

WASC Accreditation Team Onsite Review

Lines of Inquiry for Standard #4

California State University – Fresno

Standard 4: How are the results of data collection and analysis used for improvement and decision making at Fresno State? How are individuals and units within the institution held accountable for results?

EXECUTIVE SUMMARY

How are the results of data collection and analysis used for improvement and decision making at Fresno State? The single most important change impacting the data-driven decision-making culture of Fresno State was the implementation of the Tableau dashboard system. This was a game changer. The Tableau dashboard system is showing great returns on investment. The evidence clearly shows campus staff and faculty are using data for informed decision making (see <http://www.fresnostate.edu/academics/oie/data/index.html>).

The university initiated campus-wide adoption of the dashboard in January 2013. Since that time, the dashboard services by OIE have grown at a very rapid pace. OIE dashboard services include customization of data visualization for staff. College Deans, Associate Deans, directors and managers were trained and are continuously supported by OIE. OIE services are delivered campus-wide to the academic affairs administrative offices, the offices of college deans and department chairs, as well as to various offices of the Student Affairs and University Advancement divisions. In Student Affairs, for example, data are used to make decisions about effectiveness of student services interventions. Student Affairs uses OIE dashboards to analyze, monitor and manage progress in Supplemental Instruction, student advising, to manage resource allocations in University Outreach Services, to study the impact and effectiveness of Residential Housing Learning Communities, to analyze the effectiveness of Academic Support Course programs, to analyze the performance-impact of the Tutoring and Learning Center, First Year Experience programs and SupportNet services. OIE dashboards are also used by the Enrollment Management Team during the FTES target development process, and for managing university-wide as well as college FTES targets. In addition, a large array of data is captured to monitor services and reporting of the Federal TRIO student services programs. Data and information analyses are also captured and provided for the federally funded Title V HSI CLASE programs. Aside from planning and decision-making purposes, data are used to assess whether or not the service is linked to the intended services outcomes as well as for managers to understand the staffing needs of their service programs.

How are individuals and units within the institution held accountable for results? The culture of Fresno State is such that all leaders maintain a steady reliance on data and evidence-based research to inform the leadership planning and decision-making process. Data analytics, research reports, including numerous dashboard projects, also contribute to

the value of the data-driven decision-making culture of Fresno State. Deans, Associate Deans, AVPs, directors and managers (all MPPs) are held accountable for job performance and results. Each year these leader-managers are required to submit an annual performance report to the Provost/Vice President for Academic Affairs. (A similar process occurs in the division of Student Affairs where direct reports to the Vice President also submit annual performance reports for accountability review.) The Provost engages in evidence-based review of data with individuals. In this process department chairs also undergo performance reviews with the college deans. Other divisions of University Advancement and Administration Services undergo a similar process of annual review with units and staff leaders. The results of the reviews of office units are discussed in the President's Cabinet meetings.

THE BACKDROP: STRUCTURING FOR STUDENT SUCCESS AND ACCOUNTABILITY

A Fresno State initiative, supported by the President in 2002, led to the formation of the Student Success Task Force (SSTF). The SSTF, co-chaired by the Provost/Vice President for Academic Affairs and the Vice President for Student Affairs, sought to improve student engagement, retention, and graduation success through collaboration in regards to improvement of academic and student services across campus. In 2009, in collaboration with the system-wide Graduation Rate Initiative of the CSU Chancellor's Office, the SSTF formed the Graduation Rate Initiative Team (GRIT). GRIT is a set of administrators, faculty and staff from different colleges and divisions that implement strategies and services aimed at improving retention and the 6-year graduation rate and narrowing the achievement gap between underrepresented and non-underrepresented students by 2015.

In 2011 the university's Office of Institutional Research, Assessment, and Planning, underwent a name change that also included a change in mission and scope. The university established the Office of Institutional Effectiveness (OIE) to provide leadership in developing a comprehensive program of planning, assessment, dashboard development, and institutional research that assists the University in achieving its mission and goals through evidence-based research, planning and decision-making. The OIE also supports research and planning activities to improve student learning, student services, and administrative processes across campus.

ACADEMIC PROGRAM REVIEW, SELF-STUDY

The OIE supports colleges and departments in their academic program review efforts, and is also involved with student learning outcomes assessment. OIE also provides data for accreditation activities and self-studies. These and related support services are described in the OIE website where data and reports are also available for download (<http://www.fresnostate.edu/academics/oie/>).

