The Community College Faculty Labor Market

A Conceptual Framework for Research

Douglas E. Mitchell

Selin Yildiz

Michael Batie

University of California, Riverside

April, 2006

This paper was prepared for presentation in Session #45.039 at the annual meeting of the American Educational Research Association in San Francisco, California, April 7-11, 2006.

Introduction

America's community colleges employ more than a third of all higher education instructors and serve more than ### percent of the nation's post-secondary students. Shear size makes this an important set of social and economic institutions. Despite their importance, however, they are not well understood – particularly when it comes to how faculty members are recruited, selected, supported, evaluated and promoted or terminated. Some features of this labor force have been well documented, but that documentation raises almost as many questions as it answers. We know, for example, that 64% of the community college faculty members work only part-time for their employing institutions and we know that the commitment of these part-time faculty members to institutional planning and program development are substantially lower than that of their full-time colleagues. Additionally, we know that evaluation and support for the professional development of all community college faculty is under-funded and subjected to relatively little administrative supervision.

Another area where there is some solid knowledge concerns the way community college faculty members are drawn apart through their alignment with the diverse instructional missions to which they are assigned. John Levin and his colleagues (Levin, Kater and Wagoner, 2006) identify seven distinct groups of community college faculty and show that these groups face very different labor market conditions. Levin, et al., begin by dividing the faculty between those whose responsibilities are academic in nature and those with responsibility for vocational education instruction. Then they divide the academically oriented faculty into three groups based on their subject specializations (arts and humanities, social sciences, and physical sciences). The vocationally oriented faculty is differentiated into four groups: computer and technology specialists, faculty teaching high status professionals, trades instructors and teachers

of lower status professions. But even these broad divisions do not fully reflect the diverse aims of community college programs and their associated sub-cultures. The academically oriented faculty, for example, serve students who are seeking remediation for missing or deficient high school subject matter knowledge, those preparing to transfer to four-year institutions and secure at least a bachelor's degree, and a significant group of community citizens who take a consumer-oriented interest in education for personal growth or enjoyment, without explicit academic goals. And the vocationally oriented faculty are similarly split between proprietary college programs with few ties to local business or industry, and programs that are closely linked to sponsoring businesses or community development groups.

Another important dimension to the community college workforce is the mixture of career orientations found within it. Some faculty members in both the academic and vocational areas, and working across all of the community colleges' diverse programs are career educatos for whom community college instruction is a lifetime commitment. But a very large number of faculty members have career employment outside the community colleges employing them. This is particularly true for faculty instructing in the skilled trades and professions, but is also found among the other faculty groups. It is also known that significant numbers of community college faculty are "passing through" on their way to careers in other institutions (as when doctoral students in area universities work a community colleges to support themselves through their advanced degree programs). And a substantial number of community college faculty represent "second income" producers in families where their spouses are the primary breadwinners.

Cross-classification of the various subject areas and community college missions are shown in Table 1. Sample courses from a 2003 listing of California community college courses

are shown in the cells of the table. Since both part-time and full-time faculty are found teaching courses in each of these cross-classifications, the table actually illustrates only about half of the different types of community college faculty work roles. Such a cross-classification of faculty instructional responsibilities reveals just how diverse this labor market is. These diverse responsibilities almost certainly rely on different career preparation patterns, create significant occupational status and role differences, and thus rely on substantially different labor market mechanisms and processes. In short, it may not be appropriate to think of community college faculty members as belonging to a single occupational group despite the fact that they work in a common set of institutions.

Table 1. Example Courses Serving the Diverse Community College Missions

College Missions	**Subject Areas**			
Academic	Arts & Humanities	Social Sciences	Physical Sciences	
Transfer	*English, Dance*	*Sociology, Political Science*	*Biology, Chemistry, Physics*	
Remedial	*Adult Basic Education Reading Skills*	*Job Seeking/Changing*	*General Physical Sciences*	
Consumer	*Photography Survival level ESL*	*Citizenship*	*Astronomy*	
Vocational	Computers/ Technologies	Trades	Professions	
			High Status	Low Status
Proprietary	*Computer & Information Sciences, General*	*Automotive Technology*	*Business Management*	*Cosmetology*
Sponsored	*Industrial Electronics*	*Heavy Equipment Operation*	*Commercial Pilot*	*Educational Aide*

