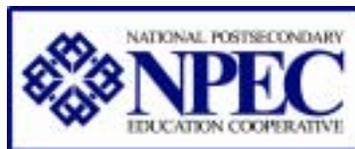




Research on Institution Level Practice for Postsecondary Student Success

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Introduction

In the opening of their review, George Kuh and his colleagues state that “creating the conditions that foster student success in college has never been more important.” Taken together, the five papers¹ reviewed in this essay present a broad view of the state of knowledge about those conditions.² They emphasize that student success is influenced by a wide range of factors—family; general conditions in society; the K–12 system; personal characteristics, tastes, and attributes; the characteristics and policies of individual colleges including pedagogic practices, counseling, and many more; the behavior of peers, faculty, and staff at any individual college; and state and federal policy on college regulation and financial aid. The papers by Kuh and his colleagues and Laura Perna and Scott Thomas in particular emphasize that college student experience cannot be understood without taking into account the multitude of factors and contexts that shape the lives of students.

In this essay, I will focus on one aspect of these many topics and influences. Confronted with the job of writing a relatively brief review of five disparate papers that together comprise 150,000 words, I will narrow Kuh et al.’s question and focus on what *colleges* can do to create “the conditions that foster student success.” Answering this narrower question is one of the primary motivations for much of the extensive research on student departure, persistence, and success. Moreover, as Vince Tinto and Brian Pusser argue in their review, if one takes a hard look at the nature of the research and the evidence that it generates, given the immense volume of research on college student outcomes, there are surprisingly few well-supported insights and recommendations for institutional policy and practice—that is, for what colleges can do to foster persistence and completion. Given the focus of this essay, there are many important issues raised and analyzed in these papers, such as public policy, that I do not address.

¹ Braxton, J. M. (in press). *Faculty professional choices in teaching that foster student success*.

Kuh, G. D., Kinzie, J., Buckley, J. A., Bridges, B. K., & Hayek, J. C. (in press). *What matters to student success: A review of the literature*.

Perna, L. W., & Thomas, S. L. (in press). *A framework for reducing the college success gap and promoting success for all*.

Smart, J. C., Feldman, K. A., & Ethington, C. A. (in press). *Holland's theory and patterns of college student success*.

Tinto, V., & Pusser, B. (in press). *Moving from theory to action: Building a model of institutional action for student success*.

² The authors of the reviews were asked to “review and synthesize relevant research, practice, and policy literature relating to Student Success in postsecondary education.”

Institutional Policy and Practice

What do these five papers suggest that college staff and faculty do to retain their students and to promote their success? All of the papers address this question at least in part. The Perna and Thomas paper does not give specific advice, but rather focuses on how colleges should think about and approach the issue of student success, essentially arguing for a comprehensive approach that takes many perspectives, accounts for multiple contexts, and combines a variety of disciplinary approaches and methodologies. The papers by John Smart, Kenneth Feldman, and Corinna Ethington and by John Braxton each focus on one particular domain. Smart and his colleagues argue for the use of Holland's person-environment fit theory to help students choose majors. Braxton focuses on teaching, developing recommendations about what institutions (and state policymakers) could do to promote "aspects of teaching role performance that contribute to the identified indicators of student success." Kuh et al. and Tinto and Pusser present more wide-ranging discussions of potential institutional activities. The primary goal of the Tinto and Pusser paper is to develop a model that can help guide college faculty and staff (and policymakers). Kuh et al. present a comprehensive review of many topics related to student success, but they do have a large section reviewing research on institutional structure, policy, and practice.

Based on a reading of these papers, how much do we really know about what colleges and universities can do to promote their students' success? An interesting mixed message comes out of these papers. First, over the last three or four decades there has been a cascade of research on student success in college. As Braxton points out, "The files of the Education Resource Information Center identify 9,287 documents that designate *college student success* as key words" (p. 1). The lengthy volumes on the effect of colleges on students by Pascarella and Terrenzini, and indeed the surprising length of the papers for this conference and their extensive bibliographies, all attest to the wealth of research on college student success. Almost 40 years ago, in 1969, there was already enough research on the impact of college on students for Feldman and Newcomb to write a book about the topic subtitled, *An Analysis of Four Decades of Research*. Thus, research stretches back to 1929.

