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The Challenges of Institutional Research in Building a Culture of Evidence: A Case Study

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- Culture of Evidence
 - The process of building a culture of evidence involves using data to understand where students are experiencing problems, designing strategies for remedying those problems, implementing them, and then evaluating the effectiveness of those implemented strategies.

- Challenges
 - While technology, data collection, focus groups, and satisfaction surveys yield output (e.g., Conklin, 1999; Huynh, Gibbons, & Vera, 2009; Roman, Taylor, & Hahs-Vaughn, 2010), it may not be sufficient to **alter** the landscape of effectiveness or create a high impact institutional effectiveness program.

- “High Impact Institutional Research”
 - The objective is to move the locus of change from the data to community college personnel and provide the process by which college personnel can question, challenge, and change processes and assumptions to **improve** institutional effectiveness.

– Performance Effective Models

- Institutional effectiveness models may serve as a measure to which the institution attains its performance goals: student goal attainment, persistence, degree completion rates, and others (Moosai et al., 2011)
- Community college performance excellence models (e.g., Eggleston et al., 2007; Moosai, Walker, & Floyd, 2011) are designed to ensure institutional effectiveness, as part of the institution's strategic initiatives.

1. Does the Performance Effectiveness model detect at-risk conditions?
 2. Is this communicated to Administration?
 - High Impact Institutional Research
 - Low Impact Institutional Research
 3. The model may not be sensitive, particularly when large enrollments can mask an at-risk condition(s)
 4. Is the solution to build a “better model”?
-
- Goomas, D. T. (2014) Testing a Community College Institutional Effectiveness Model for “Academic-Transformation” Student Success, *Community College Journal of Research and Practice*, 38:11, 1044-1048, DOI: 10.1080/10668926.2013.821046

Surveys:

- Many IR departments collect data through surveys; however, the way a survey is deployed is important. A graduate exit survey that targets the graduating class to rate one's student learning experience can expect the institution and faculty to be given quite high ratings.
- Would the same be true if the target group was all who depart, graduates that cannot get jobs, or students that cannot transfer successfully?

Executive Summary:

- Data from an executive summary that reports that females have higher passing grades than males in a core course (for example, in English composition), and that White non-Hispanic males perform better than Black non-Hispanic males, with the conclusion that further tracking is needed.

- Roach Motel model—
 - that is, data checks in, but never checks out (Petrides, 2004). It is not atypical for an agency or organization to expend substantial resources on institutional research, only to discover the results are of little use or value (Trevisan & Yi, 2003).

Culture of Evidence:

- The process of building a culture of evidence involves using data to understand where students are experiencing problems.
- Once the issue is identified, there must be a strategy for remediation, implementation, and then evaluating the effectiveness of those implemented strategies (McClenney, 2004; McKinney, 2010; Morest & Jenkins, 2007; Skolits & Graybeal, 2007).

Critical Role of Institutional Research

- In support of institutional effectiveness and accountability:
 - information authority,
 - policy analysis,
 - research (Volkwein, 1999).
- To function as a high impact IR office, IR staff must be proactive in improving processes, data collection, and analysis in support of student engagement and success in the classroom.
- Although programs may be developed and implemented without IR input, once invited to the table, it is incumbent on IR to assist faculty and staff in gathering and analyzing data to determine which activities worked, which activities did not, and why.

- This case study is about two programs that were implemented within the last two years at El Centro College of the Dallas County Community College District:
 - in-class instructor-guided service learning
 - supplemental instruction
- What were the challenges in institutional research in building a culture of evidence for these two programs?
- Also under examination were the complexities involved with collecting and assessing data for these two programs across the institution and subsequent recommended improvements.

- Service Learning
- Service learning provides community colleges with opportunities to fulfill their mission as civic institutions in two ways. First, faculty and students alike provide tangible services to not-for-profit agencies and organizations.
- Second, the experience helps provide students with a greater understanding of, and appreciation for, the importance of the services provided by participating organizations.
- Several studies (Astin, Sax, & Avalos, 1999; Eyler & Giles, 1999; Hodge, Lewis, Kramer, & Hughes, 2001; Prentice & Garcia, 2000; Weglarz & Seybert, 2004) have focused on the benefits derived from student participation in service learning.

- **How do you grow service learning?**
- As reported by Goomas and Weston (2012), merging service learning into the class was instrumental in increasing participation in, and benefit from, service learning. In a community college psychology class, throughout a 16-week semester, each participant could complete up to 20 hours of verifiable service for extra credit.
- The results indicated that integrating a service-learning component as an in-course instructor-guided module within the classroom was beneficial for students who performed service learning, as well as for students electing to forgo service learning at that time.