The academic program review process requires the use of data and evidence to demonstrate program viability, strength, and quality (including a significant section on the assessment of program level student learning outcomes) in the pursuit of improving student success. In support of self-study activities, OIE provides each program with a standard set of undergraduate and graduate data packets, as well as dashboards, designed to help understand

program performance and trends. The data are incorporated in the self-study document and used in discussing program-planning decisions and includes disaggregated data on student retention and graduation. The self-study, therefore, typically includes mechanisms for solving current problems and avoiding projected problems, for building on existing strengths, and for maximizing opportunities that are likely to develop within the discipline in the near future.

OIE ANALYSES, RESEARCH, ASSESSMENT, AND EVALUATION

OIE regularly posts website briefs, reports, surveys and studies that address various student success and student engagement concerns. The reports provide evidence the institution is committed to improvement based on the results of inquiry, evidence, and evaluation and are available on the OIE website

(<http://www.fresnostate.edu/academics/oie/research/briefs.html>).

- Examples of What We Know Based on Assessment
- At-Risk Factors for First-Time Freshmen
- First Generation Students: First in the Family, Less Likely to Succeed in College
- How Do Faculty Members Use Their Class Time?
- Do Students Learn What Faculty Teach?
- Characteristics of 3rd Year Students Who Graduate or Fail To Graduate In 6 Years

OIE also generates evidence-based reports to ensure that university efforts to assist underrepresented student populations are informed by current knowledge and data. Examples of these kind of reports include:

- Hmong Student Profile
- Fresno State Students—Past and Present
- Multiculturalism, Diversity, and Gender Equity

DATA-BASED DECISION MAKING

The OIE has enabled the campus to gather data more effectively and to analyze and use these data to make decisions that will contribute to the success of students at Fresno State. Other indications of the importance of OIE services to the university are as follows:

- The increased use of online surveys has been facilitated by the procurement of a university-wide Qualtrics Survey Research Suite license, and the transfer of the license and budget to, as well as the administration of the survey research suite by OIE.
- The procurement of the university-wide Tableau Dashboard system, which is managed by OIE.
- The Tableau user activity dashboard shows steady growth and use by campus employees. This feedback system helps to understand what is or is not working and to plan new services or features that may be improved for clients. (See Appendix)
- Periodic data inventory meetings are held by OIE with colleges, student affairs offices, academic affairs office, and other campus units to review how access and use of data are used in supporting analysis, planning, and decision-making

As a matter of practice, Fresno State relies heavily on data and evidence-based research to inform leadership planning and decision-making. Internal and external university dashboard systems have been developed (<http://www.fresnostate.edu/academics/oie/data/index.html>). The internal Tableau Dashboard was designed and developed for campus users who have access to individual student record level information as a normal part of their official duties. The external dashboard system, however, was designed and developed for public access (but without access to individual level information).

OIE services are delivered campus-wide to the Academic Affairs administrative offices, the offices of college deans and department chairs, as well as to various offices of the Student Affairs and University Advancement divisions. In Student Affairs, for example, data are used to make decisions about effectiveness of interventions. Student Affairs uses OIE dashboards to analyze, monitor and manage progress in Supplemental Instruction and in University Outreach Services. Student Affairs also use dashboard data to study the impact and effectiveness of Residential Housing Learning Communities, to analyze the effectiveness of Academic Support Course programs, to evaluate the performance of the impact of the Tutoring and Learning Center and to evaluate the First Year Experience programs and SupportNet services. In addition, a large array of data is captured to monitor services and reporting related to the Federal TRIO student services programs. Data and information analysis are also captured and provided for the federally funded Title V HSI CLASE programs. Data related to these student support services are used to inform planning and decision making and to assess whether or not the service is linked to intended service outcomes of students. The data are also used for informing managers whether or not the service units are appropriately staffed to be efficient.

DATA FOR QUALITY IMPROVEMENT

The divisions of Academic Affairs, Student Affairs, University Advancement, and Administration Services all use data and information including dashboards for operational purposes and decision-making. Data are used for continuous improvement of all aspects of university instruction and student services. Several examples of dashboard use are presented below. (The *California State University, Fresno Self Study Report* submitted August 29, 2014, documents the SOAPS and the annual assessment ratings process and how the results and findings are used. For additional information see the Fresno State *Self Study Report* at <http://www.fresnostate.edu/academics/wasc/self-study/>). The following examples describe how data and results are used for improvement and decision-making, and how programs and offices are held accountable for results.