On the other hand, most of these authors start off with statements suggesting that our knowledge base, especially when it comes to insights about institutional practice, is surprisingly thin. For example, after pointing out the large number of publications in the field, Braxton goes on to say, "However, college student success stands as a topic that cries out for some form of systematic empirical attention. Without the benefit of such scholarly attention, uninformed, ad hoc views on student success and ways to achieve student success will emerge" (p. 1). He also argues that "we have witnessed a decline in the past two decades in the research of how, and to what extent, the collective attitudes and behaviors of faculty and administrators and the environments of colleges and universities are seen as

contributing to student success.” Perna and Thomas point out that the plethora of studies has not succeeded in reducing gaps in college achievement among different types of students. They describe three fundamental problems with the available research as a guide to institutional activity: research focuses on discrete components, ignoring other forces that also influence student success; efforts are thwarted by the absence of a clear, consistent, and comprehensive definition of such success; and “policymakers and practitioners who attempt to use findings from prior research as tools to improve student success must first reconcile the broad array of theoretical and methodological approaches . . .” (pp. 3-4).

Smart and his colleagues particularly emphasize the weakness of an emphasis on college “environment,” presumably to some extent under the control of the institution: they argue that most attention has been focused on the characteristics and behaviors of students as illustrated by the “student-centered research traditions” represented by the work of Astin, Tinto, Pace, and Kuh.³ Tinto and Pusser are even more definitive, stating that “though we are increasingly able to explain why it is that students leave and in some cases why students persist, we are still unable to tell institutions what to do to help students stay and persist” (p. 3).

Still, despite initial skepticism about the quantity and quality of research on institutional policy, at the end of their papers, most of these authors are able to extract from this research literature many definitive conclusions and recommendations for colleges. For example, Braxton ends with seven specific recommendations for college administrators and four for department chairs, primarily as means to strengthen teaching. Smart cites extensive research supporting Holland’s theory and derives a series of recommendations based on more widespread assessments of student characteristics and personality types and the use of that information both to assess the students and to help them choose majors. Tinto and Pusser conclude that, “The issue, in our view, is not so much a lack of knowledge as it is of seriousness of intent and the failure to build effective partnerships between institutions and policymakers on behalf of the students we serve.” And Kuh et al. come to a similar conclusion: “This review demonstrates that we know many of the factors that facilitate and inhibit earning a bachelor’s degree. The real question is whether we have the *will* to more consistently use what we know to be promising policies and effective

³ Astin, A. W. (1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel*, 25, 297-308.

Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, 45, 89-125.

Pace, C. R. (1990a). *College student experiences questionnaire* (3rd ed.). Los Angeles: University of California, The Center for the Study of Evaluation, Graduate School of Education.

Kuh, G. D. (2001). *The national survey of student engagement: Conceptual framework and overview of psychometric properties*. Bloomington, IN: Indiana University Center for Postsecondary Research.

educational practices in order to increase the odds that more students ‘get ready,’ ‘get in,’ and ‘get through.’”

Therefore, an interesting tension emerges from these papers. On the one hand, there is great emphasis on the weakness of institutional leverage, which is limited by the multiple contexts that influence student success, contexts that are out of the control of the colleges. But several of these authors also emphasize that research has for the most part not focused on what institutions can do, either focusing primarily on student characteristics or developing theories about why students leave or stay that do not have clear links to institutional behavior. But in the end, these deficiencies do not stand in the way of the authors providing extensive recommendations, and some conclude that we really do know what institutions can do. The problem is not a lack of knowledge but a lack of will.

In my opinion, this tension is in fact a reasonably accurate image of the state of knowledge concerning the research base for institutional behavior. The vast majority of insights about the college student experience come from a focus on students. Researchers have much more to say about the effects of student characteristics on student success than about what institutions can or should do. While there is a growing body of well-done studies, most recommendations for institutions derived from empirical research, strictly speaking, go beyond the valid implications of the research. And the sheer volume of the research creates a sense of credibility for the conclusions. In any case, colleges must move forward, even when research does not definitively tell them what the best course would be. So while I would argue that many of the conclusions are not clearly supported, I think that they reflect reasonable suggestions given the state of knowledge. On the other hand, that knowledge could be improved significantly, but attention has not been focused in appropriate directions. That can change, and some of these papers point to interesting possibilities.