Theoretical Framework

To properly frame labor market issues surrounding community college faculty employment it will be helpful to briefly review some broader questions regarding how the entire 21st century economic system is being transformed by large scale social, political and technological developments. In the last couple of decades these changes have been recognized to be creating profound changes in the overall production of goods and services, and a commensurate set of changes in the nature of jobs, careers and employment systems. The changes are complex and involve shifts in social and political systems related to strategic planning, policy decision making, worker supervision and the management of competitive markets, and changes in consumer and government preferences, as well as incorporation of new technologies into most production systems. A number of scholars have tried to formulate overview conceptualizations of this "new economy," but it is probably too soon to suggest that any particular formulation has proven itself successful in fully interpreting the tectonic shifts that are currently shaking up the economic system for both workers and employers. We comment here on the contributions of four core ideas that appear to be promising leads toward an appropriate conceptualization of the changing labor market for community college faculty. These core ideas are best understood by trying to unpack their four central concepts: "information age", "globalization", "neo-institutionalism" and "spatialization."

The Information Age Economy. The digital computer with an attachment to the Internet is easily recognized as the archetypical incarnation of a social system that is now dominated by the storage, retrieval, analysis and interpretation of information about virtually every aspect of our lives – operating, quite literally, at the speed of light. Not always appreciated in this image,

however, is the way this digitization and communication of information transforms the entire economic system. It is fairly easy to see the explosive growth and decline of the "dot.com" industries and to recognize that the world's richest man made his fortune through computer operating system development. And it takes but a few moments of reflection to see how digital technologies are changing entertainment and education – making access independent of one's location and providing high fidelity production and reproduction of art and culture. More striking, but less obvious however, is the extent to which digital technologies are transforming general industry and commerce. Digital information has made "just in time" inventory control both possible and necessary. Digitization has dramatically shifted skill and knowledge from workers to machines. One economist has observed that the average machine "has a college education and is learning more every year." The widely noted shrinkage of the American middle class is, no doubt, substantially linked to the awesome gap that has developed between what it takes to *tend* the new production machinery and what it takes to *design and build* it.

For many Americans community colleges stand at the point of entry into the information age economy. They sort and assign their students to future roles in that economy. Their task, enormous already and growing more difficult all the time, is to assist their students in moving from service and production workers, who live to support the information economy infrastructure, into the ranks of knowledge workers who are capable of organizing and managing the information systems on which it is based. To do so they need a faculty that is smarter than the average machine and is capable of teaching students how to become reasonably efficient lifelong learners. This task is doubly daunting because community college faculty have high workloads, low levels of professional support and typically are working with students who have

a lot to learn just to catch up with more advantaged peers who are attending the nation's four-year colleges and universities.

Globalization of Economic Markets. In addition to transforming the character of work and the relationship between workers and the machinery of production, the new economy is transcending national borders and international political systems to establish a globalized system of competitive markets. This new market structure involves both the trading of goods and services and the employment of workers. The communication and transportation systems needed to breach national and regional boundaries are now sufficiently developed to permit worldwide distribution of such perishable commodities as fresh flowers and harvested of human organs for transplanting operations. At the same time, this market system has made "outsourcing" of highly skilled work an everyday occurrence. As Davies and Guppy have noted, globalization does not just apply to multi-national corporations – even highly localized production systems must be sensitive to changes in the mix of products and services that can easily be transported into their market space, thus creating fierce competition for market share. When they step back from the process of globalization and ask what it takes to be a successful participant in the global market system, Davies and Guppy advance two key propositions. First, success in the globalized market requires that producers of goods and services radically centralize their standards of production and delivery. Think McDonalds – successful marketing of the Big Mac hamburger *does not* depend on it being the best possible hamburger, but upon it being the *most reliable* in meeting *acceptable* standards of flavor and price. To be successful, the Big Mac purchased in Paris, France, has to look, smell and taste like the Big Mac available in Perris, California. And this can only be accomplished if the McDonalds corporate executives insist on setting global standards of

production and delivery. Without this standardization, brand recognition is impossible and marketing programs will fail.

The second prerequisite for success in the global marketplace is decentralization of service delivery so that the specialized needs and preferences of customers and clients can be served efficiently and effectively. This decentralization, combined with the centralization of production standards, is achieved by having a long list of highly standardized component parts or repertoire of service elements that can be mixed and matched by front line workers. Think Dell Computer – a great variety of highly standardized parts are produced in far-flung manufacturing plants; all made to exacting standards so that they all arrive in Texas ready for "off the shelf" assembly into highly individualized computers.