University Outreach Services. University Outreach Services (Outreach) uses the Tableau dashboards for operational management, service analysis and planning. On a daily basis, Outreach uses data and information to compare the number of student applicants from feeder schools (feeder schools for Fresno State are primarily local high schools) applying for enrollment in an upcoming semester. The assessment activity allows Outreach to make decisions regarding the allocation of appropriate resources to support working with feeder schools that may be under the expected target goal of qualified applicants to Fresno State.

The dashboard is also able to quickly show from where student applications are coming. The dashboard displays historical trend data on the hundreds of visitation requests Outreach routinely receives from feeder institutions. The analysis helps Outreach make informed decisions regarding the geographical areas to visit and thereby help meet the enrollment target goals of the university (this is broken down further by ethnicity, major, student type).

Additional uses of data include the following types of analyses:

- *prospect to application yield* based on number of workshops or activities provided making sure the targeted students are submitting their applications
- *application to enrollment yield* by providing status of students by school served, major and ethnicity. Outreach uses these data to allocate the adequate resources to the areas most in need and deploy strategies to support these areas
- *identify academic programs* that are declining in application so that school recruiters can formulate specific recruitment plans
- *provides Outreach with profile* of students who are most likely to apply and enroll at Fresno State based on geographical location, test scores, GPA, majors, ethnicity and improve strategies for other Outreach campaigns

The staff or teams responsible for various areas in Outreach use data to monitor their work or the work of their unit. The data show staff or teams whether an activity or strategy is successful or not and whether any programmatic adjustments are necessary. Supervisors use the results to help staff make adjustments to the current plan as well as to use the results to improve Outreach recruitment strategies.

Educational Opportunity Program & Summer Bridge Program. The OIE developed a Tableau dashboard for the EOP & Summer Bridge Program to be used for data collection, visualization and analytics. As planned for assessment, Summer Bridge implemented the Grit Likert-Scale Survey to program participants. “Grit” (meaning to have persistence, determination, courage) measures the tendency of students to sustain interest in and give effort toward very long-term goals (Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit: perseverance and passion for long-term goals. *Journal of personality and social psychology*, 92(6), 1087, Chicago). The scores were collected and input into the Tableau dashboard and used in analyzing student academic performance with the Grit scores.

The Grit data on the dashboard allows staff analysts to examine student persistent rates. The analysis showed that students with the lowest Grit scores have the lowest average GPA. Since Grit is a long-term measurement, Summer Bridge also collected scores from Summer Bridge 2014 to be included in the dashboard. Summer Bridge is interested in comparing first-year retention rates of these cohorts. At this time, the result of these findings helps to shed light on student success, to make more informed decisions and to enhance and modify Summer Bridge program services to meet student needs. Furthermore, data access via the dashboard allows management to consider the performance of individuals in the program for accountability purposes.

University Advising Center. With assistance from OIE, data collected help the University Advising Center better assess current policies and procedures in place with regard to student probation and disqualification (PDQ). For example, freshman students on academic

probation are required to complete one or more of the following intervention programs designed to assist them with academic recovery:

1. Successfully complete an Academic Success class
2. Utilize ongoing support services through Support Net at the Learning Center (i.e., tutoring, supplemental instruction)
3. Complete one 2-hour Maximizing Academic Potential (MAP) workshop

Once data have been fully analyzed the University Advising Center determines which programs should be continued, stopped, or continued with modifications. Further, data assist the University Advising Center to determine whether or not policy changes should be made. For example, current sophomores, juniors, and seniors that fall on academic probation do not have required intervention programs to complete. Data are analyzed to determine policy changes and best intervention strategies for these groups of students that fall below a 2.0 grade point average.

Currently, it is the responsibility of the University Advising Center to track all students on academic probation and to assign intervention programs for students to complete. Student populations include freshman, first-time transfer students and students who were disqualified and readmitted through an appeals process.

Several programs are involved in the implementation and tracking of the success of each student depending upon the intervention completed. SupportNet services tracks students on probation that are required to use their services. They monitor the usage and frequency of services (i.e., tutoring, supplemental instruction) and how often. Instructors for the University 20T Academic Success course, for example, track the attendance and assignment completion of students who are required to complete this course. In addition, the University Advising Center tracks student attendance at the Maximizing Academic Potential workshops both in person and through Blackboard. All records are then sent to the University Advising Center for record keeping and analysis in collaboration with the OIE. Initial reports of completion determine whether a student has successfully completed their assigned intervention in order to be eligible for continued enrollment the following semester.

