Beyond the Numbers: Qualitative Analysis of Open-Ended Responses for Identifying Student Success Indicators

Sriram Chintakrindi, Meggan Jordan, Erin Littlepage, Stuart Wooley, Christian Pinedo, Maribel Duran, and Katie Olivant

Abstract: This study examines Student Success indicators and coded themes from open-ended responses completed by first-year and senior college students at California State University, Stanislaus. The purpose of this study is to examine whether student success indicators will provide researchers with evidence-based insights into identifying best practices for improving graduation rates and eliminating achievement gaps for students. The results of this study demonstrate that student-faculty relationships are a major concern among college students and that administrators should develop constructive interventions to facilitate and improve student-faculty bonding as a method for promoting student success.

Keywords: *Student Success, Engagement, High Impact Practices*

Introduction

Utilizing a faculty-scholar model, our Stanislaus State University (Stan State) research team comprised of faculty, staff, and students participated in a qualitative data analysis of student success indicators using data collected from the National Survey for Student Engagement (NSSE). We are a Hispanic Serving Institution (HSI) with the majority of our enrollment identifying as Hispanic students (57%). The University is located in a largely rural area of California and many of our students come from farmworker communities in the six surrounding counties, are first generation students (73%), underrepresented minorities (59%), and Pell Grant Eligible (62%).

The NSSE survey is administered to collect data from four-year colleges and universities about first-year and senior students' academic experiences in order to compliment the assessment and planning efforts by higher education administrators. NSSE offers aggregate descriptive statistics of how undergraduates perceive their college educational experience and compares these experiences from the first to senior year using a cross-sectional design. NSSE offers participating institutions a variety of reports that norm and compare student responses across a number of different indicators. The NSSE indicators includes 10 Engagement Indicators, six High Impact Practices (HIPs), and individual survey questions.

The purpose of this research study is to contribute to the body of knowledge on student engagement indicators using qualitative data to inform assessment practices.

Through qualitative data analysis of student open-ended responses, we are seeking to understand "what works" with facilitating student engagement, which student engagement indicators need further conceptualization, and whether conceptual gaps in our understanding of student engagement may exist. We believe that the findings from this research study will advance qualitative data analysis and methods for examining open-ended responses using NSSE data (See Table 1).

Table 1. Open-ended response questions in Stan State NSSE

1. If you have any additional comments or feedback that you'd like to share on the quality of your educational experience, please enter them below.
2. What has been most satisfying about your experience so far at this institution, and what has been most disappointing?
3. Please describe the most significant learning experience you have had so far at this institution.
4. What one change would most improve the educational experience at this institution, and what one thing should not be changed? (default)

Open-ended responses are rarely used in data analysis or reporting. Moreover, these open-ended responses had never been given much thought at our institution before. The aim of this study was to systematically analyze the open-ended responses of the NSSE across three waves of cross-sectional data (2011, 2014, 2017). The rationale for this study was to explore how this overlooked data could inform assessment and programming at our institution.

Literature Review

Chambers and Chiang (2012) conducted a study of undergraduates using qualitative content analysis methods to understand student experiences, engagement, and perceived challenges to success. They discuss Zipf's Law (1949) regarding the use of word count frequencies and state that "the assumption is that words and phrases mentioned most often are those that reflect important concerns in the larger conversation and express the greatest concerns." The findings from their study indicate that most students had significant concerns regarding the social climate on campus. The students frequently mentioned repeated themes related to community, interaction with people, and extracurricular activities. These repeating themes allowed Chambers and Chiang (2012) upon closer inspection of the data, using content-analysis, to find that student isolation and alienation was a major issue outside of the classroom environment. Additionally, students felt disconnected from faculty outside of the classroom.

Kuh et al. (2011) describe how implementing HIPs are essential for student inclusion, intellectual development, and academic success. To reduce student alienation, faculty need to serve as role models, mentors, and guides for lifelong learning (Chambers & Chiang, 2012). Therefore, based on the findings from the Chambers and Chiang (2012) study, higher educational institutions need to focus on building relationships between faculty and students outside of the classroom through on-

campus activities, mentorship programs, and student organizations.