Research on Institutional Practice and Policy

There is a tremendous amount of useful information in current research on student outcomes, but many common recommendations about institutional policy come from information and research about how outcomes are related to individual characteristics or activities, not how outcomes are related to institutional policy and practice. Developing recommendations for policy and practice based on observations about student characteristics and activities can be misleading for several reasons. Many of those problems are described by these authors.

First, there is the well-known problem of determining causality. If we find that engaged students or students participating in learning communities have more success, it does not mean that policies to promote engagement or the introduction of learning communities throughout a college will increase overall student success or graduation rates. If we can show that professors who use a particular pedagogy have better results, we still cannot conclude that professional development programs to teach all professors to use that pedagogy will increase student learning or other student outcomes. All of the authors of these papers are well aware of this problem, and some are critical of research that fails to address it. For example, Kuh et al. point out that the measured effects of orientation programs weaken significantly just by controlling for some individual characteristics (p. 65). Tinto and Pusser are more critical, stating that “It must be observed that there is a lamentable paucity of empirically sound research on effective institutional practice. Most so-called studies of institutional practice are little more than descriptions of claimed effectiveness that typically lack the sort of empirical controls that would support such claims” (footnote 11, p. 15).

Certainly there are many studies in this literature, and some cited in these reviews, that do not have good comparison groups or that have minimal or no controls for confounding effects. Many studies of engagement, for example, are done within a single institution and are based on measuring the relationship between student engagement, measured by student responses to surveys, and student retention or other outcomes. Since the students at a given institution are subjected to the same institutional policies, these studies are about differences among students, not policies. But given the large number of studies, it is tempting to take the step from observations about relationships to policy recommendations. Thus, Kuh et al. argue that “the evidence from scores of studies over several decades strongly indicates that student engagement in effective educational practices seems to benefit all types of students to varying degrees” (p. 56). But that research varies widely in rigor and quality, and while there is a great deal of evidence that engaged students do well, there is much less definitive evidence to show that policies and practices to foster engagement are effective in improving student outcomes.

Many studies of the effect of policies involve comparing participating students to nonparticipating students. Even when these studies control for personal characteristics, as long as students are voluntarily enrolled, there remains a strong possibility that the two groups of students differ with respect to important factors that might influence the effect of the policy or practice. The first step in addressing this problem is at least to include measures of precollege academic records, but many colleges do not have this information. But just as important, research studies must take account of the process through which students are selected for or enroll in the particular program. While I am not familiar with all of the research cited in these reports, I have looked at research on counseling and learning communities, and, for the most part, those studies do not address this issue. Methodological fixes for this

problem such as experimental design, instrumental variable techniques, or regression discontinuity approaches are only just beginning to be used in this area, so the vast majority of the studies addressed in these reviews use more traditional methodologies that do not account for the process through which students enter the programs under study or take steps to adjust findings for that selection process.

Although these methodological issues are well understood, the wide variation in quality found in the immense research literature cited in the reviews gets lost in the discussion. Too often, lists of studies are included to make points without giving more weight to those studies that are more reliable. Advances in research methodologies and the availability of more sophisticated statistical software have changed standards of evidence, so many articles published 10 or 15 years ago in even prestigious social science journals might well be less acceptable now.

Institutionalization and Sustainability

So far I have been talking about research on specific programs, but even rigorous research, say a random assignment study, of a discrete program does not necessarily provide evidence about the effectiveness of that program as an institution-wide practice. What do these reviews say about institution-wide practice and organizational structure? Tinto and Pusser do call for more attention to conditions that will move programs beyond discrete initiatives. There is also a good deal of discussion in Kuh et al.'s review and those of other authors about specific programs, but the analyses do not generally differentiate between small-scale programs and those that are implemented on an institution-wide basis.

Another way to look at this is to observe that there are few studies that take the institution as the unit of analysis. The review by Kuh and his colleagues presents the most information about institution structure and institution-wide policy. They cite some studies by Berger, Braxton and McClendon, and Kezar and Kinzie⁴ that suggest that organizational structure and commitment do influence student success. And there is a growing number of studies that do analyze differences among institutions—that try, for example, to identify the differences between institutions that vary with respect to some measure or measures of student outcomes. This is an interesting line of research and I will return

⁴ Berger, J. B. (2001-02). Understanding the organizational nature of student persistence: Empirically-based recommendations for practice. *Journal of College Student Retention: Research, Theory, & Practice*, 3(1): 3-21.

