



Achieving the Dream™

Community Colleges Count

Using Data to Increase Student Success: A Focus on Diagnosis

PRINCIPLES AND PRACTICES OF STUDENT SUCCESS

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The Achieving the Dream (ATD) initiative works with more than 100 community colleges across the United States with the specific goal of increasing student success. Together, Achieving the Dream colleges graduate or transfer close to 250,000 students a year. With just a 5 percent increase in graduation rates, we can positively impact the lives of an additional 12,500 students each year—or 62,500 students over five years. That’s 62,500 *additional* students achieving a life-changing goal because of the work to which we are committing ourselves today.

We learned during the first five years of Achieving the Dream that attaining a large-scale increase in student success is dependent on several things, the most important being the collection, analysis, and use of data. We need data to inform us which students are most at risk of not succeeding. We need data to indicate why specific student groups are not succeeding. We need data to show us which components of our interventions have worked or have not worked. And, we need data to determine the extent to which our interventions have led to increases in student success.

Using data in such ways is not traditional practice for many colleges. In fact, some might argue that it would require fundamental change for a college to collect, analyze, summarize, and use data in this manner. Indeed, fundamental change is exactly what Achieving the Dream is all about.

Facilitating institutional change is not easy. It requires new organizational language, practices, interactions, and relationships — things that do not happen overnight. This

guide is designed to achieve two objectives: (a) offer new language to clarify the use and purpose of various types of data, and (b) demonstrate how colleges can engage in the practice of identifying (or diagnosing) the underlying factors impeding student success and address such factors in the design of specific interventions or policy changes.

Gaining Clarity About Data: The Four Components of a Culture of Evidence

Early in the Achieving the Dream initiative, it was not uncommon for faculty, staff, and administrators to become overwhelmed and confused about the data that existed on their campuses. There was either too much data or not enough. There were data about all students, but not specific groups. There were data that indicated problem areas, but no data to explain why. Occasionally, a report containing data was presented at college meetings, but few knew what it meant or how they were supposed to use it. In short, many colleges were struggling with creating a coherent culture of evidence. In an effort to

Table 1

The Four Components of a Culture of Evidence

Component One	Component Two	Component Three	Component Four
<p>“What’s Wrong”</p> <p>Use disaggregated longitudinal cohort data to determine:</p> <p>1) Which student groups are less successful than others (i.e., identify equity gaps in student success)?</p> <p>2) Which high enrollment courses have the lowest success rates?</p>	<p>“Why”</p> <p>Collect, analyze, and use data from other sources (focus groups, surveys, literature reviews) to identify the underlying factors (barriers or challenges) impeding student success.</p>	<p>“Intervention”</p> <p>Use data from Component Two to design new interventions, or revise current ones, to effectively address the underlying factors impeding student success.</p> <p>Review and consider changes to existing college practices and policies that impact the underlying factors impeding student success.</p>	<p>“Evaluation and Modification”</p> <p>Collect, analyze, and use evaluation data to answer:</p> <p>1) To what extent did the interventions (including policy changes) effectively address the underlying factors impeding student success?</p> <p>2) To what extent did the interventions increase student success?</p> <p>Make modifications based on evaluation results.</p>

facilitate clarity, the following framework, titled “The Four Components,” describes how colleges can use data to increase success.

**Component Number One:
Using Disaggregated Longitudinal Cohort Data to Find Out “What’s Wrong?”**

In the colleges’ efforts to increase student success, it became clear that it was necessary for everyone to understand the types of data needed and exactly how such data was to be used. The first step involves collecting and analyzing disaggregated longitudinal cohort data. A companion guide provides a summary of the “ins and outs” of collecting, analyzing, summarizing, and using this initial type of data. Simply put, the purpose of disaggregated longitudinal cohort data is to answer the question: “What’s wrong?” With this type of data, a college can identify: (a) which student groups are less successful than others, in terms of the five Achieving the Dream Student Performance Measures (persistence; successful completion of developmental education; successful completion of a course with a “C” or better; successful completion of gatekeeper courses; and successful completion of a degree, certificate, or transfer), and (b) which high-enrollment courses have the lowest completion rates. Disaggregated longitudinal cohort data also allow a college to determine where it should focus its time and resources. For example, should a college focus on: (a) a specific course, (b) a specific population as it relates to a specific course, (c) persistence for all students, or (d) persistence as it relates to a specific student population?

**Component Number Two:
Using Data to Answer the “Why” Question (Diagnosis)**

Early on, we discovered that it was not sufficient to simply identify “What’s wrong?” (for example, which student groups are most at-risk of not succeeding); we also needed to understand and identify *why*. That required collection of a second set of data. *Why* are particular student groups less successful than others? Specifically, what underlying factors (barriers or challenges) impede their success? Without identifying specific underlying factors, colleges found themselves with limited capacity to design interventions that would be effective in increasing student success. Even when moderate gains were achieved, colleges were not able to identify or isolate the specific components of an intervention or set of interventions that contributed to increases in student success.