Partly because the core concepts of globalization have become an ideology driving organizational development and management strategies, and partly because measures of standardized educational attainment are now seen as reliable and appropriate, community colleges are being intensely pressured to adopt the globalized marketing principles in their policy and management processes. Unfortunately, community colleges have only been able to develop systems for responding to half of the globalized equation – they produce an enormous variety of specialized educational programs, responding to virtually any recognizable community preference or demand. But they are sorely lacking in the capacity to centralize the standards for producing these educational programs. Lack of standardization is partly the result of the traditional emphasis on academic freedom in all colleges and university. More often, however, it is simply the result of an inability to specify clearly what instructional standards are required, and a general weakness in the ability of college administrators to hold faculty accountable for meeting whatever standards they are able to specify.

The New Institutionalism: Legitimacy Trumps Productivity. A third way of interpreting the new economy has arisen in organizational sociology where the "new institutionalism" is replacing bureaucratic organizational theory as the dominant paradigm for analyzing complex organizations.. Beginning in the 1970s with a seminal article by John Meyer and Brian Rowan, organizational sociologists have increasingly emphasized the fact that many organizational activities are not rationally linked to any sort of productivity goals, but are instead developed as a means of securing and maintaining organizational legitimacy in the eyes of governmental, professional and community groups.

It was Max Weber who convincingly characterized rational bureaucracies as the archetypical modern social organizations. And Fredrick Taylor is generally credited with successfully disseminating of "scientific management" as the appropriate mechanism for managing bureaucratic production. Both of these early 20th century conceptions of organization and management assume that the most effective organizations will be those characterized by rationalized management decision making, an articulated and detailed division of labor and standardization of work roles. Within a very short period, however, organizational research scholars began to identify significant shortcomings in theories emphasizing the self-contained, closed system, proprietary goal pursuing aspects of organizational behavior. Internally, scholarly critiques found a robust social and cultural life among workers that sharply limited their willingness and ability to comply with the presumed hyper-rationality of the bureaucratic model. Managers were forced to recognize the critical importance of human relations factors and to develop ways for professionals and autonomous craft workers to transcend organizational routines. Externally, the critics of bureaucracy found sweeping evidence of non-rational and non-productive influences flowing into organizations from their environments.

For about half a century these critical insights were accepted as merely elaborating the basic bureaucratic model – simply adding complexity to bring the model into line with empirical evidence. By the 1970s, however, it had become obvious that the criticisms went to the heart of the bureaucratic paradigm itself, and required a more radical reconceptualization of how complex social organizations are created and sustained. Within their boundaries, it had become obvious that organizations are cultural systems with traditions, moral (or perhaps immoral) value systems, and a rich set of symbols and rituals for creating and expressing shared meanings capable of establishing social identities (not just work roles) for organizational members. Beyond the organizational boundaries, emergent scholarship was documenting the broad dependencies of all organizations on the ways in which environmental actors – civic governments, professional associations and community groups – are willing to endorse their legitimacy by embracing their organizational missions and approving their operational routines. As a result, contemporary organizational sociology has raised to central significance the institutional rather than the bureaucratic aspects of complex social organizations. By "institutional" these sociologists mean that the moral, normative and symbolic significance of organizations are even more fundamental to the stabilization of an organization than are the rational, means-ends productivity considerations. In short, the new organizational sociology proclaims that "legitimacy has trumped productivity" as the fundamental standard for evaluation and support.

The community colleges have been on the cutting edge of this theoretical revolution. Beginning with their initial foundation in the first quarter of the 20th century, these institutions found themselves routinely penetrated by normative expectations regarding their diverse missions and the appropriate ways of pursuing them. They have been seen as, and have seen

themselves as, key institutions in the generation of civic and educational opportunity for marginalized citizen groups and as the "go to" agencies to support economic and civic cultural development in their local communities.

