

# PROGRAMS FOR ENGAGEMENT AND ENHANCEMENT

Gloria Crisp, Lisa Palacios, and John Kaulfus



**Association for  
Institutional Research**

## PROFESSIONAL FILES | SPRING 2013 VOLUME

Supporting quality data and decisions for higher education.

# Letter from the Editor

AIR is pleased to reintroduce *Professional Files*. This volume contains three articles recommended for inclusion by AIR members through a blind peer-review process. Each article puts forth ideas and analysis for our consideration as institutional research professionals. Most salient for me in my role as volunteer coordinating editor is that the articles frame the work of IR as more than pure technical analysis through acknowledgment of the importance of context.



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Zan, Yoon, Khasawneh, and Srihari unpack differences in enrollment projections, with a particular focus on the influence of the unit of analysis on the appropriateness of the model. Saupe and Eimers examine the under-appreciated area of grade point average reliability; something that will be of greater importance as policy dialogues move to multiple measures of college readiness and adjusted metrics of student outcomes. Crisp, Palacios, and Kaulfus empower IR professions in efforts to better understand student engagement efforts on campus.

It has been an honor to be a part of this volume of Professional Files and to strive to elevate the work of peers for the benefit of the field. We look forward to receiving your submission next.

Sincerely,

A handwritten signature in black ink, appearing to read 'C. Mullin'.

Christopher M. Mullin

## IN THIS ISSUE...

### **Article 129**

*Author: Zan et al.*

A Comparison Study of Return Ratio-Based Academic Enrollment Forecasting Models

**Page 1**

### **Article 130**

*Author: Saupe & Eimers*

Alternative Estimates of the Reliability of College Grade Point Averages

**Page 13**

### **Article 131**

*Author: Crisp et al.*

Programs for Engagement and Enhancement

**Page 23**

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ISSN 2155-7535

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**Gloria Crisp, Lisa Palacios, and John Kaulfus**

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### Abstract

The following article describes programs used by universities and colleges to engage students; these programs include mentoring, learning communities, and first-year success courses and programs. We begin with a brief overview of student development theory, program descriptions and citations, and article summaries for key references. Next, we introduce prominent national surveys available to institutions that are interested in measuring student engagement (inside or outside formal programs). We conclude with additional references and recommendations for institutional researchers involved in program review and/or student outcomes assessment of student engagement programs.

### INTRODUCTION

Higher education is not a passive experience that leaves students untouched. Rather, college life involves a variety of experiences, both inside and outside the classroom, designed to engage

students and enhance their lives by introducing new ideas, challenging past behaviors or events, and creating intellectual discord and tension (Keeling, Wall, Underhile, & Dungy, 2008). Institutional effectiveness is dependent, in part, on institutions providing students with opportunities to purposefully engage (Harper & Quaye, 2009). According to Pascarella, "an excellent undergraduate education is most likely to occur at those colleges and universities that maximize good practices and enhance student engagement" (2001, p. 22). As such, institutions that value student success will take every opportunity to engage students both academically and socially (Culp, 2007).

Simply defined, student engagement is how universities organize their human capital and resources to encourage students to involve themselves in academic, interpersonal, and cocurricular activities (Astin, 1993). Student engagement is typically not viewed as a direct measure of student learning, but rather is used as a measurement of participation in meaningful educational experiences and activities that facilitate both social and academic integration (Tinto, 2000) and lead to student development (LaNasa, Olson, & Alleman, 2007). More specifically, opportunities for students to engage are provided through formalized programs designed to directly support student integration and/or development outcomes (i.e., study strategies, time/stress management skills, motivation, academic self-confidence,

connections with peers, and out-of-class interactions with faculty), that in turn directly impact traditional measures of student success (i.e., grades, persistence).

