Mid-Career Faculty: Trends, Barriers, and Possibilities

Anita G. Welch, Ph.D.
Ball State University

Jocelyn Bolin, Ph.D.
Ball State University

Daniel Reardon, D.A.
Missouri University of Science and Technology

Rachel Stenger
University of Nebreska, Lincoln

> **Abstract:** *Mid-career faculty comprise the largest segment of the academia, yet there is scant empirical evidence for the policies and practices related to mid-career faculty. The aim of this study was to deepen our understanding of the lives of mid-career faculty working at institutions of higher education in the United States, with focus on their productivity, and to suggest implications for future research on the subject. Using data from the National Study of Postsecondary Faculty (NSOPF) in combination with an analysis of recent articles*

Anita G. Welch is the Associate Dean of Teachers College and Professor of Educational Studies at Ball State University.

Jocelyn Bolin is a Professor in the Educational Psychology department at Ball State University.

Daniel Reardon is an Associate Professor and Director of the Composition and English Teacher Education at Missouri University of Science and Technology.

Rachel Stenger is a graduate student in Sociology at the University of Nebreska, Lincoln.

related to mid-career faculty, this study identified factors related to the academic life of mid-career faculty. Results point to professional responsibilities (teaching and service) rather than personal factors (children and married life) as barriers to faculty productivity.

Introduction

The purpose of this study was to examine an often-overlooked period of academic life-that of the mid-career faculty. Mid-career faculty, comprise the largest segment of the academic profession. Scant empirical evidence for the policies and practices related to post-tenure mid-career faculty can be found. What is known is that the largest and most important population of academia has been largely ignored by both researchers and policymakers. Using data from the National Study of Postsecondary Faculty (NSOPF) this study identified factors related to the academic life of post-tenure mid-career faculty by analyzing trends and predictive patterns. Therefore, the aim of this study was to deepen our understanding of the lives of mid-career faculty working at institutions of higher education in the United States, with special focus on their productivity, and to suggest implications for future research on the subject.

Levinson's (1986, 1996) theory of adult development demonstrates that during mid-life, adults alternate between stable periods of achievement and advancement in conjunction with periods of uncertainty, reassessment, and renewal. Levinson believed that the uncertainty of this period allowed for the introduction of new priorities which can potentially impact the quality of work. Adding to that, Super's (1980) seminal work on career development establishes the concept in which adult workers transition from an 'established stage' between ages 25-44 where career growth and advancement are in an upward trajectory to a 'maintenance stage' around ages 45-64 when work becomes stable and routine. Super (1980) later added the concept of 'career recycling' to this theory, stating that a normal part of career development may be a return to an earlier stage because of personal development, technological,

or social change. Therefore, mid-career may be a time of adaptation to personal and/or environmental conditions.

Hall's (1986) model of organizational career stages illustrates mid-career as a time of unpredictability and complexity, which can result in either career maintenance, growth, or stagnation. Career routines, typically well established by mid-career, allow for little experimentation or revision, but Hall (1986) believes that "triggers" in the work environment or organization, can stimulate a renewed time of exploration, transition, and establishment, thus bringing with it increased unpredictability. Hall (1986) defines mid-career as "the period during one's work in an occupational (career) role after one feels established and has achieved perceived mastery and prior to the commencement of the disengagement process" (p. 127).

The literature points to three distinct areas which mid-career faculty view as barriers to productivity: increased service, limited time, and teaching. In higher education, service is defined as activities that are neither teaching nor research (Wheeler, 1997). Often, faculty are protected from excessive service activities in the early stages of their careers, thus allowing more time for teaching and research productivity. But, after promotion from assistant to the associate level, associate professors are usually encouraged, or expected, to participate in or chair organizations, in addition to serving on numerous committees on campus (Lumpkin, 2009; Walker, 2016). Studies have shown that associate professors were significantly less satisfied with the time they spent on service activities, especially committee assignments, compared to both assistant and full professors, and this dissatisfaction can in some cases, lead to questioning of the meaning of work and career paths (Mamiseishvili et al., 2016; Strage, Nelson, & Meyers, 2016).

Therefore, the aim of this study was to deepen our understanding of the lives of mid-career faculty working at institutions of higher education in the United States, with special focus on their productivity, and to suggest implications for future research on the subject.