Accountability falls on the University Advising Center and the academic counselor responsible for PDQ processing. This individual is responsible for compiling student reports in a timely manner in order to report which students meet continuing enrollment eligibility. If this process is not completed on time students are not able to register for classes and may be disqualified from the university.

The Learning Center. OIE developed a data analytics dashboard for the Learning Center, where data collection and analysis are critical to daily decision making as well as for long-term planning. Throughout the semester, the data are used for evaluating peak time service activity in order to make staffing scheduling adjustments as needed. Data are also used in determining student demands and needs, which provides information on hiring, training and budgeting for tutors. The Learning Center team, for example, evaluates how many students come in for math tutoring and also evaluates in which math courses students may need assistance. This information is important in order to make sure that appropriate student tutors are hired and trained on the needs and expectations of students.

End-of-semester data are also evaluated to determine if the services provided are making a difference in student success. Through data analysis, the Learning Center may change techniques to improve measurement. For example, with Supplemental Instruction, the Learning Center has been able to determine that an increased number of visits have a direct impact on student success. SupportNet data show that single visits have little or no significance, which has prompted the student advisors to follow up regularly with students and to encourage repeat visits.

The Learning Center makes nearly all of its operational decisions using evidenced-based data. The use of data is what drives allocation of current resources as well as additional funding opportunities. Data-driven decision-making also allows staff to have clear expectations of programmatic outcomes and objectives and a measurable scale of accountability to ensure that daily work is in line with broader strategic goals and outcomes. Assessment of data collected provides staff with critical feedback on program performance and allows opportunity to make adjustments in student-staff training, policies and procedures as well as approach and direct student support. By collecting and analyzing data related to student support programs, the Learning Center is able to provide quality and effective services that assist the university in its mission to improve student success.

University Courtyard Housing, Learning Communities. OIE developed a data dashboard to support the University Courtyard Housing and the Learning Communities program. The Housing Learning Communities (HLC) program is an innovative program and initiative for improving student success. As a known and proven high impact practice, learning communities make programmatic sense to implement in university student housing. The HLC program offers freshmen three learning community classes. As a result of program participation and living in the residence halls, the evidence shows participant students tend to have higher GPAs, higher graduation rates, and shorter time to degree. In addition, data show there tends to be a smaller percentage of students on the disenrollment list by participating in the HLC.

The targeted student groups of under-represented minority (URM) and first generation students also tend to do better than other students when they are given more support. This is one of the benefits of the structure of participation in the HLC. The Courtyard Housing also created an International Student program by creating an international floor to meet the engagement needs of these students. The results show an increase in GPA and an increase in interactions with domestic students. Data also show a higher rating on the student satisfaction survey.

The management team looks at results to determine “touch points” and programs for the incoming students. Students in the housing suites, for example, are found to underperform academically compared to students in the traditional halls (student rooms). The analysis suggests Courtyard Housing needs to introduce more targeted programs and engage more individual conversations with students (the “touch points”). As a result of information from dashboard analytics, the evidence shows a closing of the academic performance gap between students living in Suites versus Traditional Halls.

Advisors that work with individual academic programs are accountable for using data and reaching out to those students who meet certain criteria. Advisors have a list of students and data regarding their performance and are expected to reach out to those students whose information suggests they need assistance.

CONCLUDING REMARKS

In addition to the implementation of the Qualtrics Survey Research Suite and the Tableau Dashboards, the university also launched the GradesFirst/Early Alert and U.Direct/U.Achieve systems for the purpose of monitoring student progress to degree completion and for enabling students (with advisor support) to build their course road maps and their own plans for timely success to degree. These information technology tools support data aggregation, data visualization, and data decision making among administrators, staff, and faculty. These data application systems support faculty decision making when it comes to providing referrals to students needing additional support with professional advisors, tutors and career counselors.

U.Direct will deliver class roadmaps for students to use and stay on track for their specific degrees. University advisors will use the GradesFirst tool to inform on student performance and will enable current action data for student advising. Using the Tableau dashboard, students will be able to assess their progress and help them analyze the impact of changing majors. These tools, plus the implementation of GradesFirst will assist in identifying students that are in need of intervention by the staff.