According to a survey involving 185 colleges and universities across the country, the most prevalent services and programs provided to students to promote student engagement in the first year include tutoring, academic coaching and counseling, writing support services, academic advising, and testing services (National Resource Center for the First-Year Experience and Students in Transition, 2008). In large part due to work by Kuh and colleagues, engagement programs and activities have become increasingly viewed as an important component of student success (Kuh, Kinzie, Buckley, Bridges, & Hayek, 2007). As such, increasing attention has been given to the implementation, administration, and assessment of educational experiences designed to engage students.

Although engagement programs are typically created and managed by student affairs professionals, institutional researchers should be familiar with programmatic efforts on their campus, and should understand how program outcomes can be used to address accreditation standards and institutional planning and assessment goals (as demonstrated in volume 141 of *New Directions for Institutional Research*, 2009). The present article describes several programs currently used by

postsecondary institutions to engage students with the intent of providing institutional researchers with knowledge to support assessment efforts. The article begins with an overview of relevant student development theory that serves as a conceptual grounding for engagement programs. Next, we provide program descriptions for programs that have been linked to engagement (e.g., social engagement, academic skills, time management, and career selection) and academic outcomes. Citations and article summaries for key references are provided in table form following each section for institutional research professionals who are interested in learning more about student engagement and/or enrichment programs. Third, we highlight prominent national surveys available to institutions that are interested in measuring student engagement (inside or outside of formal programs). The article concludes with additional references and recommendations for institutional researchers involved in program review and/or student outcomes assessment of student engagement programs.

## OVERVIEW OF STUDENT DEVELOPMENT THEORY

Research and theory by Erikson and Chickering provide a foundation for our current understanding of student development. Erikson's theory of psychosocial development (1968) explains that individuals must work through eight stages in order to successfully form an identity and discover purpose and meaning in life. According to Erikson, adolescents move through a developmental stage during college termed the "identity versus role confusion" stage before moving into adulthood. This stage involves students successfully, or in some cases unsuccessfully, develop-

**Table 1. Student Engagement Theory References**

References for Student Engagement Theory	Impact for Institutional Researchers
Astin, A. (1993). <i>What matters in college: Four critical years revisited</i> . San Francisco: Jossey-Bass.	Presents the results from a study of almost 25,000 students at 200 colleges and universities. Findings demonstrate how colleges and universities can enhance student development during college through a variety of in-class and out-of-class experiences.
Hamrick, F. A., Evans, N. J., & Schuh, J. H. (2002). <i>Foundations of student affairs practice: How philosophy, theory, and research strengthen educational outcomes</i> . San Francisco: Jossey-Bass.	Provides an overview of theories that relate to student growth and development during college and explores ways that institutions can enhance students' educational experiences.
Harper, S. R., & Quaye, S. J. (2009). <i>Student engagement in higher education: Theoretical perspectives and practical approaches for diverse populations</i> . New York: Routledge.	Based on theory, explores ways that diverse populations of students (e.g., racial and ethnic minorities, LGBT students) as compared to nondiverse populations might struggle to engage during college.
Kuh, G. D., Kinzie, J., Schuh, J. H., & Whitt, E. J. (2005). <i>Assessing conditions to enhance educational effectiveness. The inventory for student engagement and success</i> . San Francisco: Jossey-Bass.	Provides a theoretical framework, the Inventory for Student Engagement and Success (ISES), to examine student engagement within a program, division, college, or entire institution. Explains how information can be used for program reviews, planning, and accreditation.
Pascarella, E., & Terenzini, P. T. (2005). <i>How college affects students: A third decade of research</i> . San Francisco: Jossey-Bass.	Presents findings from 15 years of research on college's impact on student learning, growth, and development. Also presents implications for research, policy, and practice.
Tinto, V. (1993). <i>Leaving college: Rethinking the causes and cures of student attrition</i> (2nd ed.). Chicago: University of Chicago Press.	Synthesizes research on student retention demonstrating the importance of institutions providing students with opportunities to engage with the campus community.

ing a personal identity; it is defined by a "crisis" that must be resolved in order for students to avoid an "identity crisis" that leads to stagnation or regression. Similarly, Chickering's seven vectors of

student development (1969) explain that college students move through seven vectors or stages as they become more self-aware and as they have more complex thoughts, which is spurred

by interactions with peers and faculty and the introduction of new concepts and ideas. Chickering's work has since been updated to be inclusive of non-traditional students (i.e., Chickering & Reisser, 1993).