Service Learning

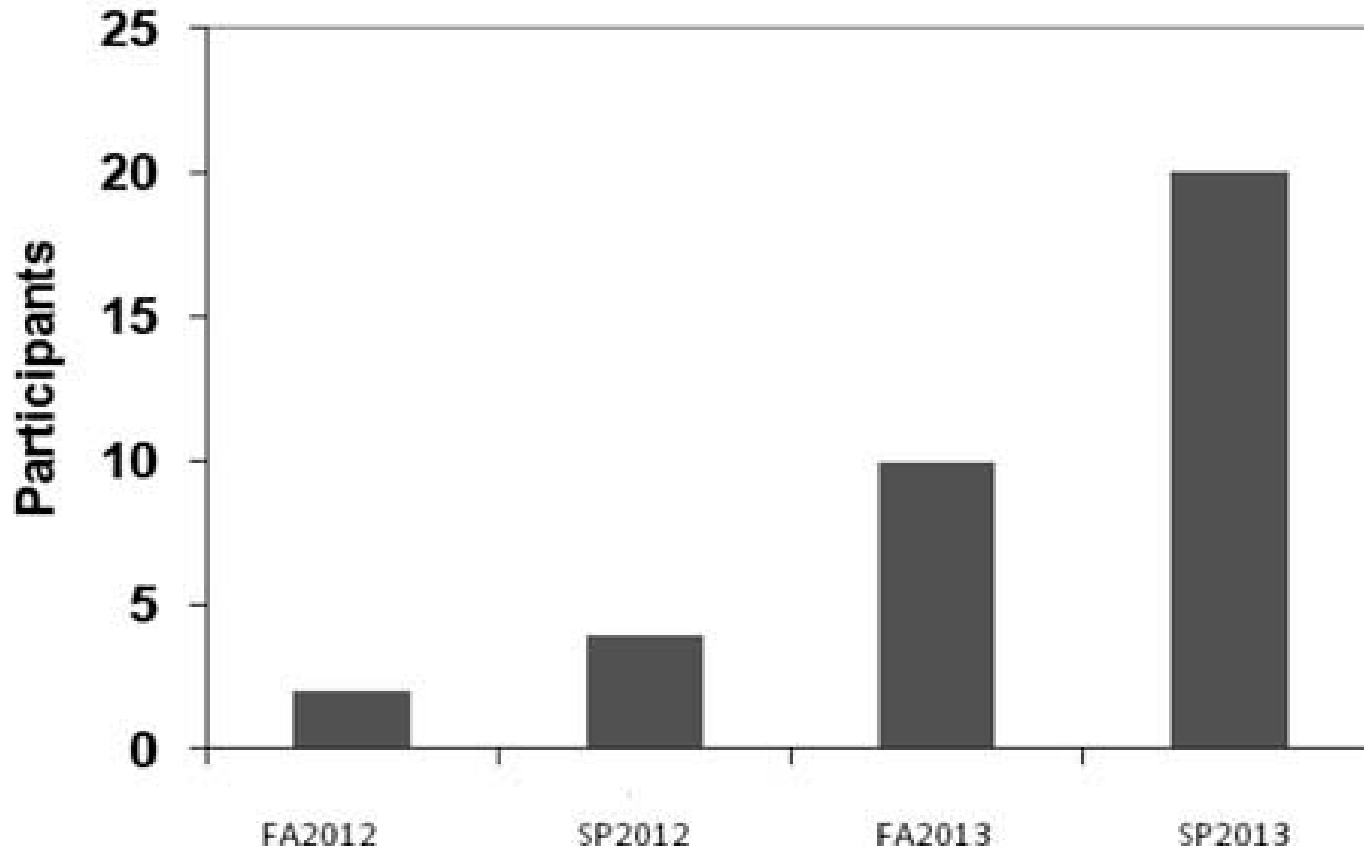


FIGURE 1. In-class instructor-guided participant tracking of service learning of 20 or more hours of service in general and developmental psychology classes

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- While service learning increased by implementing in-class instructor-guided service learning for specific general and developmental psychology classes, the challenge encountered by IR was that—despite collecting service learning data by hours-of-service, number of participants, and number of certificates awarded to participants—there was not a central repository nor a consistent method for tabulation across the institution.
- IR recommended the college implement a consistent way of measuring service learning participation

- **Supplemental Instruction**
- Supplemental instruction (SI) is an academic support program consisting of a series of free, voluntary-based weekly study sessions for students taking historically difficult courses.
- SI is designed to increase student retention and academic performance. The SI model is a unique academic support program that targets difficult courses rather than high-risk students. These courses tend to have high number of students who do not earn a passing grade or withdraw from a course section.
- Sessions were facilitated by peer student leaders (SI Leaders) who had already taken and done well in the targeted courses.