Method

This study focused on mid-career faculty working at institutions of higher education in the United States and employed both qualitative and

quantitative methodologies. First, a comprehensive review of the mid-career literature was conducted with the goal of identifying recurring themes related to mid-career faculty. These themes were then used to identify the variables used in the multilevel modeling.

Literature Search and Inclusion Process

An extensive systematic review of published peer-reviewed research was conducted by the research team with a focus on the search terms *mid-career*, *post-tenure, scholarly productivity*, *mentoring*, and *faculty development*, in databases of peer-reviewed articles. We limited our search to peer-reviewed journal articles published after 1999. The following databases were reviewed: Academic Search Premier (EBSCO), ERIC, LexisNexis Academic, OneSearch, and WorldCat. Manual searches of journals that commonly publish articles on faculty development in higher education (e.g. *Journal of Faculty Development*) were also conducted. Reference lists and the names of authors of the included articles were also searched. This complementary strategy was used to validate the systematic review of the databases and to determine whether other relevant articles were available.

The review focused on literature concerning mid-career faculty employed in institutions of higher education. Studies involving faculty in the health care profession (schools of medicine and hospitals) were excluded. Studies conducted on early career mentoring or pre-tenure mentoring were not included. Studies focusing solely on post-tenure review and evaluation were also excluded (e.g. Aper & Fry, 2003; Barnard, 2008). Books and book chapters were excluded because they may not have been subjected to the same peer review process as items published in academic journals. Therefore, Alstete's (2000) book, *Posttenure Faculty Development: Building a System for Faculty Improvement and Appreciation* was not included. Dissertations were excluded for the same reason. Theoretical articles, reviews, and editorials were excluded. Articles that were not possible to access in full text were also excluded.

A total of 106 published articles were identified for inclusion once duplicates had been removed. The 106 articles were further examined in full text for inclusion based on the following criteria:

1. Studies addressing mid-career post-tenured faculty in higher education were included.

2. Our review focused on literature concerning mid-career post-tenured faculty.

3. Articles were considered only if published since 1999.

4. Only peer-reviewed articles were considered.

This process led to a total of 24 articles which were included in the study. Articles included in the study are denoted by an asterisk (*) in the Reference section. See Figure 1 for a flow chart summarizing the search and selection process.

Figure 1. *Flow chart of search and selection process*
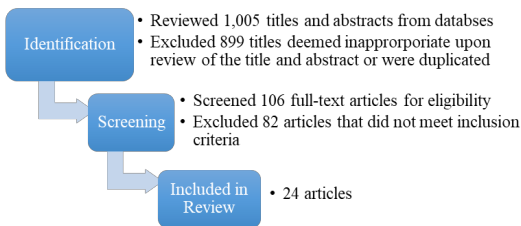
Coding Process

Thematic synthesis (Thomas & Harden, 2008) was used in the coding process. Thematic synthesis identifies recurring themes within the primary studies and analyses the themes which emerge. The process involves three steps: 1) the free line-by-line coding of the primary studies; 2) the organization of the free codes into related areas to construct descriptive themes; 3) development of analytical themes. The development of descriptive and analytical themes requires constant comparison and shares characteristics of grounded theory. Analysis of the texts was conducted using NVivo v. 11. The descriptive themes, listed in alpha order, and number of sources and references for each are

shown in Table 1. The resulting analytical themes are discussed in the following section.

Table B1: *Descriptive themes as identified by the coding process*

Theme	Number of Sources	Number of References
Career Planning	13	39
Career Reflection and Assessment	10	31
Challenges	13	47
Increased service	5	21
Limited Time	8	16
Teaching	8	22
Life Stage	9	21
Mentoring	13	54
Reinforcement	14	33
Resources	9	19
Stagnation and Neglect	11	25

Several themes emerged from the analysis of the literature, including neglect, stagnation, and uncertainty. In addition, lack of mentoring, limited time, and increased service were also common themes. The following is a summary of the analytic themes.