Finally, Chambers and Chiang (2012) discuss how open-ended questions are a valuable tool for gathering contextually-rich information that provides a baseline for proposing funding for policies and programs that eliminate the social- and cultural- gap on campus between students and faculty. Their study found that "Academic experience", "Social experience", and "Campus environment" are the three categories that students frequently cited as major concerns when completing the open-ended NSSE questions.

The extant literature covers the concept of student success, participation, and how to facilitate and achieve both in unique but similar ways. Kuh (2007) examines undergraduate student engagement and college readiness by analyzing prospective students in high school as well as students entering a university environment for the first time. Kuh's (2007) argument relies on a three-pronged approach: (1) to assess how and at what level high schoolers are preparing for their collegiate careers, (2) the expectations students have entering college versus reality, and (3) providing universities and their administrators strategies to get their students on track towards academic success through HIPs. Ultimately, Kuh (2007) writes, "By identifying the gaps between entering students' expectations and their level of engagement in the first year of college, institutions can target their efforts to create educationally effective programs for new students" (p. 8).

According to Kuh (2007), most college students entering four-year institutions are generally unprepared for the rigors and critical thinking expectations of college. Unfortunately, student success is largely related to their parent's income level and education, and if students do not have proficiency in subjects like mathematics and reading by the eighth grade, they are less likely to be college ready by their senior year of high school (Kuh, 2007, p. 4). Kuh (2007) devotes much of his time in the literature with regards to students' preparedness.

The High School Survey of Student Engagement (HSSSE) reveals that while most students express a desire to attend university, on average, they do not exhibit habits and tendencies that translate to academic success. When they arrive to college, students typically expect to do more during the first year than they are prepared to manage in terms of preparing for courses, utilizing services, and participating in on-campus activities. Kuh (2007) points to NSSE data that shows, for example, students study two to six hours less per week than they thought they would when entering college. Additionally, between 40-50% of students never use career planning, financial advising, or academic tutoring services in their college career--resources that are in place precisely for facilitating student success (Kuh, 2007, p. 4).

Kuh (2007) writes that while students who come in unprepared are present, there are ways of putting students on what he calls "pathways to success." First year courses that enhanced their skills or social development gave them a significant advantage over

students that did not participate in first-year courses. Most notably, Kuh (2007) points to HIPs like learning communities, study abroad opportunities, and internships as pathways to student success. Instructors, using HIPs, provide students with regular feedback on their performance and lead toward productive activities and deeper learning. Kuh (2007) admits that both students and institutions must share responsibility in helping students achieve success in college. Helping faculty members emphasize these learning practices correlates to students engaging in these activities (Kuh, 2007, p. 8).

Huber's (2010) research builds on Kuh's work, and attempts to measure the effects of service learning, internships, senior experience, research with faculty, and study abroad on student persistence and success. Huber (2010) found that the more HIPs a student engaged in, the higher their GPA was at exit along with an increased likelihood of on-time graduation. One significant finding in Huber's (2010) study was that low-income (Pell grant recipients) and Latino students are greatly impacted by HIPs participation, especially when this demographic participates in one or more HIP (Huber, 2010, Fig. 3).

While Huber (2010) stresses that these findings should be viewed with caution given the response rate (36%), she asserts that these findings are clear enough to act on, "All of the findings summarized indicate unequivocally that participation in multiple high impact activities of different kinds provides greater benefit to students than participation in only one type" (p. 4).

Lastly, Gidley et al. (2010) analyze the differences between quality, success, participation, and empowerment in higher education and how those key terms change depending on ideology. The authors question the neoliberal idea of "quality" as a measure of higher education because knowledge has been commodified rather than collaborated or shared in recent times (Gidley et al., 2010). Access and equity, they contend, is now being framed and replaced by the term "social inclusion", which emphasizes various groups of disadvantaged, minority, or at-risk individuals. However, Gidley et al. (2010) explain that degrees of social inclusion can be understood differently depending on the ideology subscribed to, with the narrowest being the neoliberal notion of social inclusion as access and – the widest interpretation - empowerment, and social justice as participation/engagement (p. 7).