**Component Number Three:
Addressing the Underlying Factors Impeding Student Success through New or Revised Interventions or Policy Changes**

After collecting a second set of data to answer the “why” question, a college is then ready to revise existing interventions or create new ones to address the specific underlying factors impeding student success. Additionally, a college needs to review and consider the impact of existing college policies on the underlying factors impeding student success.

Component Number Four: Assessing Impact — Evaluating Interventions to Increase Student Success

Next, the college must evaluate its interventions (see the companion guide “Evaluating Student Success Interventions”). This data enables colleges to determine: (a) the effectiveness of an intervention or policy change in addressing the underlying factors impeding student success, and (b) the extent to which an intervention or policy change led to increases in student success.

Summarizing the Four Components of a Culture of Evidence

As summarized in Table 1, there are four components to using data to create and sustain a culture of evidence. Component Number One involves the use of longitudinal, disaggregated cohort data to answer the “what’s wrong” question as it relates to specific student success outcomes. Component Number Two entails using a second set of data to answer the “why” question and identify the underlying factors that impede student success. Component Number Three involves designing an intervention — or making a policy change — that addresses the underlying factors impeding student success. Finally, Component Number Four includes evaluating: (a) the effectiveness of the college’s intervention or policy change in addressing the underlying factors and (b) the extent to which the college’s intervention or policy change increased student success.

Following are examples of how two Achieving the Dream colleges used data to identify (or diagnose) underlying factors impeding student success and effectively addressed them in the design of a specific intervention.

A Focus on Diagnosis

Prior to Achieving the Dream, a handful of participating colleges had collected, analyzed, and used disaggregated longitudinal cohort data. These colleges knew, for example, that the course completion rates of male students taking developmental English courses at their institution were quite low. What they didn’t know was why. Moreover, they quickly realized that their capacity to significantly increase course completion rates for males in developmental English would be continually hampered until they had the data that indicated the specific underlying factors impeding the success of these students. Acquiring data to identify such underlying factors was no simple task. Questions emerged, such as: (a) What data do we need to identify the underlying

factors? (b) Can we use existing data or do we need to collect new data? (c) Do we administer a survey or do we conduct focus groups? (d) If we conduct a survey, can we use an existing instrument or do we need to develop our own? (e) Should we conduct a review of the literature, and if so, who will be responsible for completing and sharing it?

What is clear to everyone in the Achieving the Dream initiative is that we must answer the “why” question and identify the specific causes or underlying factors if we are to significantly increase student success. The paths colleges can take to identify underlying factors are many. In the next section, I present three different approaches or methods to answering the “why” question: (a) conducting focus groups, (b) completing a review of the literature, and (c) using existing survey data. Ideally, colleges would use multiple sources of data to triangulate the specific underlying factors. Other approaches to identifying underlying factors include using transcript analysis (Hagedorn et. al, 2003) and assessment of student learning outcomes.

Conducting Focus Groups to Identify Underlying Factors

Conducting focus groups — in the context of Achieving the Dream — involves facilitating a series of focused, small-group conversations with the goal of identifying common responses related to specific underlying factors impeding student success. The benefits of conducting focus groups include: (a) producing a local, campus-based understanding of underlying factors impeding student success; (b) allowing students, faculty, and staff members an opportunity to have their voices heard; and (c) increasing the capacity of the college to use multiple sources of data when identifying underlying factors impeding student success. If faculty and staff members are trained in conducting focus groups, the college also expands its capacity to conduct and use focus group data in the future.

There are particular challenges to conducting focus groups, such as determining: (a) which groups to target in a focus group; (b) what questions to ask in a focus group; (c) who will conduct the focus group and analyze, summarize, and report the data; (d) how to gain trust and confidence in focus group data; (e) and how to use focus group data to design interventions to increase student success. Each of these challenges is addressed in the case below. *Please note: This guide is intended to provide a brief overview of specific approaches to identifying underlying factors impeding student success. The following material is not presented as a training guide for conducting effective focus groups.*

Using Focus Group Data to Design Student Success Interventions at Tulsa Community College

Using focus groups to identify underlying factors After compiling, reviewing, and discussing Tulsa Community College’s (TCC) disaggregated longitudinal cohort data (Component Number One), the college achieved consensus concerning specific problem areas. Based on the data, TCC’s Achieving the Dream Core Team chose to prioritize its time and resources to address four areas: (a) fall-to-spring persistence for all first-time-in-college students, (b) fall-to-spring and fall-to-fall persistence for first-time-in-college African-American males, (c) course completion rates for students enrolled in developmental reading courses, and (d) course completion rates for students enrolled in developmental math courses. The college developed a plan to address each of these areas over a four-year period. Increasing the persistence rate for all first-time-in-college students was addressed first.