More recently, Erikson and Chickering's work has been expanded by Astin and Tinto in an effort to understand the factors related to student success and persistence. Astin's theory of involvement (1984, 1999) postulates that student involvement in college has a direct impact on psychosocial development and assists in identity formation as students work toward graduation. Astin's work also demonstrates that student learning and development are dependent on active involvement in academic and social aspects of a college experience. Moreover, his theory argues that development is influenced by both the quality and the quantity of involvement.

Similarly, Tinto's theory of student departure (1993) demonstrates that students are more likely to persist toward graduation if they become socially and academically integrated into the college environment. He postulates that integration is achieved when a student and the institution share similar values and the student is engaged in positive social and academic interactions. Tinto's work demonstrates the importance of support from faculty and university staff. Table 1 contains key references related to theory underpinning student engagement programs to guide the development of programmatic activities and goals.

## ENGAGEMENT PROGRAMS

The following section provides a program overview for mentoring, learning communities, and first-year success courses and programs. This is not meant to provide a comprehensive

overview of engagement programs, but rather to provide institutional researchers with examples of programs currently employed on college and university campuses across the country that have been empirically shown to enhance students' experiences and to promote students engagement.

### Mentoring Programs

Mentoring programs that involve a variety of engagement activities such as academic advising, academic skills development, personal development, and career selection are becoming increasingly prevalent. Mentoring programs and experiences have been empirically shown to be associated with numerous academic and developmental outcomes, including improving critical thinking skills, self-confidence, persistence, and academic performance. Mentoring has also been found to help students develop their latent abilities, and to raise students' expectations and future aspirations (e.g., Astin, 1999; Bank, Slavings, & Biddle, 1990; Campbell & Campbell, 1997; Freeman, 1999; Girves, Zepeda, & Gwathmey, 2005; Johnson, 1989; Mangold, 2003; Pagan & Edwards-Wilson, 2003; Roberts, 2000; Ross-Thomas & Bryant, 1994).

Institutional researchers should consider and draw from published program overviews and evaluations when assisting in the development and/or assessment of programmatic efforts. Unfortunately, there is little agreement regarding how college students experience mentoring, or on the components that should be included in a mentoring program. Moreover, it has been noted that the majority of empirical work on mentoring has been limited due to methodological weaknesses including limitations in how mentoring is defined and measured, a lack of sophisticated data analysis and theoretical grounding, failure to control for selection bias, and an overreliance of self-reported benefits of mentoring as the assess-

ment measure (Crisp & Cruz, 2009). However, according to a comprehensive review of the psychological, business, and education literature by Nora and Crisp (2007), students perceive a holistic mentoring experience to include four separate yet interrelated types of support: (1) psychological and emotional support, (2) support for setting goals and choosing a career path, (3) academic subject knowledge support aimed at advancing a student's knowledge relevant to his or her chosen field, and (4) support in the form of a role model.

An assortment of mentoring programs designed to serve a variety of student populations including first-generation, minority, at-risk, and/or low-income students have been described in the literature (e.g., Bordes & Arredondo, 2005; Pagan & Edwards-Wilson, 2003; Wallace, Abel, & Ropers-Huilman, 2000). For instance, the Puente Project, evaluated by Laden (1999), is a nationally recognized program designed to raise Latino/a students' educational and career aspirations. Other examples of programs that involve a mentoring component include TRIO Programs (Wallace et al., 2000), the Adventor Program (Shultz, Colton, & Colton, 2001), and the Search for Education, Elevation and Knowledge (SEEK) Program (Sorrentino, 2007). Table 2 provides a list of select published work including a mentoring theory and scale (i.e., Crisp, 2009) to guide assessment efforts.

