members reported that lab space in some departments is lacking in quantity and in functionality, that some lab spaces are not up to safety codes, or that there are electrical, plumbing or environmental problems with the space.
- Faculty members who have access to newer research facilities and to Ames Laboratory reported very high levels of satisfaction.
- Faculty members across departments (the proportion varies) reported that the administrative and technical support received by faculty members in their department is uneven.
- Newer faculty members across departments (the proportion varies) reported that they would benefit from an orientation or departmental guide regarding the kinds of support available to departmental faculty and explicit explanations of whom to go to for specific types of support.

Facilities, administrative and technical support may be a concern if one or more of the following circumstances exist:

- Faculty members are dispersed across multiple buildings and the department holds few departmental meetings/seminars.
- Courses offered by the department consistently enroll more students than available (properly equipped) classrooms and laboratories are able to accommodate.
- The department has inadequate mechanisms for ensuring that lab spaces are up to safety codes.
- The department has no mechanisms for ensuring that faculty members understand how decisions about the distribution of office space are made.
- The department does not regularly discuss with the faculty (especially newer faculty members) which administrative and technical support staff are responsible for certain tasks and activities.

Addressing potential problems. In departments where facilities, administrative support or technical support are a concern, the following strategies may help to address these problems:

- When departmental faculty members are dispersed across multiple buildings (or floors in buildings), departmental Chairs may wish to take proactive steps to create spaces and time periods for junior faculty and tenured faculty to interact face-to-face with one another. Among the many ways to accomplish this are:
 - department Chairs may wish to organize informal meetings with Assistant professors to discuss issues of departmental norms, policies, and tenure and promotion evaluation processes;
 - department Chairs may wish to organize more regular faculty meetings and seminars;
 - faculty members may wish to hold regular social gatherings;
 - departments may wish to hold faculty retreats so that faculty members can discuss their respective research programs and realize opportunities for collaboration.
- As a routine part of scheduling courses and assigning classrooms and labs, departmental teaching coordinators and/or committees may wish to report back to the faculty as a whole on the process by which room assignments are made (and the limitations to scheduling that result from forces beyond the control of the department).
- Departments may wish to form committees (or empower an existing committee) to work specifically on developing procedures (or for enforcing existing procedures) regarding the allocation, maintenance and safety of facilities for teaching and research.
- The department may wish to annually discuss with the faculty which administrative and technical support staff are responsible for certain tasks and activities.

REFERENCES:

- Bird, Sharon R. 2010. *ISU ADVANCE Collaborative Transformation Project, Focal Department Report: Physics and Astronomy*. Iowa State University ADVANCE Program, Ames, IA 50010.
- Bird, Sharon R. 2009. *ISU ADVANCE Collaborative Transformation Project, Focal Department Report: Chemistry*. Iowa State University ADVANCE Program, Ames, IA 50010.
- Bird, Sharon R., Kristen P. Constant, Fred Janzen and Jo Anne Powell-Coffman. 2008. *ISU ADVANCE Collaborative Transformation Project: First Round Focal Department Transformational Strategies and Outcomes, January 2008 – January 2009*. Iowa State University ADVANCE Institutional Transformation Program, Ames, Iowa 50010.
- Bird, Sharon R. and Florence A. Hamrick. 2008. *ISU ADVANCE Collaborative Transformation Project: First Round Focal Department Synthesis Report*. Ames, IA: Iowa State University ADVANCE Program. Report available online at: <http://www.advance.iastate.edu/resources/resources.shtml>.
- Bird, Sharon R. and Florence A. Hamrick 2007a. *ISU ADVANCE Collaborative Transformation Project, Focal Department Report: Materials Science and Engineering*. Iowa State University ADVANCE Program, Ames, IA 50010.

- Bird, Sharon R. and Florence A. Hamrick 2007b. *ISU ADVANCE Collaborative Transformation Project, Focal Department Report: Ecology, Evolution and Organismal Biology*. Iowa State University ADVANCE Program, Ames, IA 50010.
- Bird, Sharon R., Laura Rhoton, Carla Fehr and Lisa M. Larson. 2010. *ISU ADVANCE Collaborative Transformation Project: Rounds 1 and 2 - Focal Department Synthesis Report (April 2010)*. Iowa State University ADVANCE Program. Report available online at: <http://www.advance.iastate.edu/resources/resources.shtml>.
- Fehr, Carla. 2010. *ISU ADVANCE Collaborative Transformation Project, Focal Department Report: Plant Pathology*. Iowa State University ADVANCE Program, Ames, IA 50010.
- Fehr, Carla. 2009. *ISU ADVANCE Collaborative Transformation Project, Focal Department Report: Animal Science*. Iowa State University ADVANCE Program, Ames, IA 50010.
- Hamrick, Florence A. and Sharon R. Bird. 2007. *ISU ADVANCE Collaborative Transformation Project, Focal Department Report: Genetics, Development and Cell Biology*. Iowa State University ADVANCE Program, Ames, IA 50010.
- Harris, Mary A., Susan L. Carlson, and Bonnie S. Bowen. 2009. *ISU Policies & Guidelines for Flexible Careers: Resources for Chairs & Deans*. Iowa State University ADVANCE Program, Ames, Iowa.
- Larson, Lisa M. 2010. *ISU ADVANCE Collaborative Transformation Project, Focal Department Report: Chemical and Biological Engineering*. Iowa State University ADVANCE Program, Ames, IA 50010.
- Larson, Lisa M. 2009. *ISU ADVANCE Collaborative Transformation Project, Focal Department Report: Civil, Construction and Environmental Engineering*. Iowa State University ADVANCE Program, Ames, IA 50010.