Having identified its priority areas, the college’s Data Team, in consultation with the college leadership team, chose to conduct focus groups as the primary method of identifying the underlying factors impeding successful fall semester persistence for all first-time-in-college students. To expand TCC’s research capacity, the Data Team recruited and identified five faculty members and one administrator to participate in a two-day training session (Gonzalez, 2007) on how to collect, analyze, summarize, and use focus group data. This training was largely based on the focus group approach developed by Raymond V. Padilla (1999; 2008; Padilla, Trevino, Gonzalez, & Trevino, 1997). Padilla’s approach is highly structured and allows for quick analysis, interpretation, and use of the data. The approach also can be used to identify underlying factors impeding student success in many areas, such as persistence or the successful completion of a particular course.

The questions guiding TCC’s focus on persistence included: (a) What barriers or challenges do first-time-in-college students experience in their first semester? (b) What do students know or do that enables them to overcome specific barriers or challenges in the first semester? (c) What changes can the college make to eliminate, reduce, or assist students in overcoming specific barriers or challenges in the first semester? (d) What does the college do currently that effectively helps students overcome specific barriers or challenges in the first semester?

Prior to conducting focus groups, the Data Team met to discuss and decide how many focus groups should be conducted to produce a quality data set for analysis. Given that Tulsa Community College serves students on four geographically separated campuses, the Data Team chose to conduct twelve student focus groups — three on each campus. The Data Team members wanted to ensure that the focus group data would allow them to identify campus-specific differences. The Data Team also chose to conduct eight additional focus groups — two on each campus — that targeted TCC faculty and staff members. Finally, the team developed a comprehensive recruitment plan that produced: (a) an adequate number of participants for each focus group and (b) a group of students that mirrored the demographic characteristics of the TCC student population.

After conducting 20 focus groups on all four campuses, the Data Team spent the next two months analyzing the data and identifying the common underlying factors impeding fall semester persistence (see Table 2 for timeline). Using the constant comparative method (Glaser & Strauss, 1967) for data analysis, the Data Team identified six common underlying factors impeding successful semester-to-semester persistence.

Table 2

TCC Timeline for Completing the Four Components of Increasing Student Success

2007		2008			
Oct.	Nov. – Dec.	Jan. – Feb.	March – June	July	Aug. – Dec.
Component One	Component Two		Components Three and Four		
Identification of Problem Areas	Focus Group Training and Conduction of 20 Focus Groups	Data Analysis and Identification of Common Underlying Factors	Discussion and Use of Focus Group Data to Design College-wide Intervention: Student Success Course Development of Common Course Learning Outcomes and Assessment and Evaluation Plan		Implementation of Intervention Assessment and Evaluation

Table 3

Underlying Factors Impeding Successful Fall Semester Persistence at TCC

Adjusting to college	Balancing school and life	Difficulty choosing courses	Communication issues with instructors	Textbook issues	Tulsa Achieves Implementation Issues
Too much freedom Getting used to being on your own Having lots of stress Adjusting to different kinds of students Time and effort to do well in courses (very different from high school)	Balancing needs of family, study time, and personal time Juggling home and school responsibilities Scheduling around your children	Not knowing which courses are needed for your major Not knowing what courses to select and which courses transfer; need more guidance in planning class schedule Limited choices of some required classes	Not getting feedback on assignments and not knowing how you are doing in class Unable to find out how you are progressing in class Instructors don't know their students	Students and teachers are using different editions of the textbook TCC Campus Store didn't have the required books Purchase on-line course materials only at NE campus Inadequate bookstore refund policy	Paying for textbooks Financial aid processing Information about TA constantly changing and sometimes was inaccurate

The common underlying factors reported in the focus groups included: (1) adjusting to college, (2) balancing school and life, (3) difficulty choosing courses, (4) communication issues with instructors, (5) textbook issues, and (6) Tulsa Achieves implementation issues. Tulsa Achieves is a recruitment and retention program for local Tulsa residents. The Data Team used specific language from the student focus groups to define the six themes noted above. The six underlying factors, and supporting language, are found in Table 3. Finally, the Data Team reported that there were no underlying factors that were unique to a specific campus.