### Learning Communities

Recently, there has been increased interest from both academic and student affairs practitioners to enhance and/or expand innovative programs such as learning communities and first-year experiences (Dale & Drake, 2007). Learning communities provide college students with the opportunity to get to know other students as well as faculty; these communities integrate students into the university commu-

**Table 2. Mentoring Program References**

References for Designing/ Assessing Outcomes for Mentoring Programs	Impact for Institutional Researchers
Crisp, G. (2009). Conceptualization and initial validation of the College Student Mentoring Scale (CSMS). <i>Journal of College Student Development, 50</i> (2), 177–194.	Offers a theoretically grounded survey to be used by institutions that are interested in measuring the mentoring experiences of undergraduate college students. Includes the 25-item survey as an appendix.
Laden, B. V. (1999). Socializing and mentoring college students of color: The Puente Project as an exemplary celebratory socialization model. <i>Peabody Journal of Education, 74</i> (2), 55–74.	Presents highlights from the Puente Project, a program designed to support first-generation Latino/a college students at California community colleges.
Shultz, E. L., Colton, G. M., & Colton, C. (2001). The Adventor Program: Advisement and mentoring for students of color in higher education. <i>Journal of Humanistic Counseling, Education, and Development, 40</i> , 208–218.	Describes the Adventor Program, designed by the College of Education at Kutztown University to serve racial/ minority students. Presents information about the program design and implementation, and follows with pilot findings.
Sorrentino, D. M. (2007). The SEEK mentoring program: An application of the goal-setting theory. <i>Journal of College Student Retention, 8</i> (2), 241–250.	Presents a description and overview of the SEEK Program at the College of Staten Island, City University of New York (CUNY), that provides academic mentoring to students at risk for academic dismissal.
Wallace, D., Abel, R., & Ropers-Huilman, B. R. (2000). Clearing a path for success: Deconstructing borders through undergraduate mentoring. <i>The Review of Higher Education, 24</i> (1), 87–102.	Utilizes qualitative interview data to explore first-generation, low-income students' experiences with and perceptions of formalized mentoring programs.

nity in a meaningful way (Price, 2005; Taylor, Moore, MacGregor, & Lindblad, 2003; Tinto, 1998; Weber, 2000). More specifically, learning communities provide students with an educational environment that supports student engagement through an integrated and interdisciplinary curriculum that may cross departments or divisions and focuses on high levels of participation and support from faculty (Brower & Dettinger, 1998; Oertel as cited in Taylor

et al., 2003; Price, 2005). Learning communities exist in a variety of formats to facilitate students' connection to faculty, other students, and the institution (Tinto, 1998); these formats include team-taught programs, paired or clustered courses, cohorts of students enrolled together in large courses, and residence-based programs (Price, 2005; Taylor et al., 2003; Tinto, 1998; Weber, 2000).

There is a wealth of literature on learning communities to suggest that programmatic efforts can be used to influence retention and learning outcomes. Namely, ongoing evaluations of the Opening Doors Learning Communities (ODLC) program by MDRC are utilizing experiments that test a cause-and-effect relationship between participation in learning communities and outcomes for various groups of students through the use of random assignments (e.g., Bloom & Sommo, 2005; Richburg-Hayes, Visher, & Bloom, 2008; Scrivener, Bloom, LeBlanc, Paxson, & Sommo, 2008). Additionally, nonexperimental research by Zhao and Kuh (2004) has revealed that students who participate in the learning community have higher levels of academic effort, active learning, interactions with faculty, and participation in diversity activities. Participants also reported more positive associations with advisers, campus support services, and overall experiences, as well as self-reported gains in personal and social development and basic skills advancement. Furthermore, qualitative work by Tinto and Goodsell (1993) involving a linked writing course and seminar found that learning communities supported the development of students' time management, writing, and study skills. Table 3 provides a list of key references to studies on learning communities.