Life Stage

Baldwin et al. (2008) define mid-career as 'the lengthy period between the end of professors' probationary years and their preparation for retirement' (p. 48). While faculty of both genders face challenges during mid-career, women especially struggle with issues of child-bearing during the first five years post-tenure and again with supporting aging parents after six years post-tenure (Baldwin et al., 2008). Data suggest that the mid-career period may be the most productive period, as evidenced by increased presentations and publications (Baldwin et al., 2005). In contrast, studies also have found that mid-career faculty have higher levels of dissatisfaction with their jobs than those at other career stages (Baldwin et al., 2005; Mamiseishvili et al., 2016). This period is

also the time in which some faculty move into administrative positions. Walker (2016) cautions faculty about moving into administrative positions before being promoted to full professor as the requirements of administration may hinder faculty productivity, thus hindering their growth toward promotion.

Career Planning, Reflection, and Assessment

Mid-career is a time for planning, reflection, and assessment (Baker-Fletcher, Carr, Menn, & Ramsay, 2005). Mid-career is a time of reassessment and is a time in which faculty may ask themselves 'what's next?' or 'what do I do now?' It can be a time of unclear goals, neglect, or relief (Baldwin et al., 2005, 2008). Women especially are subject to anxiety as the process for promotion is often nebulous and unclear, resulting in that fewer women actually aspire to formal leadership positions, such as full professor (Crawford, Burns, & McNamara, 2012). When mid-career faculty engage in reflection and planning, they are better prepared to develop strategies that align their professional growth with that of their institution (Baldwin & Chang, 2006). Mid-career planning helps faculty engage in career reflection and assessment that helps ensure that institutional barriers to their advancement are removed, yet this process is often overlooked by colleges and universities when planning professional development activities (Buch, Huet, Rorrer, & Roberson, 2011; Lumpkin, 2009; Pastore, 2013; Strage et al., 2016). Consequently, many faculty find it difficult to keep current with changes in their disciplines and teaching strategies, especially faculty who have been tenured for five years or more (Baldwin et al., 2008). Along with planning, reflection and assessment of personal goals is a critical factor when considering promotion to full professor. Studies by Lechuga (2014) and Strage and Merdinger (2014) identified mid-career as a time of self-renewal for faculty. The authors noted that faculty autonomy was important during this period; faculty believed they had freedom which allowed them to pursue innovative research interests and establish their professional identity.

Barriers to Promotion

The literature points to three distinct areas which mid-career faculty view as barriers to promotion: increased service, limited time, and teaching. In higher education, service is typically defined as activities that are neither

teaching or research. Often, faculty are protected from excessive service activities in the early stages of their careers, thus allowing more time for teaching and research productivity. But after promotion to the associate level, professors are encouraged or expected to take on leadership roles at local, state, regional, and national levels in professional organizations, in addition to serving on numerous campus committees (Lumpkin, 2009; Walker, 2016). Studies have shown that associate professors were significantly less satisfied with the time they spent on service activities, especially committee assignments, compared with both assistant and full professors, and this dissatisfaction can in some cases lead to a questioning of their work and career paths (Mamiseishvili et al., 2016; Strage et al., 2016).

These barriers, whether real or perceived, often result in mid-career faculty feeling either frustrated, angry, anxious, or stagnant (Baker-Fletcher et al., 2005; Hart, 2016; Strage et al., 2016; Terosky, O'Meara, & Campbell, 2014). The feelings of uncertainly and isolation result from a lack of attention, often due to lack of institutional and department support for mid-career faculty and the increased support and attention given to early career faculty (Baldwin et al., 2008; Buch et al., 2011; Strage & Merdinger, 2014). Mid-career faculty may feel as though they are on their own or marginalized because of the lack of attention, resources, and professional development opportunities afforded junior faculty but unavailable for them (Lumpkin, 2009).

Although both men and women report feeling stagnate and neglected during mid-career, women report experiencing additional stresses due to sex discrimination, harassment, and gender-role stereotypes (Luna & Medina, 2006). Romano, Hoesing, O'Donovan, and Weinsheimer (2014) report that many mid-career women described themselves as frustrated in having to wait to be invited for leadership opportunities at their institutions.

Possible solutions: Resources, mentoring, and reinforcement

Findings from literature review suggest that institutions often do not provide adequate resources in the form of support programs or incentives for mid-career faculty (Nottis, 2005; Strage & Merdinger, 2014). Resources are essential to facilitate mid-career academic's growth, and may include funding for research, release time from teaching, or creative

scheduling. Baldwin and Change (2006) found that carefully targeted resources, even in modest amounts, can motivate mid-career faculty.