Using focus group findings to design a college-wide intervention After collecting, analyzing, and summarizing the focus group data, the Data Team used the findings to facilitate a discussion with the college leadership team about how to design an intervention that would address most or all of the identified underlying factors impeding fall semester persistence. After much deliberation, the college leadership team chose to convene a group of faculty from all four campuses to completely redesign an existing student success course to address four of the six underlying factors. This team of faculty members met over the summer and accomplished the following: (a) used the focus group data to produce common course learning outcomes (objectives) for the student success course, (b) gained consensus on using a common textbook

for the course, (c) identified additional faculty to teach the course, which expanded the available fall sections from six to sixty-four, (d) conducted summer training for all faculty teaching the course, and (e) designed an evaluation and learning outcomes assessment plan, which was implemented in the fall semester. Table 4 illustrates how the common course learning outcomes addressed four of the six underlying factors impeding successful fall semester persistence.

Results: The impact of TCC's redesigned student success course on fall-to-spring persistence rates

Sixty-four sections of TCC's redesigned student success course were offered in the Fall 2008 semester. Prior to TCC's involvement in Achieving the Dream, the college offered approximately six sections of a student success course each semester. Of the nearly 3,000 first-time-in-college students enrolled in the fall semester of 2008, 561 enrolled in the redesigned student success course. The fall-to-spring persistence rate for first-time-in-college students enrolled in TCC's redesigned student success course was 81percent, compared with 63 percent for other first-time-in-college students. TCC's faculty is now reviewing the learning outcomes assessment data to determine the relationship between a specific learning outcome and subsequent persistence.

Table 4

Linking Focus Group Findings with TCC Revised Student Success Course

Underlying Factors Impeding Persistence	TCC Student Success Course (Common Course Learning Outcomes)
<p>Adjusting to college</p> <ul style="list-style-type: none"> ■ Too much freedom ■ Getting used to being on your own ■ Having lots of stress ■ Adjusting to different kinds of students ■ Time and effort to do well in courses (very different from high school) 	<ol style="list-style-type: none"> 1) Use personal and social strategies to succeed, enjoy the college experience, and become involved in college and community activities. 2) Identify and apply college and academic terminology. 3) Construct short-term and long-term goals, balancing personal skills, interests, personality, and values. 4) Construct and monitor weekly/monthly time plans to balance work, school, family, and social activities. 5) Locate and apply college resources and support systems and incorporate these into the learning process. 6) Analyze and modify study techniques and behavior patterns to successfully complete homework, reading assignments, exams, and special projects. 7) Apply critical and creative thinking skills to identify and solve academic and social problems. 9) Demonstrate transference of skills learned from other coursework during the semester.
<p>Balancing school and life</p> <ul style="list-style-type: none"> ■ Balancing needs of family, study time, and personal time ■ Juggling home and school responsibilities ■ Scheduling around your children 	<ol style="list-style-type: none"> 3) Construct short-term and long-term goals, balancing personal skills, interests, personality, and values. 4) Construct and monitor weekly/monthly time plans to balance work, school, family, and social activities. 5) Locate and apply college resources and support systems and incorporate these into the learning process. 6) Analyze and modify study techniques and behavior patterns to successfully complete homework, reading assignments, exams, and special projects. 7) Apply critical and creative thinking skills to identify and solve academic and social problems. 9) Demonstrate transference of skills learned from other coursework during the semester.
<p>Difficulty choosing courses</p> <ul style="list-style-type: none"> ■ Not knowing which courses are needed for your major ■ Not knowing what courses to select and which courses transfer; need more guidance in planning class schedule ■ Limited choices for some required classes 	<ol style="list-style-type: none"> 2) Identify and apply college and academic terminology. 3) Construct short-term and long-term goals, balancing personal skills, interests, personality, and values. 4) Construct and monitor weekly/monthly time plans to balance work, school, family, and social activities. 7) Apply critical and creative thinking skills to identify and solve academic and social problems.
<p>Communication issues with instructors</p> <ul style="list-style-type: none"> ■ Not getting feedback on assignments and not knowing how you are doing in class ■ Unable to find out how you are progressing in class ■ Instructors don't know their students 	<ol style="list-style-type: none"> 1) Use personal and social strategies to succeed, enjoy the college experience, and become involved in college and community activities. 3) Construct short-term and long-term goals, balancing personal skills, interests, personality, and values. 5) Locate and apply college resources and support systems and incorporate these into the learning process. 7) Apply critical and creative thinking skills to identify and solve academic and social problems.
<p>Textbook issues</p> <ul style="list-style-type: none"> ■ Students and teachers are using different editions of the textbook ■ TCC Campus Store didn't have the required books ■ Purchase on-line course materials only at NE campus ■ Inadequate bookstore refund policy 	<p>TCC currently discussing strategy to address textbook issues.</p>
<p>Tulsa Achieves Implementation Issues</p> <ul style="list-style-type: none"> ■ Paying for textbooks ■ Financial aid processing ■ Information about TA constantly changing and sometimes was inaccurate 	<p>TCC addressed Tulsa Achieves Implementation Issues with a different intervention.</p>

Completing a Review of the Literature to Identify Underlying Factors

For several decades, researchers have written articles on the barriers impeding the success of community college students. Unfortunately, the vast majority of these studies never find their way onto a community college campus. Few can make the argument that the model of scholars producing knowledge and practitioners consuming knowledge is working.