By emphasizing environmental influences on organizational behavior, institutional theory explains why community colleges are faced with expectations that far exceed their capacities. Since the colleges are conceptualized as responsible for meeting local community needs their legitimacy depends upon acknowledging and giving at least symbolic attention to virtually any locally initiated educational interest. At the same time, since the colleges are typically organized and funded through state-level policies and budgets, they are responsible for living within severe and unpredictable budget constraints while giving at least symbolic attention to state wide specifications of their missions and responsibilities. Institutional theory helps to explain why these institutions are able to escape the tough accountability measures so prevalent in most sectors of the globalized marketplace. Since these institutions began with the explicit mission of providing an alternative to four-year college and university enrollment for low income and first generation college goers, they were quickly characterized as providing "alternative" educational options – vocational training, remedial help for students who were having difficulty meeting admission standards for the four-year institutions, and consumer type education for individuals who did not have clear academic goals. As a result, as they exist today, the community colleges do not have anything like a uniform set of outcome expectations for which their faculty and staff can be held accountable. They are more important as the agencies of *symbolically promising* access to the middle class of the "American Dream" than for documented realization of that promise. As Brint and Karabel have so eloquently documented, symbolic commitment to these

aspirations has been far more successful in legitimating these institutions as colleges than any realistic appraisal of their actual outcomes would justify.

Spacialization: the Reorganization of Work in the New Economy. A fourth approach to interpreting the new economy focuses on how advancing technologies are combining with aggressive managerialism to fundamentally transform the nature of work and restructure the relationships between employers and workers. Ideas pioneered by David Gordon (1978) and advanced creatively by Wallace and Brady (2001) depict the development of the new economy as grounded in the inevitable tensions between labor and management as they seek to establish workplace rights and responsibilities within the evolving technologies of production and management. These scholars argue that industrialization, with its advancing complexity and intensification of workplace technologies has created at least four distinctive periods of labor/management relationships. The earliest stage involved direct supervision of workers by the owner/entrepreneurs for whom they worked. With the emergence of a distinctive managerial class came the development of "scientific management" with its emphasis on technical control over worker activities through the disaggregation of tasks and relying on time and motion studies of how each component task can be most efficiently performed to guide managerial supervision. Labor organization during this period was concentrated in the craft union movement bringing together skilled workers performing the same generic tasks. As intelligence moved from the workers into their machines, however, work supervision became more bureaucratic, emphasizing differentiation between a primary labor market for skilled and professional workers whose tasks required autonomy and managerial support (rather than supervisory direction) and a secondary labor market for unskilled workers who were managed through direct supervision. Workers responded with industrial unionism aimed at controlling access to jobs in entire firms rather than

autonomous control over skilled tasks. Wallace and Brady argue that we are now moving into a fourth period in which labor/management relationships are driven by the technologization of the work itself. They call this fourth period the period of work "spatialization" to highlight two key components of the new worker/manager relationship. First, spatialization highlights the fact that the application of advanced digital technologies has resulted in work that is no longer place bound to a particular factory or work site. Management, through detailed specification of measurable work standards can farm out various components of almost any production process to far away places and still maintain tight control over its quality, quantity and cost. This broad distribution of work components enables managers to both seek the most economical venue for production and, simultaneously, undercut the power of worker organizations by simply moving production away from organized worker environments.

The second critical component of work spatialization is the shift of employment from permanent, full-time jobs to contingent, intermittent, task contracting. That is, new managerial technologies make it possible to supervise *outcomes* rather than *task performance*, and to employ workers only for the amount of time needed to complete specified tasks. This strategy has dramatic consequences for work role definitions as workers are no longer expected to develop loyalty to the firm or to require fringe benefit packages that keep them tied to a particular firm. Crucial to this redesign of work, however, is the development of managerial tools for actually monitoring production results (and assigning responsibility for those results to specific workers), rather than supervising the execution of specific tasks. Think, here, about the new strategies for building products as diverse as automobiles, computers and household appliances. These products are now designed to consist of highly standardized modular parts whose production can be spatially distributed. Construction, repair and maintenance of these products consists of

assembling or replacing the appropriate modular components. This work can be monitored remotely and technologically. Diagnostic instruments identify problematic modules, and worker training focuses on reading the diagnostic instruments and adjusting or replacing the appropriate module. Moreover, management can fairly easily test whether any given worker knows how to undertake the identification and proper installation of modular parts. Thus workers can be hired contingently, performing tasks on a "piece work" basis. Wallace and Brady observe that by the beginning of the 21st century 35 percent of all jobs in the U.S. economy had been successfully structured as contingency employment organized around outcomes monitoring, and they predict continued expansion of this approach to task definition and work supervision.