Braxton, J., & McClendon, S. (2001). The fostering of social integration and retention through institutional practice. *College Student Retention: Research, Theory and Practice*, 3, 57-71.

Kezar, A., and Kinzie, J. (2006). Examining the ways institutions create student engagement: The role of mission. *Journal of College Student Development*, 47(2): 149-172.

to it later, but there are still very few studies of this type. Examining the issue of student success from the point of view of the institution raises some interesting and difficult questions. First, under what conditions can successful “programs” be expanded to become broader institutional practices. Second, why are programs about which there is widespread agreement not expanded throughout the institution or the country? In addition to identifying successful “programs,” research needs to answer these broader questions.

For example, according to Smart et al., there is empirical support for the idea that students will be more successful if they choose to be in majors appropriate for their personality type. Have institutions adopted a counseling policy designed to help facilitate this match, and if so, have those institutions had greater success with their students? Also, many of the principles of good teaching described by Braxton are not controversial. What efforts at the level of institutional policy have been made to promote the use of those principles throughout an institution? Have colleges that have had such institutional policies had better overall outcomes for students? And in any case, if such principles are widely accepted, why are we still struggling to get them into use? Similarly, whatever the definitiveness of evidence supporting the effectiveness of learning communities, they already have a widespread following. Yet even in many institutions that have had a good experience with them, they are still used sparingly. What prevents the spread of these practices? Perhaps they are simply too expensive or take too much time. Perhaps they threaten traditional faculty or administrator roles. Perhaps institutional or individual incentives discourage the reforms. Perhaps traditional organizational structures make change difficult. Perhaps professional development programs are too superficial. Or do colleges, as some of these authors suggest, simply do not have the will to do what is right?

Institutional and individual incentives to carry out reform are other factors that need more attention than is evident in these reviews. In general, institutional incentives are based on enrollments, not student success. Attempts to devise accountability systems to reward student success have met with political barriers and have not been widely used, although their use will probably increase. Faculty reward structures, as Braxton emphasizes, have little to do with the success of their students. To what extent have policies that recognize and reward teaching improved student outcomes?

In any case, we will need more answers to these questions related to the implementation, institutionalization, and sustainability of practices. “Effective” practices that cannot be implemented and sustained are not much more useful to student success than practices that do not work.

As I have stressed, several of these authors call for much more emphasis on using research to design and evaluate institutional practice and policy, and they point out that insights from research often

do not translate easily into recommendations for institutional policy or that too much attention has been focused on individual characteristics or “contexts” beyond the control of the institution. A focus on individual characteristics is much more likely to lead to marketing and recruitment plans, not plans to improve “value added.” I completely agree with this perspective, although I think that in some cases, the authors have in their own reviews relied on evidence derived from the types of approaches that they criticize. While Smart et al. cite research that individuals are more effective in occupations that match their personalities, they do not present evidence that colleges that promote the use of this type of counseling are in general more effective. Likewise, Tinto and Pusser argue for a model of institutional behavior based on five principles—commitment, expectations, support, feedback, and involvement. But much of the research that they cite in support of this model seems to be same type of research that they criticize to begin with—research that establishes relationships without necessarily providing support for institutional policy.

Barriers to Research on Institutional Policies and Practices

One problem that these authors confront in finding research that explicitly measures and tests institutional policies is that there is very little research that does that. Probably the most important reason for this situation is that there is not much easily available data to allow cross-institutional analysis—for example, to analyze the implications for institutional performance of variation in institutional policy and practices.

There is some research relating institutional characteristics to student outcomes, but the characteristics that are available for a wide range of institutions are often not very useful in designing specific institutional practices. The primary source for this research is the Integrated Postsecondary Education Data System (IPEDS), and IPEDS does provide detailed information on college finances, size, location, some faculty characteristics, and some student body characteristics. Yet many, although not all, of these characteristics are not policy variables that can be manipulated. In any case, as Kuh and his colleagues point out, research on the effects of these types of characteristics does not reveal strong measurable influences on student outcomes.