There are at least two primary challenges to using research articles in our work to increase student success. First, most research articles are not written for practitioners. Their primary audience is other researchers. As a consequence, community college faculty and staff members must make their way through abstract concepts and complicated methodologies to locate the nugget of information that may help them serve students better. Second — and even more challenging than the first — faculty and staff already are overextended and simply do not have the time to read and summarize the primary findings of several research articles. Other challenges include having the ability to assess the quality of a research article, and transforming the primary findings of a literature review into actionable information. Those challenges are addressed in the following case.

Using a Review of the Literature at Tulsa Community College

As noted earlier, one of Tulsa Community College's priorities was to increase the persistence rates of African-American males. During a college-wide presentation of the disaggregated longitudinal cohort data, a group of TCC African-American male faculty and staff members reacted strongly to the data. It was clear that African-American male students persisted at a much lower rate than all other students. Their reaction to the data turned into concerned discussion, followed by planned action. This initial group of African-American male faculty and staff recruited other African-American male professionals from throughout the college and met to discuss what they could do to increase the success rates of African-American male students at Tulsa Community College. They adopted the Four Components approach to ensure that their plan would be data-driven. They had the data that answered the “what’s wrong” question. Now, they needed additional data to identify why.

The group began its work by discussing and identifying the challenges and barriers they overcame to complete their undergraduate degrees. This information was a good start, but the group knew it needed additional data to attain a comprehensive understanding of the underlying factors impeding the success of African-American males at Tulsa Community College. As a consequence, the group chose to conduct a review of the literature on African-American males in community colleges, and focus groups with TCC African-American male students.

Several issues were addressed in the group's plan to conduct a review of the literature. First, the members discussed the criteria to be used to determine the quality of a research article and the trustworthiness of its findings. The criteria included using: (a) peer-reviewed research articles published in reputable journals or by reputable organizations, (b) research reports published by reputable organizations, and (c) published works consistently cited in the literature. They also identified group members who felt comfortable with various research methodologies and would be willing to conduct a review of the literature. Next, they developed a plan to secure release time for the individuals conducting the literature review. They also were in agreement that the findings from the literature review would be used to support or confirm the findings from the focus groups, which would be conducted in the Fall 2009 semester. Finally, they discussed and developed a template that would be used to transform the primary findings of the literature review into actionable information.

TCC's review of the literature on African-American males in community colleges is nearly complete at this writing. Preliminary findings were presented to the group using a newly developed template. Table 5 shows the template used to transform the literature review findings into actionable information. The template includes designated space to capture and compare the literature review findings with the findings from the focus groups and the specific intervention components. A full citation for each research article can be found following the template.

Table 5

**Linking Literature Review Findings with Interventions to Increase Student Success:
A Focus on African-American Males in Community Colleges — A Working Document**

Challenges/Barriers for AA Males			
Literature Review Citations	Literature Review Findings	Focus Group Findings	Intervention Components
Cuyjet (1997) Flowers (2006)	Less engaged with the academic experience than other students	To be completed	To be designed
Cuyjet (1997)	Less likely to take detailed notes than other students	To be completed	To be designed
Cuyjet (1997)	Less time devoted to writing and revising essays than other students	To be completed	To be designed
Rendon (2000) Flowers (2006)	There is a sense of disconnectedness from the social aspect of college life.	To be completed	To be designed
St. John, Cabrera, Nora, & Asker (2000) Jordan (2008)	Costs of education, costs of books and materials	To be completed	To be designed
Jordan (2008)	Stereotypes exist that make AA males question their ability to be scholars.	To be completed	To be designed
Adelman (2006) Hagedorn, Maxwell, & Hampton (2001)	AA males who take more than 4 units during the summer term prior to first semester have a 78.2% degree completion rate. AA males who did not enroll in summer term have a 21.2% degree completion rate.	To be completed	To be designed
Dawson-Threat (1997) Quaye & Harper (2007) Ellis (2004) Jordan (2008)	Successful class experience for AA males is related to three characteristics: 1) "Safe space" exists to express personal experiences. 2) Classroom culture promotes the understanding of difference. 3) Course provides opportunities for Black males to explore "Black Manhood."	To be completed	To be designed
Brown (2006) Ellis (2004) Jordan (2008) Harper (2006)	Peer support, particularly with other Black males, had a positive impact on their college experience and sense of engagement.	To be completed	To be designed
Bonner & Bailey (2006) Jordan (2008)	Family units and sense of responsibility to family serve as key sources of support for AA males.	To be completed	To be designed
Hagedorn, Maxwell, & Hampton (2001) Jordan (2008) Bailey, Jenkins, & Leinbach (2005)	Goal setting and commitment to goal has positive impact on college experience.	To be completed	To be designed

TCC Literature Review References on African-American Males in Community Colleges

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Bailey, T., Jenkins, D., & Leinbach, T. (2005, October). *The effect of student goals on community college performance measures*. New York: Community College Research Center, Teachers College, Columbia University.