Mentoring has been defined as a form of professional socialization in which an experienced individual serves as a guide and role model to a less experienced individual for the purpose of developing skills and expertise within an institution (Lechuga, 2014). Although mentoring of junior faculty is common in many institutions, it is far less common for mid-career faculty. Awareness of the many challenges facing mid-career faculty has caused some institutions to implement mentoring programs. For example, The University of Washington utilizes a website to support mid-career faculty with specific information on proposal development and how to keep pace one's field and new research topics. At Oregon State University, mid-career faculty are placed in mentoring relationships and are provided professional development stipends to support either instructional design, technology education, or research development (Baldwin & Change, 2006). Mentors can help mid-career faculty identify potential funding sources and offer help in writing proposals for grants. Mentors also serve a valuable role by listening, asking questions, and offering alternatives to the many challenges facing mid-career faculty (Lumpkin, 2009). Buch et al. (2011) found when mid-career faculty had a mentor, they were significantly more likely to perceive that there were incentives in place for seeking promotion and that promotion criteria were clear.

While formal mentoring programs are important and have been shown to improve faculty retention and lessen the barriers to promotion, faculty also value opportunities to talk to each other in less formal settings (Ledchuga, 2014). These may include opportunities for collegial support through social gatherings, lunches, or collaborative working groups (Pastore, 2013). Extending opportunities for collaboration and networking beyond one's department has also been found to be a meaningful form of reinforcement (Rees & Shaw, 2014). Faculty value opportunities to discuss their research and instructional success and challenges; they have reported feeling enriched by meeting with a group of colleges to focus on ways to strengthen their pedagogical knowledge and research skills (Romano et al., 2014).

Multilevel Modeling

Data from the Institutional Survey and Faculty Survey of the National Study of Postsecondary Faculty (NSOPF) for 2004 were used in this study. The 2004 data is the most recent NSOPF data and is the most comprehensive study of faculty in postsecondary educational instructions ever undertaken in the United States. Data pertaining to participants were used in analyses if they were associate professors who worked for a university that had a tenure track system, which produced a sample size of 2,941 faculty from 583 institutions. Due to the nested structure of the data (faculty nested within institutions), multilevel modeling was used. Multilevel modeling is an analysis used for nested data which can take into account multiple levels of influence; here the faculty level and institution level. The outcome of study was productivity, measured by six different variables:

- o total number of articles published in an academic's career

- o total number of books published in an academic's career

- o total number of presentations done in an academic's career

- o number of articles published recently

- o number of books published recently

- o number of presentations done recently

See Table 2 for descriptive statistics on each outcome variable. For each outcome variable, three models were compared using a chi-square test for deviance—a null model, a model including demographics variables only, and a model including all predictors (demographic characteristics and professional characteristics). Testing the models in this fashion allows us to determine whether each set of additional predictors significantly improves model fit. Due to a lack of theoretical support for random slopes, random intercepts models were used for each outcome.

Table 2: Descriptive Statistics

Descriptive statistics for Productivity Outcome variables

	Min	**Max**	**Mean**	**Stand. Dev.**
Career Articles	0	325	22.50	30.80
Career Books	0	90	6.56	11.44
Career Presentations	0	700	43.69	75.57
Recent Articles	0	47	3.50	5.10
Recent Books	0	22	1.38	2.50
Recent Presentations	0	78	5.47	8.29

Simple Characteristics

Demographic variables used in analyses included age, gender, marital status, race, and the number of dependent children. The sample consisted of 60.6 percent males, 81 percent white only, and the marital status breakdown was 10.2 percent single, 74.8 percent married, 3.9 percent cohabiting, and 11.1 percent other. The full model for each productivity measure also included professional information. Professional variables used included, the year associate professor status was attained ($M = 1996.05$, $SD = 6.93$), tenure status, percent of time spent on teaching ($M = 57.27$, $SD = 27.83$), per cent of time spent on research ($M = 21.45$, $SD = 23.02$), an eight-item measure of job satisfaction, a four item measure of perceived fairness, and a question asking whether the participant would choose an academic career again. The sample consisted of 72.7 percent tenured (11.8 per cent not tenured but on track) and 89.9 per cent of them said they would choose an academic career again. The job satisfaction scale ($M = 15.65$, $SD = 4.36$) consisted of a total score from eight Likert scale items (1=Very Satisfied; 4=Very Dissatisfied). These items asked individuals about their satisfaction with authority to make decisions, with technology-based activities, with equipment/facilities, with institutional support for teaching improvement, with workload, with salary, with benefits, and with the job overall. The perceived fairness scale ($M = 7.91$, $SD = 2.49$) consisted of a total score from four Likert

scale items (1=Strongly Agree; 4=Strongly Disagree). These items asked individuals how strongly they agree with several statements, including teaching is rewarded, part-time faculty are treated fairly, female faculty are treated fairly, and racial minorities are treated fairly. See Table 3 for correlations between all predictor variables and each outcome.