In sum, there is both opportunity as well as need to expand and integrate data and analytic services across the entire campus. In the area of education planning, dashboards are used for monitoring enrollment activity of students during the enrollment registration period so that colleges and departments can track enrollment by courses and sections, and compare this against FTES targets and historic trends. In the area of counseling and coaching, in collaboration with Student Affairs, OIE developed analytic dashboards to track usage, academic progress, and comparison data for ongoing assessment needs (see e.g., [Supplemental Instruction and Its Effect on Student Performance](#)). In the area of performance targeting and support intervention, OIE developed a dashboard to identify students who are at-risk of dropping out during the first year in school as well as those close to graduation during the last semester based on their cumulative GPA and units earned. Colleges and departments have used these data effectively to increase their retention and graduation rates through one-on-one interaction with identified students.

Fresno State fully embraces the practice of using data for decision making purposes. As the report demonstrates, the evidence is the widespread use of data for program review, accreditation self-studies, annual program assessments, for monitoring the persistence, retention, and graduation rate progress of all students. As a matter of practice, the data are disaggregated by college, by department, by major, by gender, by race-ethnicity, by first generation status, by income level, and by institution of origin to name a few. The internal dashboard system, however, can carry the disaggregation of data down to the individual student record level as needed. Employees who have authority to the student record level are provided with this right via the Tableau dashboard.

The evidence clearly shows Fresno State uses data and analyses for improvement and decision making. Across the University data are used for data-based decision making, an essential element of continuous quality improvement. A wide-range of research methods and tools are used for collecting data and performing institutional research. Since no single research approach provides all the information, multiple approaches or mixed-methods are important to utilize, such as focus group research, personal interviews, quantitative surveys, extracts from the student information system, and analysis of program service data from student support databases. The “triangulation” of research approaches helps more fully to understand the particular research questions and institutional processes. Other sources of information might include using published reports, such as the OIE Fact Book or the Common Data Set in addition to data from the OIE Tableau Dashboard system.

Finally, the use of data is central to how Fresno State leadership and educators evaluate their practices and monitor students’ academic success. The procurement and implementation of the Tableau dashboard system for data-driven decision-making is an ongoing capacity building task. The investment of time and resources is showing great returns on investment: campus staff and faculty are using data for informed decision-making (see <http://www.fresnostate.edu/academics/oie/data/index.html>).

APPENDIX – TABLEAU USER ACTIVITY

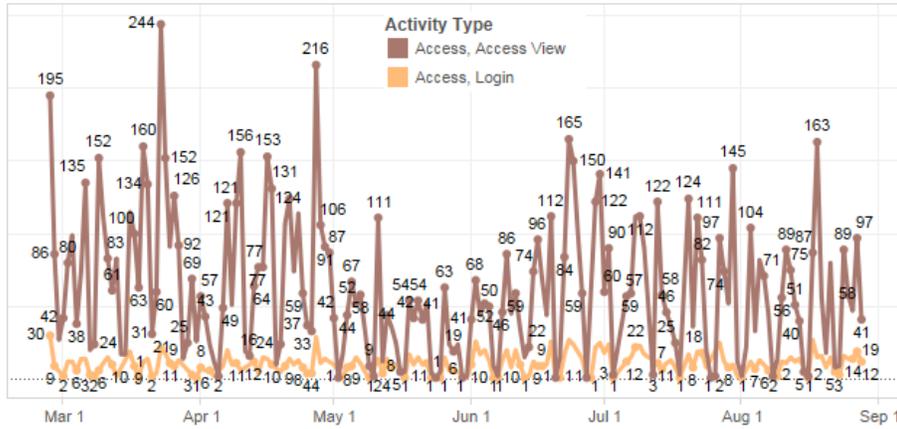
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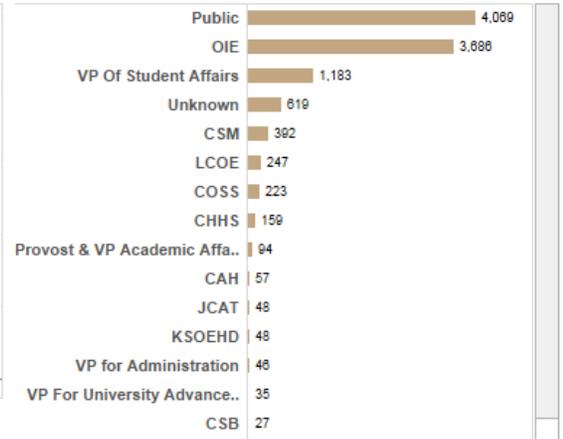
User
 All

Select Job Category
 Job Area

Total Views and Logins Over Time



Total Views by Job Area



Workbooks and Dashboards by Total Views and Distinct Users