Any research about student success must be based on longitudinal data, and researchers trying to relate institutional characteristics to longitudinal student outcomes face many difficulties. Longitudinal measures of student outcomes are scarce. For the last few years, IPEDS has included graduation rates and some retention rates. Three-year graduation rates are particularly problematic for community colleges because they do not measure transfer to 4-year colleges (transfer students may not

graduate from the community college) and because the majority of community college students attend part time (so their chances of graduating in a given time period are lower). But one particular graduation rate cannot give a complete picture of student success. Many other measures, such as course completion ratios, successful transfer or exit from remediation, or subsequent education and employment, are not available. And consistent and comparable measures of increases in student skills and knowledge are almost nonexistent. It is possible to wed IPEDS data to the national longitudinal databases such as the National Education Longitudinal Survey (NELS) or the Beginning Postsecondary Study (BPS) so that more nuanced and sophisticated outcome measures can be used, but we are still left with the crude measures of institutional characteristics. Furthermore, the sample sizes are not large enough to analyze individual institutions.

Promising Directions

Thus, we need data that link more sophisticated longitudinal measures of student success to particular policies, such as approaches to teaching, class size, student services and counseling, class scheduling, college organization, and other factors. Research that uses a variety of sources to link student outcomes to institutional practices is beginning to emerge, and some of that is reflected in these reviews. Linking data from national surveys, such as the College Student Experiences Questionnaire (CSEQ), the National Survey of Student Engagement (NSSE), or the Community College Survey of Student Engagement (CCSSE), to institutional records on student outcomes is one promising approach. Very recent papers by Kuh and others at the Indiana Center for Postsecondary Research, briefly referred to as “emerging research” in Kuh et al.’s review, are examples of this approach. Strictly speaking, these are still measures of student reports on their experience with college policy and practice rather than direct measures of college practice, which implies that we should be developing and expanding surveys and data collection systems that gather institution-level data on policies and practices derived from sources other than students. Faculty surveys are an important movement in this direction.

Another approach that is increasingly employed is using outcome data, usually IPEDS graduation rates, to identify lists of effective colleges and using qualitative work to try to understand what makes them effective. Studies cited in Kuh et al.’s review by the Pell Institute and Kuh himself and work by the Education Trust use this approach. It is fair to say that such research is only beginning, and many methodological issues remain to be worked out. Some of these studies examine only more successful colleges and are therefore not able to identify factors that distinguish higher from lower performing colleges. Sample sizes for these studies are necessarily small because of the time it takes to conduct the

field work, so it can be difficult to differentiate among the effects of the many differences among these institutions. Still, this is a promising approach that needs further exploration.

An important trend in research on higher education student success that is not reflected in these reviews is the use of state unit record data systems. These data sets offer consistent unit record longitudinal data across public institutions and, in some cases, private institutions, within states. Sample sizes are also large enough to allow analyses of individual institutions, and in large states there are enough colleges to provide significant variation in college policies and practices. Moreover, it is also possible to collect data on the college practices to supplement the more superficial measures found in IPEDS. Linking these data to the cross-sectional surveys such as NSSE and CCSSE could offer important new insights.

Conclusion

This essay has focused on the implications for institutional practice that emerge from these five reviews of research on postsecondary student success. Most of the papers take a much more comprehensive view and include useful discussions of many other factors that shape and determine college outcomes. I have not addressed those other areas.

Three of the papers, by Tinto and Pusser, Braxton, and Smart et al., make the crucial point that researchers have not been adequately focused on conducting methodologically rigorous studies designed explicitly to guide institutional practice. Research either has emphasized explanations of student retention or departure, which do not necessarily translate into insights for policies to improve outcomes, or has studied the effects of student characteristics and the influence of multiple contexts—factors beyond the control of the colleges. While Kuh et al. do not emphasize this point, this group does provide a more extensive review of research on the effects of institutional structure and practice on student outcomes. By advocating a shift from focus on the student to one on institutional behavior, these authors do an important service to the field.

Much research looks at relationships between student behavior and outcomes—these have problematic implications for deriving policy implications. Studies that do try to measure the effect of institutional practice vary widely in their methodological reliability. These authors all make this point, but often do not emphasize the varying quality of studies in drawing conclusions. The reviews pay much less attention to whether small programs will be successful when translated into institutional policy and what factors stand in the way of the institutionalization and sustainability of reforms. There is a growing

genre of research that links longitudinal student data to institutional characteristics and policies. These developments receive only a modest amount of attention in these reviews, probably reflecting the very limited presence of these approaches in the literature under review.

We have a long way to go to develop more definitive research on effective institutional practice for improving student retention and success in college. These authors have made a contribution to that effort, but at the same time, to some extent they have been thwarted by the very circumstances that need to be changed.