Table 3: Correlations between predictors and outcomes

Correlations between predictors and outcomes

	Outcomes					
	Career			Recent		
Predictors	Articles	Books	Presentations	Articles	Books	Presentat
Age	-0.006	0.062**	0.013	-0.180**	-0.066**	-0.137*
Gender	-0.174**	-0.048**	-0.033*	-0.121***	0.011	-0.028
Marital Status	-0.014	0.014	-0.005	-0.010	0.008	-0.024
Race	0.013	0.002	0.007	-0.023	-0.024	-0.021
Num. Children	0.070**	-0.011	0.018	0.112**	0.016	0.070*
Rank, Year	-0.081**	-0.107**	-0.024	0.115**	0.059**	0.112*
Tenure Status	-0.010	0.028	-0.004	-0.067**	-0.005	-0.043
% Time on Teaching	-0.258**	-0.117**	-0.073**	-0.283**	-0.123**	-0.108*
% Time on Research	0.297**	0.102**	0.051**	0.352**	0.115**	0.104*
Job Satisfaction	0.040*	0.027	0.022	0.041*	0.048**	0.024
Opinions	0.017	0.071**	0.010	0.018	0.086**	0.001
Academic Career	-0.009	0.008	-0.010	0.002	-0.003	0.011

NSOPF Analysis Results

According to the chi-square tests for deviance, the full model (using demographic characteristics and professional characteristics) fit the data better than the demographics only model for all outcomes except for career presentations. Because the demographics only model for career presentations did not fit the data better than the null model, these results will not be presented. Results for all other outcomes appear in Table 4.

Results from the multilevel analysis of the NSOPF indicate that faculty job satisfaction does not predict productivity. Instead, the percentage of time spent on research and teaching as well how recently faculty achieved their associate professor status predicted productivity. First, faculty who published more articles in their career were male ($\beta = 8.2914$, $p < .001$), had achieved their associate professor status less recently ($\beta = -0.4117$, $p < .001$), had spent less time on teaching ($\beta = -0.1365$, $p < .001$), and had spent more time on research ($\beta = 0.3300$, $p < .001$). Second, faculty who published more books in their career were male ($\beta = 1.1049$, $p < .05$), had achieved their associate professor status less recently ($\beta = -0.1436$, $p < .001$), had spent less time on teaching ($\beta = -0.0313$, $p < .01$), had spent more time on research ($\beta = 0.0363$, $p <$). Third, faculty who published more articles recently were younger ($\beta = -0.0530$, $p < .001$), were male ($\beta = 0.8314$, $p < .001$), were not tenured but on tenure track ($\beta = -0.7193$, $p < .01$), had spent less time on teaching ($\beta = -0.0185$, $p < .001$), and had spent more time on research ($\beta = 0.0702$, $p < .001$). In addition, those who were single ($\beta = -0.8442$, $p < .05$) and those who were cohabiting ($\beta = -0.9946$, $p < .05$) published fewer articles recently compared to those of other marital statuses. Fourth, those who published more books recently had achieved their associated professor status more recently ($\beta = 0.0193$, $p < .05$), had spent less time on teaching ($\beta = -0.0094$, $p < .001$), had spent more time on research ($\beta = 0.0067$, $p < .05$), and had more positive opinions about how fairly faculty were treated ($\beta = 0.0757$, $p < .001$). Last, faculty who did more presentations recently were younger ($\beta = -0.0742$, $p < .01$), had achieved their associate professor status more recently ($\beta = 0.0653$, $p < .05$), and had spent more time on research ($\beta = 0.0286$, $p < .01$).