Bonner, F. A. II, & Bailey, K. W. (2006). Enhancing the academic climate for African American men. In M. J. Cuyjet & Associates (Eds.), *African American men in college*. San Francisco: Jossey-Bass.

Cuyjet, M. J. (1997). African American men on college campuses: Their needs and their perceptions. Helping African American men succeed in college: *New directions for student services*, No. 80.

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Ellis, P. (2004). *Addressing the shame of higher education: Programs that support college enrollment and retention of African American males*. San Francisco: Leveling Playing Field Institute. Retrieved January 4, 2008, from <http://www.lpfi.org/docs/AddressingtheShame.pdf>.

Flowers, L. A. (2006, February). Effect of attending a 2-year institution on African American males' academic and social integration in the first year of college. *Teacher's College Record*, 108, 267-286.

Hagedorn, L. S., Maxwell, W., & Hampton, P., (2001). Correlates of retention for African American males in community colleges. *Journal of College Student Retention*, 2, 243-263.

Harper, S. R. (2006). Peer support for African American male college achievement: Beyond internalized racism and the burden of "acting White." *Journal of Men's Studies*, 14, 337-358.

Pope, M. L. (2006). Meeting the challenges of African American men at community colleges. In M. J. Cuyjet &

Associates (Eds.), *African American men in college* (pp. 210-236). San Francisco: Jossey-Bass.

Quaye, S. J. & Harper, S. R., (2007). Faculty accountability for culturally-inclusive pedagogy and curricula. *Liberal Education*, 93, 32-39.

Rendon, L., Jalomo, R. E., & Nora, A. (2000). Theoretical considerations in the study of minority student retention in higher education. In J. M. Braxton, (Ed.), *Reworking the student departure puzzle* (pp. 127-156). Nashville, TN: Vanderbilt University Press.

St. John, E. P., Cabrera, A. F., Nora, A., & Asker, E. H. (2000). Economic influences on persistence reconsidered. In J. M. Braxton, (Ed.), *Reworking the student departure puzzle* (pp. 127-156). Nashville, TN: Vanderbilt University Press.

Using Survey Data to Identify Underlying Factors

Survey data are abundant on many community college campuses. Colleges routinely administer surveys, such as the Community College Survey for Student Engagement (CCSSE), the Student Satisfaction Inventory (SSI), and the HERI Faculty Survey, as well as campus-based satisfaction surveys and student surveys of instructor effectiveness. The benefits to using survey data include: (a) identifying the perceptions or attitudes of a large number of students, faculty, or staff members, (b) having a level of confidence in the survey results, due to the large sample size, (c) identifying trends that may have a positive or negative impact on student success, (d) helping to test the ability to generalize hypotheses with a representative sample of respondents, and (e) receiving results in a relatively short time frame, especially with the use of on-line surveys. The primary limitations of survey data include: (a) not being able to identify the contextual factors that may impact the survey results, and (b) not being able to probe responses to a particular question. These two shortcomings can be addressed, in part, through the use of focus groups, as discussed earlier. The challenge for most colleges is finding a way to use survey data to identify specific underlying factors impeding student success. The following case highlights how South Texas College used the results from their survey data to confirm the identification of underlying factors impeding student success in the classroom.

Table 6**Top 10 Barriers to Successful Persistence at South Texas College, 2005 and 2007**

2005 Barriers Study	2007 Barriers Study
Money	Instructor Issues
Lack of Information	Child/Family Issues, Responsibilities
Work/Job/Time Management	Lack of Course Offerings/Times Offered
Lack of Adequate Facilities/Equipment	Placement in Developmental Courses/THEA
Child/Daycare/Family Issues	Work/Job/Time Management
Lack of Course Offerings/Times Offered	Issues with STC Personnel
Placement in Developmental Courses/THEA	Money
Lack of Access to Technology/Internet	Lack of Information
Instructor Issues	Lack of Adequate Facilities/Equipment
Issues with STC Personnel	Lack of Access to Technology/Internet

Using Survey Data at South Texas College Comparing the results of focus groups in two time periods

South Texas College (STC), located in Texas' Rio Grande Valley, serves more than 21,000 students on five different campuses. After reviewing and discussing their disaggregated longitudinal cohort data, STC chose to address the fall-to-spring and fall-to-fall persistence rates for all first-time-in-college, full-time students. Twenty-five student focus groups were conducted in the fall of 2005 that identified, in rank order, the top 10 barriers to persistence, and STC used the data to redesign its approach to academic advising for all first-time-in-college students. The findings from the 2005 focus group study are summarized in Table 6.