Supplemental Instruction

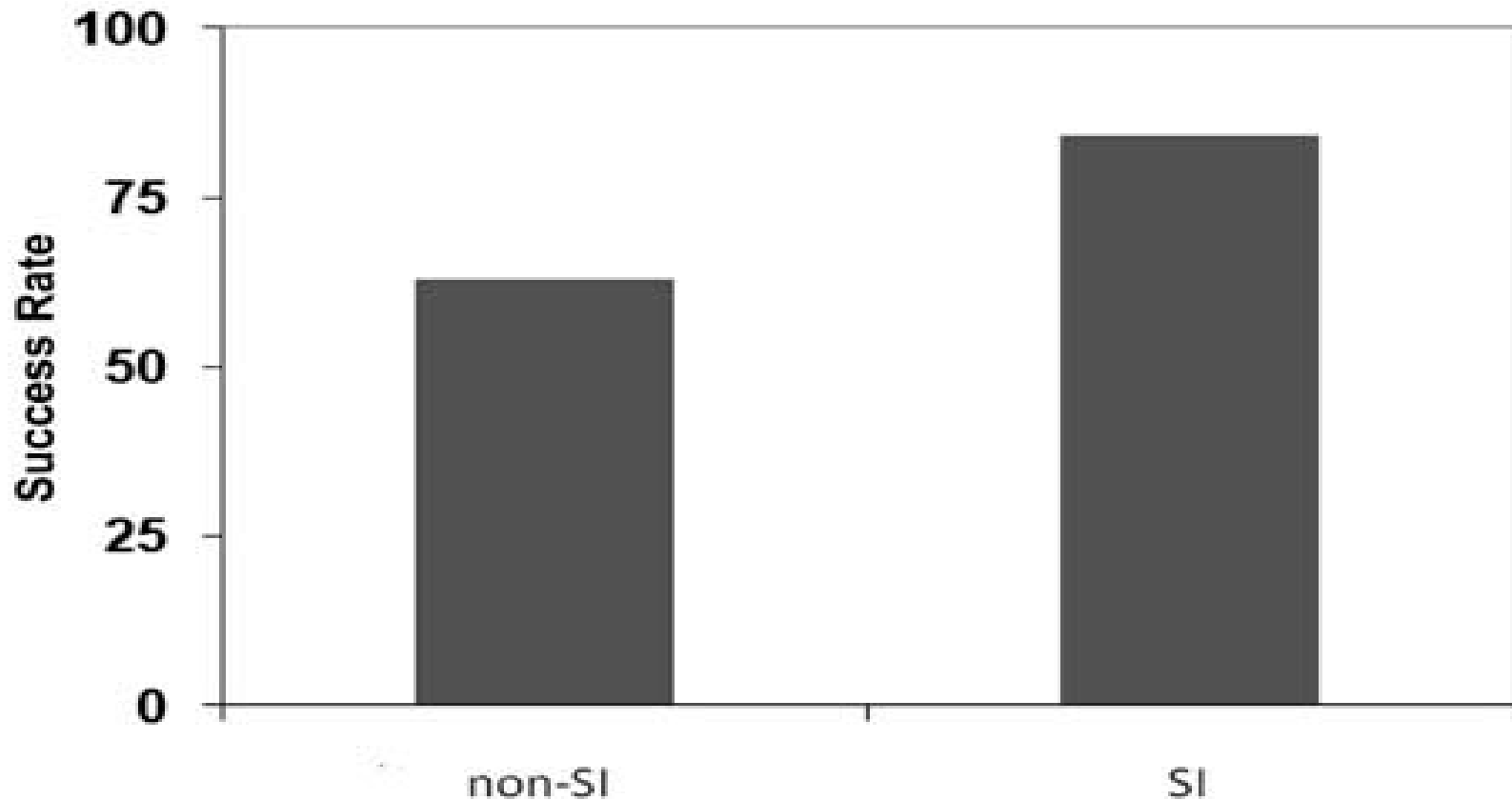


FIGURE 2 Success rate of two general psychology classes with no supplemental instructor (non-SI) and with a supplemental instructor (SI).
Note: SI attendance was not incentivized with points toward the final grade

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- 20 of the 24 students that participated in SI study sessions completed the course with final grades of A, B, or C, an 83% success rate. Of the 39 students that did not participate in SI study sessions, 25 students completed the course with final grades of A, B, or C, a 64% success rate.
- Participation ranged from one SI study session up to 12 study sessions. The median number of SI sessions was five sessions with a mode of seven study sessions.
- Assignment completion was higher (1.33 more assignments and essays) by the SI participants compared to the nonparticipants.
- The additional assignment completions equated to nearly 12% of the total assessment points.
- (Note that SI participation was not incentivized)

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- While SI appeared to have had a positive impact on students with regard to their performance for specific general psychology classes, the challenge encountered by IR was in obtaining the data for level of participation, number of student participants, and number of sessions attended per student, across the institution.
- Furthermore, implementation of SI attendance has not been standardized across the institution.
- Instructors are free to incentivize SI attendance, which introduces bias when comparing results to classes where SI is available but without incentive or penalty.

- Both programs showed significant improvement in their respective measurements for general and developmental psychology classes.
- However, without an easy-to-use data collection, central repository, and analysis system, conducting the kind of institutional research that could inform improvements to program and institutional performance can be quite difficult



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- IR Offices are often consulted:
 - After the fact
 - Anecdotal vs Measurable
 - Unreliable results
 - Questionable outcomes

 - Unhappy faculty/staff/admin.

- Persistence
- Consistence
- Involvement
 - Pre
 - During
 - Post

- Results
 - Positive/negative?
 - What worked?
 - What can be improved?
 - Unintended consequences?
 - Sustainable?
 - Scalability?

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- Proactive
- Walk-ins welcome
- Courageous conversations
- It takes a college