For the faculty of the community colleges, the contingent employment part of this scenario is fully established. Two-thirds of the faculty already work on contingent contracts, without continuing employment agreements, fringe benefits, or immediate task performance supervision. What is missing, of course, is the other half of the Wallace and Brady model – the capacity of management to remotely supervise and outcome manage the work performance of their part-time college faculties.

Implications for the Employment of Community College Faculty

The transformation of work and of the relationships between workers and their employers being produced by the new economy pose important questions regarding the labor market for community college faculty members. We comment here on six of those questions that we expect to define a research and development agenda for the California Community College Collaborative (a new research and development center supported through a joint powers agreement between the California Community College Chancellors Office and the University of California's Office of the President, and located on the University of California's Riverside

campus). We frame the questions as study targets which will lead both to advancements in the theory of labor market systems as they apply to community college faculty and the development of programs for advanced training for community college leaders and professional recruitment, selection, retention and development programs of faculty members entering this occupation.

Question #1: Does the extensive use of part-time, untenured faculty to teach in all community college programs mean that these faculty members are now best characterized as belonging to the "secondary labor market" with its presumptions of limited skill, lack of career objectives and interchangeability of workers, or does it mean that community colleges have fully entered into the era of work specialization, with its emphasis on contingent jobs that can be supervised remotely through high-technology managerial techniques?

We begin by wanting to discern whether the shift toward employment of part-time temporary faculty represents a deterioration of the institutional integrity of the community colleges, indicating that they will continue to have difficulty meeting statewide and local community expectations for high quality instruction leading to high rates of student success, or to the contrary, is an indication that the colleges are adapting in expected and potentially powerful ways to the spatialization of pedagogical work in the new economy. If the movement to part-time faculty appointments is a mark of the deteriorating status of community college work, we will see faculty unions redoubling their efforts to protect faculty jobs and to prevent effective supervision and performance accountability policies from being implemented. If the shift represents the spatialization of this line of work, we will see the demise of the industrial union model of faculty unionism, to be replaced by a system of outcome accountability utilizing intensive assessment technologies to determine the extent to which faculty work is producing

measurable "value added" consequences for students. Moreover, the value added assessments will actually inform management decisions regarding renewal of contingent contracts for instruction.

Question #2: Is it true that governmental policy and prevailing managerial practices are based on the assumption that community college faculty work takes place within a managed public bureaucracy dominated by principles of control and supervision derived from the rational pursuit of proprietary organizational goals rather than being embedded in an institutional context dominated by concern for environmental legitimacy? If so: a) is continued use of this approach to policy and management tenable in the contemporary political and economic environment? And b) what mechanisms of supervision and accountability can be expected to improve overall organizational performance?

Although community colleges have demonstrated great flexibility and entrepreneurialism in adapting to local opportunities and in capitalizing on state and federal grants and contracts, the language of many policy debates and the orientation toward command and control manifested in most leadership training programs continues to act as if the appropriate normative model for the good community college is one in which strong executive leadership undertakes strategic and rational planning to pursue goals commensurate with the public mission of the colleges. For the most part, these policy and management practices focus on the input and process side of the colleges' productive processes – regulating financial resources, program content and organizational processes rather than carefully monitoring outcomes and insisting on program and practice adjustments based on their impact on the production of outcomes. We do not know

whether either college administrators or the faculty themselves are capable of monitoring outcomes and adapting their practices in response to outcome measures. We are well aware, of course, that when courses are taught some students learn much from them while others learn little or nothing, but there are few systematic efforts to determine which organizational, pedagogical or curricular components of these courses are producing these outcomes.

Of course, outcomes are not everything. Students, and their teachers, are entitled to fair and equitable treatment regardless of the learning outcomes that result. Moreover, college life has much to do with the development of personal and social identities as well as the attainment of important learning goals. So it is not at all unthinkable that community colleges would continue to function as care and nurture institutions producing immeasurable outcomes and monitored for their fulfillment of political and social roles rather than academic goal attainment. It is certainly reasonable to imagine that community colleges should devote significant resources to both their institutional identity development and their academic attainment production functions. But it is probably not reasonable to assume that proper attention will be given to these divergent purposes if little attention is paid to separating them and carefully studying how each can be optimized with the tight budgets and substantial political constraints imposed on the colleges pursuing them.