Table 4: Full Multilevel Model Results

	Career		Recent		
	Articles	Books	Articles	Books	Presentatior
Fixed Effects					
Intercept	837.51***	287.53***	-45.57	-37.29*	-121.03*
Age	0.01	0.06	-0.05***	0.01	-0.074**
Male	8.29***	1.10*	0.83***	0.01	0.45
Marital Status					
Married	-1.60	0.01	-0.19	0.13	0.05
Single	-2.04	0.07	-0.84*	-0.05	0.35
Cohabiting	-4.06	1.62	-0.99*	0.31	0.21
Race (Majority)	0.95	0.09	0.06	-0.06	-0.17
Num. Children	0.60	0.01	0.04	-0.05	0.01
Rank, Year	-0.41**	-0.14**	0.03	0.02*	0.065*
Tenured	-2.46	-0.21	-0.72**	-0.06	-0.66
% Time Spent					
Teaching	-0.14**	-0.03**	-0.02**	-0.01**	-0.01
Research	0.33**	0.04**	0.07**	0.01*	0.029**
Job Satisfaction	0.25	-0.02	0.03	-0.01	0.06
Fairnesss	-0.02	0.31**	-0.01	0.08**	-0.09
Academic Career	0.27	0.98	0.03	0.09	0.27
Random Effects					
Intercept	5.89*	1.12*	0.75*	0.01*	1.54*
Deviance	27953.36	22309.28	17222.42	13465.72	20601.80
AIC	27987.36	22343.27	17256.42.00	13499.72	20635.81
BIC	28089.13	22445.04	17358.19	13601.49	20737.58

Discussion

Analysis of the literature indicates faculty' awareness of an 'imbalance' in teaching, research, and service increased in the post-tenure years (Baker-Fletcher et al., 2005; Crawford et. al. 2012; Nottis, 2005; Romano 2014). Lack of research examining these years further contributed to faculty' sense that there are few resources for navigating the post-tenure period (Baldwin & Chang, 2006). A pattern emerged which suggests that consistent mentoring of mid-career faculty appears most productive in alleviating tenured faculty' concerns regarding too much service, dissatisfaction with teaching loads, and lack of time to complete research. This pattern seemed especially evident for women, minority, and other underrepresented faculty, who in addition to the sense of imbalance may also be struggling with workplace and career inequality (Hart, 2016). When faculty turned to colleagues for mentoring

and support, results were often mixed (Pastore, 2013) because colleagues' career satisfaction levels varied greatly, thus, affecting the degree and quality of their support. Lechuga (2014) found that when administrative members took an active role in mentoring faculty rather than a de facto policy of "let them figure it out" (p. 915), faculty satisfaction improved, despite no actual changes in workload. Colleagues who described themselves as productive, satisfied, and 'thriving' (Strage et al., 2016, p. 71) often included administrative mentoring as key in their mid-career satisfaction. Strage and Merdinger (2014) offered several steps for administrative mentoring, including "renewal programs" (p. 46), fostering greater interaction among colleagues, and administrative guidance for faculty with self-motivational techniques (p. 46-47).

Summarizing the results from the NSOPF analyses indicate strong patterns regarding faculty' productivity. For nearly all dependent variables, increased time on research and decreased time on teaching were important determinants of productivity. It is important to note that this was the case for both career articles and career books, which would both be considered highly desirable measures of productivity for faculty at research intensive universities. These factors would be consistent with the common experience of associate professors' 'publish or perish' status in order to get promoted and make tenure. It was also found that married faculty tend to have decreased productivity (with respect to recent articles) in comparison with single and cohabitating faculty. This decrease could suggest family obligations as another source of career strain. As a last point, job satisfaction was found to be unrelated to faculty' productivity, possibly suggesting that the most significant barriers to the productivity of mid-career faculty may revolve around inadequate time to produce. Further research should more fully explicate competing job and family related obligations experienced by faculty in this developmental period. Characteristics of the program and of the university should also be considered (for example, is there post tenure review? Is there university provided daycare? Is it a high-research university?) in terms of their impact on the performance of mid-career faculty.

Implications

Currently, the number of faculty in higher education in the US reaching mid and later years of their career is significant, with more than two-thirds of full-time faculty over the age of 50 (Romano, 2004). Our study is significant because it provides a base of information that can be used by academic leaders, administration, and policymakers to transform their cultures and reexamine policies related to mid-career faculty. Mid-career productivity appears to wane when faculty perceive an imbalance of teaching and service over research. This perception may be particularly acute with regard to service, which is often rated lower than teaching or research among faculty workload in promotional reviews. To this extent, institutions may be sending mixed signals in their encouragement of faculty governance at universities, but little incentive or reward for that governance. A lack of research on the role of faculty service and its effect on promotion exemplifies the hidden impact of service obligations for mid-career faculty (Mamiseishvili, 2016).