### First-Year/Orientation/Success Programs

According to a survey by the National Resource Center for the First-Year Experience and Students in Transition (2008), nearly 85% of colleges and universities currently offer a first-year program. First-year programs, student success courses, and orientation courses all focus on assisting college students' transition and/or enhancing engagement and success in college (Cook, 1996). These programs are designed to teach students strategies for

**Table 3. Learning Communities References**

<b>References for Designing/ Assessing Outcomes for Learning Communities</b>	<b>Impact for Institutional Researchers</b>
Richburg-Hayes, L., Visher, M. G., & Bloom, D. (2008). Do learning communities affect academic outcomes? Evidence from an experiment in a community college. <i>Journal of Research on Educational Effectiveness</i> , 1(1), 33–65.	Details the design and results of a study that utilized an experimental design to explore a cause-and-effect relationship between participation in a learning community and students' engagement and attachment to the institution's community.
Scrivener, S., Bloom, D., LeBlanc, A., Paxson, C. E., & Sommo, C. (2008). A good start: Two-year effects of a freshmen learning community program at Kingsborough Community College. MDRC, New York.	Explains how Kingsborough's Opening Doors Learning Communities (ODLC) program utilizes an experimental design with random assignment to study the effect of learning communities on student success.
Taylor, K., Moore, W. S., MacGregor, J., Lindblad, J. (2003). <i>What we know now. National Learning Communities Project Monograph Series</i> . The Washington Center for Improving the Quality of Undergraduate Education at The Evergreen State College in cooperation with the American Association for Higher Education, Washington, DC.	Presents findings from a systematic literature review of research and assessment specific to learning communities conducted by the National Learning Communities Project.
Tinto, V. (1997). Classrooms as communities: Exploring the educational character of student persistence. <i>Journal of Higher Education</i> , 68(6), 599–623.	Presents a mixed methods study of the use of learning communities at Seattle Central Community College. The study investigates the impact on collaborative learning strategies on both student persistence and learning.
Tinto, V. (1998). Learning communities and the reconstruction of remedial education in higher education. Prepared for presentation at the "Conference on Replacing Remediation in Higher Education" at Stanford University, January 26–67, 1998, sponsored by the Ford Foundation at the U.S. Department of Education.	Details a case study specific to the effectiveness of a developmental education learning community. Provides a description of the program, research procedures, and findings.

success in college by introducing them to campus facilities, resources, and services; and/or by enhancing students' health or well-being, study skills, time management, or learning styles (e.g., Derby, 2007; Derby & Smith, 2004;

Derby & Watson, 2006; Glass & Garrett, 1995; Grunder & Hellmich, 1996; National Resource Center for the First-Year Experience and Students in Transition, 2008; O'Gara, Karp, & Hughes, 2008; Raymond & Napoli, 1998). Programmat-

ic efforts may be offered as both credit and noncredit courses (Donnangelo & Santa Rita, 1982), and may be required or optional (Zimmerman, 2000). Possible program offerings range from a half-day orientation (Hollins, 2009) to semester- or year-long programs (Donnangelo & Santa Rita, 1982; Glass & Garrett, 1995).

Although the majority of research to date has focused on examining the impact of programs on retention or learning outcomes (e.g., Derby & Smith, 2004; Glass & Garrett, 1995; Pascarella, Terenzini, & Wolfle, 1986; Raymond & Napoli, 1998; Stovall, 1999), findings from the National Resource Center for the First-Year Experience and Students in Transition (2008) survey indicate that success courses may also be associated with engagement outcomes such as increasing peer connections, use of campus services, participation in campus services, and out-of-class interaction with faculty. Additionally, research conducted by the Community College Research Center (CCRC) at Teachers College, Columbia University, found that programmatic efforts may integrate students both socially and academically by helping to facilitate the development of students' relationships with faculty and other students (O'Gara et al., 2008). Moreover, evaluation efforts at the Virginia Community College System examined the impact of a comprehensive approach to student orientation that included a half- to full-day program (Seeking Opportunities through Academic Recruitment [SOAR]), group advising, and an orientation course. Findings indicated that the program increased students' personal adjustment during the transition process and academic gains among first-semester students. The orientation course was also found to assist students in developing effective study habits, career and academic planning, and knowledge regarding college resources (Hollins, 2009).