Question #3: Are issues of institutional legitimacy facing community colleges encouraging them to focus attention on symbolic faculty attributes (like hiring more faculty holding earned doctorates, or diversifying by gender, race and ethnicity) rather than insisting upon and supporting improved pedagogical effectiveness?

It is quite clear that community colleges are succeeding in hiring increasing numbers of faculty possessing earned doctoral degrees. It is equally clear that they are not succeeding nearly as well at producing a faculty reflecting the racial, ethnic and gender diversity of the students they serve. It is hard to avoid the conclusion that both the success in the first instance and the failure in the second reflect the degree to which community colleges are responding a legitimacy crisis rather than enhancing productivity. In some locales institutional legitimacy pressures are focused on faculty racial, ethnic and gender composition, in others it is more focused on the status benefits of securing faculty with more advanced academic degrees. A perusal of the literature makes it fairly obvious that most colleges moving on either of these fronts is doing so on the basis of concerns about legitimacy in the eyes of significant stakeholders rather than on the basis of known contributions to academic or other kinds of productivity. In addition to the obvious institutional legitimacy benefits derived from changing the composition of the community college faculties, it will be important to discover whether there are consequences for learning and long-term student success.

Question #4: Are governmental policies (like California's 75/25 Rule) continuing to treat community colleges as weak public bureaucracies in need of regulatory constraint at the expense of allowing them to develop spatialized working arrangements and/or developing stronger institutional cultures?

For the most part state statutes and local board policies are aimed at securing organizational rationality and regularity rather than creating systems of outcome accountability. When, for example, California law specifies that colleges should have no less than 75 percent of their instructional work performed by full-time faculty, a clear consequence is to limit the ability of the colleges to move toward a more spatialized and outcome contingent faculty supervision

system. That may be because policy makers have not yet grasped the important reorganization of work implied by the new economy. Or it may be because they insightfully recognize that community colleges are not the proper venue for this kind of work restructuring. Whichever is the case, it is important to determine the extent to which labor market policies are producing intended rather than unintended constraints on employment of college faculties.

Question #5: Have the full time community college faculty become the *de facto* managers of the institution – responsible for program and curriculum definition and development, peer review and institutional resource mobilization through contract and grants development? If so, is it true that these faculty have too little authority to effectively carry out these management responsibilities and too much loyalty to their union memberships to really accept managerial responsibility?

To the extent that program definitions, curricula specification and evaluation of instructional performance are in the hands of the full-time faculty members, these individuals represent the real management structure for instructional work. Unfortunately, in the absence of a clear understanding of how these managerial responsibilities are linked to the larger question of instructional work in the new economy, it is difficult to imagine how discharge of these management and supervision responsibilities can be expected to produce systematic improvement in the colleges' instructional programs. Under the spatialization of work paradigm, the managers who have responsibility for ascertaining the quality and quantity of work products should be the ones who are responsible for making decisions regarding the maintenance and renewal of contingent work contracts. In some colleges, at least in some departments within colleges, this is probably exactly what is happening – full-time faculty are determining whether

contingent contract part-timers should be retained and renewed. However, all faculty members tend to belong to the same unions, and the rights of full-time faculty to discharge management of contingent instructors is not clearly articulated. What is almost certainly true, however, is that it is impossible to realistically judge the productivity of part-time faculty without the kind of intimate knowledge of their work that full-time colleagues possess. Moreover, it is impossible to tell about whether there is real value added by either part-time or full-time instruction without far more detailed data regarding the consequences for students than the overwhelming majority of community colleges are currently able to generate.

Question #6: Has the fluidity and diversity of community college instructional missions made it difficult to identify and support a faculty career "pipeline" capable of keeping the community colleges supplied with an effective workforce?

One of the most troublesome aspects of the community college faculty labor market is the absence of clearly defined career patterns tracking individuals through their period of preparation, into the workforce and through their institutional careers. Here the great diversity of different faculty jobs described in the introduction to this paper frames the context for much needed research and analysis. With the exception of a modest number of community college faculty training programs spread across the country, we simply do not know when and how most faculty members make the decision to seek employment as a community college teacher, and we know even less about who leaves, when or why. Hence faculty recruitment is a complex and uncertain process. It is not clear how to effectively change this pattern – serious research needs to be undertaken aimed at tracking faculty careers and then systematic experiments need to be

undertaken to see if changed recruitment and support systems significantly change faculty composition or performance levels.