Two areas therefore stand out in terms of more needed research regarding mid-career faculty productivity: quantitative studies of the effects mentoring has on faculty satisfaction and promotion, and the role of institutional, organizational, and public service on faculty satisfaction and promotion. The results of our study point to mentoring as the most significant factor in raising job satisfaction; more analysis needs to be conducted on institutions with established mentoring programs for mid-career faculty, and the rate of promotion among faculty at those institutions. Additionally, the complexities of faculty service have been under-researched. Given that service includes institutional, organizational, and public variations—and faculty may be encouraged to serve in all three capacities—the burden of service becomes even more onerous because it is often ranked below research and teaching in both yearly reviews and promotional considerations for faculty. Service obligations may even ironically act as an impediment to promotion, especially for women faculty (Fox & Colatrella, 2006).

Finally, given the increased number of full-time non-tenured track (NTT) faculty and unranked full-time faculty in higher education over the last 30 years, and who now represent over 60% of faculty at all degree-granting institutions (Waltman, Bergom, Hollenshead, Miller, & August, 2012), more research needs to be conducted on job satisfaction

among these individuals, as well as the impact of their productivity. Because NTT faculty are most often required to assume the burden of teaching loads, ostensibly so tenured and tenure-track faculty can devote more time to research, studies which quantitatively and qualitatively examine how productivity among non-tenure track faculty is assessed and measured, and how those measures affect NTT faculty.

At a time when higher education institutions in the United States are the subject of increased media scrutiny and nearly continuous loss of funding by resource-strapped state legislatures, a greater understanding of higher education's bulwark resource—research and teaching faculty—is more important than ever. Revealing impediments and pathways to faculty job satisfaction and productivity will strengthen higher education institutions by protecting, fostering, and maintaining this vital workforce.

References

Alstete, J. W. (2000). *Posttenure faculty development: Building a system for faculty improvement and appreciation*. New York: Jossey-Bass.

Aper, J. P. & Fry, J. E. (2003) post-tenure review at graduate institutions in the United States. *The Journal of Higher Education, 74*(3), 241-260.

Austin, A. E. (2002). Preparing the next generation of faculty: Graduate school as socialization to the academic career. *Journal of Higher Education, 73*(1), 94-122.

Baker-Fletcher, K, Carr, D., Menn, E., & Ramsay, N. (2005). Taking stock at mid-career: Challenges and opportunities for faculty. *Teaching Theology and Religion, 8*(1), 3-10.

Baldwin, R. G. & Chang, D. A. (2006). Reinforcing our "keystone" faculty. *Liberal Education, 92*(4), 28-35.

Baldwin, R. G., Lunceford, C. J., & Vanderlinden, K. E. (2005). Faculty in the Middle Years: Illuminating an overlooked phase of academic life. *The Review of Higher Education, 29*(1), 97-118.

Baldwin, R., DeZure, D., Shaw, A., & Moretto, K. (2008). Mapping the terrain of mid-career faculty at a research university: Implications for faculty and academic leaders. *Change, 40*(5), 46-55.

Barnard, J. W. (2008). Post-tenure review as if it mattered. *Faculty Publications.* Paper 136. Retrieved from http://scholarship.law.wm.edu/facpubs/136

Boboc, M., Smaldino, S., & Persichitte, K. (2012). Senior academic staff mentoring: Dealing with a challenging concept. *International Journal of Learning & Development, 2*(5), 57-66.

Boice, R. (2000). *Advice for new faculty members: Nihil nimus*. Boston: Allyn and Bacon.

Brim, O. G. (2001). Research network on successful midlife development (MIDMAC). Retrieved from http://midmac.med.harvard.edu

Buch, K., Huet, Y., Rorrer, A., & Roberson, L. (2011). Removing the barriers to full professor. *Change, 43*(6), 38-45.

Crawford, C., Burns, R., & McNamara, R. H. (2012). Promotion to full professor: Moving beyond tenure and associate professorship. *Journal of Criminal Justice Education, 23*(1) 41-64.