Two years later, STC decided to conduct a follow-up study on the barriers to student persistence, in large part to determine if the college's interventions eliminated or reduced the frequency of the barriers identified in the 2005 study. The findings from the 2007 focus group study also are summarized in Table 6. What the college discovered after comparing the list of top 10 barriers from the 2005 study with those in the 2007 study was that

the top four barriers in the 2005 study were much less prevalent in the 2007 study. This provided one source of evidence that the interventions designed to decrease the barriers related to money, lack of information, and time management were working. In contrast, the lower-ranked barriers in the 2005 study were found to be higher on the list in the 2007 study. Of particular interest and concern was the barrier related to "instructor issues." In the 2005 study, "instructor issues" was ranked 9th out of the 10 barriers. In the 2007 study, it was ranked first. Faculty members were both concerned and surprised by the 2007 list of barriers. Many questioned the validity of the findings from the 2007 study; others wanted to know, specifically, what the students meant in terms of "instructor issues."

South Texas College responded to the results of the 2007 study, particularly as it concerned "instructor issues," by convening a group of faculty members to discuss and review all available data related to faculty/student interactions. This faculty team, along with the Director of Institutional Research, accomplished the following tasks over a three-month period: They (a) disaggregated "instructor issues" from the 2007 barriers study, (b) reviewed survey results from CCSSE, CCFSSE, HERI Faculty Survey, and Student Evaluations of Faculty and determined whether the survey data triangulated with the "instructor issues" finding from the 2007 focus group study, (c) recommended interventions to address "instructor issues" as validated through the data triangulation process, and (d) developed a 2009 "Instructor Issues" follow-up study. Discussion about each action step follows.

Disaggregating "instructor issues" After reviewing the raw data from the 2007 focus group study, the faculty team was able to identify sub-themes and quotes to further define the finding "instructor issues." Sub-themes for "instructor issues" included: (a) instructor attitudes, (b) quality of instructors, (c) instructor expectations, (d) instructor spoken language and accents, and (e) instructor practices and course inconsistencies. Table 7 includes a list of sub-themes and quotes for the finding "instructor issues."

Table 7

Sub-themes and quotes for “Instructor Issues” finding from 2007 focus group study

Instructor Attitudes	Quality of Instructors	Instructor Expectations	Instructor Spoken Language and Accents	Instructor Practices and Course Inconsistencies
Some don't care, only on payroll; unhelpful, subjective faculty; treatment childish and unfair Some professors are rude/they embarrass you/they are rude and mean, attitude discouraging, intimidating and impatient	Lack of qualified instructors Instructors do not teach/lecture Classes are not interesting	Teach at too high of a level/ classes are too advanced Teachers expect too much Not enough in-class learning, expected to learn on our own	Communication barriers Lack of understanding	Experience base and text lectures are not equivalent Irrelevant homework Communication problem outside of class

Triangulation with survey data. Next, faculty members reviewed the survey results from CCSSE, CCFSSSE, HERI Faculty Survey, and the Student Evaluations of Faculty to determine if the survey data triangulated with the focus group finding “instructor issues.” They discovered that both the CCSSE and the Student Evaluations of Faculty survey results supported the finding “instructor issues” as it related to instructor attitudes, quality, expectations, practices, and course inconsistencies. They also noted significant differences between student and faculty perceptions with regard to: (a) receiving prompt feedback from instructors on performance (89 percent faculty vs. 49 percent students); (b) discussing grades and assignments with instructor (70 percent faculty vs. 48 percent students); and (c) faculty encouraging students to ask questions in class (96 percent faculty vs. 72 percent students).

Recommended interventions to address “instructor issues” Having found survey data to support the focus group finding “Instructor Issues,” the faculty team produced a series of recommendations to address instructor attitudes, instructor practices and course inconsistencies, quality of instructors, and spoken language. To address “instructor attitudes,” the faculty team recommended that: (a) deans and chairs follow up with the student complaint process, (b) complaint offices be located on all campuses, (c) faculty have a presence in the grievance office, (d) cultural sensitivity be addressed in professional development, and (e) faculty focus groups be conducted to clarify HERI Faculty Survey results. To address “instructor practices and course inconsistencies,” the faculty team recommended that

instructors: (a) provide e-mail solutions, (b) provide handouts on how to use campus voicemail system, (c) post and emphasize faculty contact information, (d) ensure that syllabi indicate when assignments can be expected to be returned to students, and (e) provide various opportunities for feedback on assignments. To address “quality of instructors,” the faculty team recommended that: (a) student evaluation questions be incorporated in the quality evaluation rubric for the Faculty Search Committee Protocol, (b) instructors be made aware of expectations for quality, (c) instructors encourage questions in the classroom, and (d) instructors demonstrate and stimulate interest in the subject matter. Finally, to address “spoken language and accents,” the faculty team recommended that instructors: (a) make lessons understandable and accessible to all students, (b) summarize the main points of all lessons, and (c) provide visuals.