Resources and support regarding first-year programs are available to researchers through the First-Year Experience (<http://www.sc.edu/fye/>). Additionally, Table 4 provides a list of references specific to designing and assessing outcomes for first-year, orientation, and student success courses and programs.

## TOOLS FOR ASSESSING STUDENT ENGAGEMENT

Several national surveys are available to institutions interested in assessing student engagement and/or students' experiences during college, including the National Survey of Student Engagement (NSSE; <http://nsse.iub.edu/>). This survey contains items assumed to measure different components of student engagement, including academic challenge (e.g., preparing for class, using higher-order thinking skills), active and collaborative learning (e.g., contributing to class discussions, working with students outside of class), and student interactions with faculty members (e.g., talking about career plans, working on activities other than coursework) (Kuh, 2004). Additionally, seniors report whether they participated in various programs and on-campus activities, including learning communities. The NSSE is typically administered in the spring using a paper or online version of the survey to a random sample of first-year and senior students (Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008).

Variations of the NSSE that measure engagement of different student populations are also available, including the Community College Survey of Student Engagement (CCSSE) (<http://www.ccsse.org/>) and Beginning College Survey of Student Engagement (BCSSE) (<http://bcsse.iub.edu/>). Moreover, many institutions compare student responses from the NSSE with faculty perceptions

**Table 4. First-Year/Orientation/Success Program References**

References for Designing/ Assessing Outcomes for First Year/Orientation Success Programs	Impact for Institutional Researchers
Engberg, M. E., & Mayhew, M. J. (2007). The influence of first year "success" courses on student learning and democratic outcomes. <i>Journal of College Student Development</i> , 49(2), 95–109.	Examines the impact of a first-year program on a variety of outcomes, including multicultural awareness, commitment to social justice, and the complexity of attributes. Also includes a discussion of connecting theory with practice.
Keup, J. R., & Barefoot, B. O. (2005). Learning how to be a successful student: Exploring the impact of first year seminars on student outcomes. <i>Journal of the First Year Experience</i> , 17(1), 11–47.	Utilizes data from the Cooperative Institutional Research Program's (CIRP) 2000 freshman survey and the Your First College Year (YFCY) 2001 survey to study the relationship between taking a first-year course and academic and social experiences of students.
O'Gara, L. Karp, M. M., & Hughes, K. L. (2009). Student success courses in the community college: An exploratory study of student perspectives. <i>Community College Review</i> , 36(3), 195–218.	Investigates the perceived impact of taking a success course on individual benefits such as building relationships with faculty and developing study skills at two urban community colleges in the Northeast.
Schwitzer, A. M., McGovern, T. V., & Robbins, S. B. (1991). Adjustment outcomes of a freshman seminar: A utilization-focused approach. <i>Journal of College Student Development</i> , 32(1), 484–489.	Presents findings of an evaluation investigating the relationship between participation in a college orientation seminar and students' social and academic adjustment in college.
Zeidenberg, M., Jenkins, D., & Calcano, J. C. (2007). <i>Do student success courses actually help community college students succeed?</i> Community College Research Center (CCRC) Brief No. 36, June.	Examines the impact of enrolling in a student success course over the course of 17 semesters on various student outcomes, controlling for possible extraneous variables.