DeZure, D., Shaw, A., & Royewski, J. (2014). Cultivating the next generation of academic leaders. *Change, 46*(1), 6-13.

Fox, M.F., & Colatrella, C. (2006). Participation, performance, and advancement of women in academic science and engineering: What is at issue and why. *The Journal of Technology Transfer, 31*(3), 377-386.

Hall, D. T. (1986). Breaking career routines: Midcareer choice and identity development. In D.T. Hall & Associates, *Career development in organizations* (pp. 120-159). San Francisco: Jossey-Bass.

Hart, J. (2016). Dissecting a gendered organization: Implications for career trajectories for mid-career faculty women in STEM. *The Journal of Higher Education, 87*(5), 605-634.

Hawkins, A. G., Graham, R. D., & Hall, R. F. (2007). Tenure as a fact of academic life: a methodology for managing the performance of tenured professors. *Education and the Law, 19*(1), 41-57.

Lechuga, V. (2014). A motivation perspective on faculty mentoring: the notion of "non-intrusive" mentoring practices in science and engineering. *Higher Education,* 68, 909-926.

Levinson, D. (1986). A conception of adult development. *American Psychologist, 41*, 3-13.

Levinson, D. (1996). *The seasons of a woman's life*. New York: Knopf.

Lumpkin, A. (2009). Follow the yellow brick road to a successful professional career in higher education. *The Educational Forum,* 73, 200-214.

Luna, G. & Medina, C. (2006). Mid-career women leaving administration and returning to faculty. *Advancing Women in Leadership Online Journal,* 2. Retrieved from http://www.advancingwomen.com/awl/summer2006/Luna_Medina.html

Mamiseishvili, K., Miller, M. T., & Lee, D. (2016). Beyond teaching and research: Faculty perceptions of service roles at research universities. *Innovative Higher Education,* 41, 273-285.

McIntrye, L. J. & Hellsten, L. M. (2014). Forging a research pathway: Perspectives of two post-tenure female faculty members. *Brock Education, 24*(1), 55-64.

Nottis, K. E. (2005). Supporting the mid-career researcher. *Journal of Faculty Development, 20*(2), 95-98.

Pastore, D. (2013). Faculty perspectives on Baldwin and Chang's mid-career faculty development model. *Journal of Faculty Development*, *27*(2), 25-32.

Rees, A. & Shaw, K. (2014). Peer mentoring communities of practice for early and mid-career faculty: Broad benefits from a research-oriented female peer mentoring group. *Journal of Faculty Development, 28*(2), 3-17.

Romano, J. L., Hoesing, R., O'Donovan, K, & Weinscheimer, J. (2004). Faculty at mid-career: A program to enhance teaching and learning. *Innovative Higher Education, 29*(1), 21-48.

Strage, A, & Merdinger, J. (2014). Professional growth and renewal for mid-career faculty. *Journal of Faculty Development, 28*(3), 41-50.

Strage, A., Nelson, C., & Meyers, S. (2016). "Stayin' Alive:" Meeting faculty mid-career professional renewal needs. *Metropolitan Universities, 27*(2), 71-83.

Super, D. E. (1980). A life-span, life-space approach to career development. *Journal of Vocational Behavior, 16,* 282-298.

Terosky, A., O'Meara, K., & Campbell, C. (2014). Enabling possibility: Women associate professors' sense of agency in career advancement. *Journal of Diversity in Higher Education, 7*(1), 58-76.

Thomas, J. & Harden, A. (2008). Methods for the thematic synthesis of qualitative research in systematic reviews. *BMC Medical Research Methodology*, 45. doi: 10.1186/1471-2288-8-45

Walker, J.T. (2016). How to manage the move from associate to full professor. *Journal of Criminal Justice Education, 27*(2), 255-270.

Waltman, J.; Bergom, I.; Hollenshead, C.; Miller, J.; & August, L. (2012). Factors contributing to job satisfaction and dissatisfaction among non-tenure-track faculty. *The Journal of Higher Education, 83*(3), 411-434.

Wheeler, D. W. (1997). Mid-career and senior faculty: Maintain vitality and productivity. *HortScience, 32*(1), 44-45.

Wolf-Wendel, L. &Ward, K. (2015). Academic mothers: Exploring disciplinary perspectives. *Innovative Higher Education, 49*, 19-35.