Beyond offering recommendations to address “instructor issues,” the faculty team designed and implemented a follow-up study focusing on the “instructor issues” barrier. The purpose of the study was to: (a) re-examine the student-faculty interaction variables found in the 2007 focus group study; (b) discover quantitative values of the five disaggregated categories ranking highest within the “instructor issues” barrier, (c) use a survey approach to design item groupings to analyze mean scores at the item, scale, and dimension levels, (d) use ordinal-level data to run potential tests for statistical difference and correlation relationships among student characteristics, (e) confirm or reject the strength of 2007 barriers study findings,

and (f) establish the current state of student-faculty interactions with regard to “instructor issues,” specifically the five disaggregated categories. The instrument used in the follow-up study is found in Appendix 1.

Conclusion

National philanthropic organizations, such as Lumina Foundation for Education and the Bill & Melinda Gates Foundation, and President Obama have set bold goals for doubling the numbers of young Americans who attain a postsecondary degree. Foundations and the Obama Administration see community colleges as key to meeting this challenge. The goal stated in the introduction of increasing community college graduation rates by five percent would be a step in the right direction. In fact, we need more than that if we are to meet the demands of a knowledge-based economy and offer more individuals and families an opportunity to achieve the American Dream.

We have learned a great deal in the first five years of the Achieving the Dream initiative. Most importantly, we learned that a 5 percent increase is not only possible, but also probable if colleges can use data in meaningful and productive ways. More than that, we have witnessed promising, data-driven practices that are on track to increasing graduation rates by much more than 5 percent. This guide is offered as one tool, among many, to help colleges collect, analyze, and use data in ways that can lead to increases in student success.

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APPENDIX 1. Survey Instrument for follow-up study on “instructor issues”

Barriers Revisited Study

Your opinion is important to us.

Your Campus: _____ What grade do you expect in this course: _____

How many credit hours have you completed: _____ Are you an online only student: **Yes No (Circle)**

Are you taking Developmental Courses: **Yes No (Circle)**

In this section, please rate the following statements:

	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree
I. IPCI Grouping				
1. Instructors provide timely feedback	1	2	3	4
2. Instructors are available outside of class	1	2	3	4
3. Instructors respond when I try to contact them	1	2	3	4
4. Instructors explain grading	1	2	3	4
5. Instructor’s assignments are related to the course	1	2	3	4

Comments for Questions 1-5:

	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree
II. QI Grouping				
6. Instructors present materials in an interesting way for learning	1	2	3	4
7. Instructors encourage students to participate in class	1	2	3	4
8. Instructors are knowledgeable in their subjects	1	2	3	4
9. Instructors have skills necessary to teach courses in major	1	2	3	4
10. Instructors answer students’ questions well	1	2	3	4

Comments for Questions 6-10:

	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree
III. ISLA Grouping				
11. Instructors make time to summarize main points of lesson	1	2	3	4
12. Instructors use words that are clear where I can understand material	1	2	3	4
13. Instructors do not have language barriers making it difficult to learn	1	2	3	4
14. No communication problems exist	1	2	3	4
15. Instructors address questions from students clearly	1	2	3	4

Comments for Questions 11-15:

	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree
IV. IE Grouping				
16. Instructors expectations are not fair	1	2	3	4
17. Instructors do not provide enough time in class to teach material	1	2	3	4
18. The tests do not cover information that I was asked to study	1	2	3	4
19. Instructors teach at too high of a level	1	2	3	4
20. Instructors expect us to learn too much of the material on our own	1	2	3	4

Comments for Questions 16-20:

V. IA Grouping	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree
21. Instructors are interested in academic problems of students	1	2	3	4
22. Instructors treat students fairly with respect	1	2	3	4
23. Sometimes instructors are rude and embarrass you	1	2	3	4
24. Instructors are willing to help	1	2	3	4
25. Instructors provide support you need to succeed in college	1	2	3	4

Comments for Questions 21-25:

Exit Comment #1

In your experiences at STC, do instructors contribute to retention (keeping students enrolled)? **Yes No (Circle)**

How?

Exit Comment #2

In your experiences at STC, do instructors contribute to student withdrawal (barriers that influence students dropping)? **Yes No (Circle)**

How?

Additional Resources

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