measured by the Faculty Survey of Student Engagement (FSSE) (<http://fsse.iub.edu/>). Tips and recommendations for analyzing and interpreting the NSSE survey data are available in a 2009 issue of *New Directions for Institutional Research* by Chen and colleagues. Another survey available to institutions interested in assessing students' devel-

opment during the first year of college is the Your First College Year (YFCY) survey, developed through collaboration between the Higher Education Research Institute (HERI) and the Policy Center on the First Year of College at Brevard College (<http://www.heri.ucla.edu/yfcyoverview.php>). This survey allows colleges and universities to

identify students' experiences during the first year that encourage and support student involvement, satisfaction, and learning, as well as other success indicators that enhance first-year programs. Similar to the NSSE, the YFCY allows for comparisons to national and institutional peer groups among participating institutions as well as trend and longitudinal analyses. The YFCY is offered in both paper and web format and is conducted at the end of the students' first academic year (somewhere between the months of March to June).

Third, the Degrees of Preparation survey may also be of interest to institutions in measuring ways that college experiences are related to various developmental and civic outcomes, including critical thinking skills, career-related experiences, and civic engagement. This survey's major components and question descriptions are available in an issue of *New Directions for Institutional Research* (Ouimet & Pike, 2008). A copy of the piloted version of the survey is available at <http://www.aascu.org/accountability/survey/?u=1>. Additional information regarding the above-mentioned instruments as well as an inventory of other potentially relevant surveys and tools used to assess student engagement outcomes is posted on the Association for Institutional Research (AIR) website at <http://applications.airweb.org/surveys/Default.aspx>.

## CONCLUSIONS AND RECOMMENDATIONS

We hope that the information presented in this article is useful to institutional researchers involved with program planning, assessment, and/or accreditation efforts; we offer the following conclusions and recommendations. First, we recommend that student engagement programs be clearly connected to the institution's core mission (Culp, 2007) and that they be grounded

in student development theory (Dale & Drake, 2007). Institutional researchers should work with faculty as well as academic and student affairs personnel to utilize previously validated assessment tools and survey items that are grounded in theory, rather than developing home-grown surveys that may or may not be accurate measures of students' experiences. Additional recommendations specific to using engagement data in assessment and planning efforts are provided by Banta, Pike, and Hansen (2009).

When possible, we also strongly encourage the use of experimental designs that utilize random assignment to groups and an experimental (i.e., students in the program) and control group (i.e., group of students who do not participate) to assess cause-and-effect relationships between program activities and engagement outcomes. Examples of evaluation work utilizing experimental designs are provided in the learning community section of this article. Because experimental designs are rarely possible, we also recommend the use of quasi-experimental designs that adequately control for possible confounding variables (e.g., matching groups). Furthermore, in cases where the program is already in place or the independent variable (i.e., program) cannot be manipulated, we suggest the use of nonexperimental designs that adequately control for students' background characteristics and precollege characteristics that have been previously found to impact student outcomes (see discussion by Cole, Kennedy, & Ben-Avie, 2009). Finally, we suggest that institutional researchers consider using qualitative methods to answer "how" and "why" questions specific to program assessment.

Next, we encourage institutional researchers to actively seek out collaborations with faculty and student and academic affairs programs/offices. Stu-

dent affairs personnel have knowledge of long-standing and professionally accepted student development theory (King & Howard-Hamilton, 2000) that is likely to strengthen assessment efforts and properly take into account factors such as ethnicity, culture, and career choice (Pickering & Sharpe, 2000). Student and academic affairs practitioners and faculty also have ready access and can encourage student participation in surveys needed to properly assess student outcomes (Smith & Mather, 2000). Moreover, institutional research offices may be able to provide precollege data to student affairs divisions to guide and inform the development of programmatic activities (Cole et al., 2009). Kinzie and Pennipede (2009) provide further discussion and recommendations for collaborating with student affairs in using data. Additionally, a *New Directions* article by Nelson Laird, Smallwood, Niskode-Dossett, and Garver (2009) offers ideas for involving faculty in assessment efforts specific to student engagement.

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ISSN 2155-7535

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