What Gidley et al. (2010) do well is braid these ideologies together to have, what they call, interventions. The interventions, as they explain, should be used as a steppingstone towards a more inclusive understanding of social justice and human potential intervention with things like income support, transportation services, and improved infrastructure. Social Justice Ideology interventions encompass community engagement, sport, arts, and social enterprise while Human Potential Ideology interventions are concerned with pathways, cultural transformation, and voices "being heard". Social justice is regarded as engaged participation while human potential as empowered success (Gidley et al., 2010, 14-15). Kuh (2007), Huber (2010), and Gidley el al. (2010) ask a similar research- and theoretical-

question, "How can we empower our students?" both from a cultural and academic standpoint. As Gidley at al. (2010) points out, mass education can and should still be quality education while Kuh (2007) and Huber (2010) assess how we go about making sure students succeed, prosper, and grow through target interventions, such as developing and implementing HIPs.

Easley et al. (2012), conducted a study using the transcendental phenomenological approach, which is a qualitative research method in which the researcher focuses on the descriptions of the participants' experiences, while aiming to perceive the data through a new perspective. The study participants were first-generation and immigrant Mexicans from a university in the Western United States. The qualitative data included autobiographies (n = 115) written by Latinx students enrolled at the university, student focus groups (n = 33), and family interviews (n = 8). The results indicated that even with socio-economic adversity, immigration issues, and the minority label in higher education, Hispanic students can be very successful in their academic achievement with the proper institutional support structure and a campus culture that promotes and embraces diversity. These results are important considering the increasing number of Hispanic students enrolling in the higher education system. It is essential and important to understand the components that influence and motivate Hispanic students' academic success.

According to Easley et al. (2012) multiple factors motivate educational achievement for Mexican heritage groups and have been referred to as "ganas". Ganas is described as the desire to succeed and has been an influential aspect of students who expressed their reasoning behind their achievements. The results of this study revealed multiple components of Ganas, including (a) acknowledgement of parental struggle and sacrifice, (b) strong value of family and family's history, (c) parental admiration and respect, (d) a desire to repay and pay forward, and (e) resilience and willingness to persevere (Easley et al., 2012).

Research Questions

The research questions for this study focuses on understanding whether student success indicators can be developed by examining coded themes of open-ended responses completed by college students. In our research questions we are trying to develop and measure student success indicators that can be used to identify best practices and policies in higher education:

1. What patterns emerged from students' open-ended responses in the Stan State NSSE data?
2. How do these patterns align with, or deviate from, definitions of student success as it is defined in the academic literature?
3. In what ways can this data be used to develop personalized student success indicators for Stan State?

The research team analyzed open-ended responses completed by first-year and senior-level college students from three NSSE administrations (2011, 2014, 2017). Part of the work undertaken by the team was to determine whether utilizing qualitative data analysis would bolster and support existing quantitative data reports provided by NSSE. The team was interested in learning whether qualitative data

analysis of open-ended responses would shape the development and measurement of student success indicators using coded themes. Previously, the open-ended responses had been ignored or overlooked when the survey results were delivered to the university community, but now that there were three waves of data, we could compile a database of open-ended responses that could be analyzed for meaningful patterns with a larger sample size (n=330). The team plans to share the results of qualitative data analysis of student success indicators with administrative groups discussing graduation and retention rates with a focus on supporting diversity, equity, and quality of learning at our HSI.

This study was supported by The Office of the Provost, in coordination with the Office of Strategic Planning, Enrollment Management, and Innovation, which launched a pilot program connecting two faculty scholars with graduate research assistants to review and analyze open-ended institutional survey data using qualitative data analysis software (NVivo). The faculty scholars designed the research questions and developed the methodology for analyzing the open-ended questions. The faculty scholars provided two graduate students (enrolled in our History and Child Development programs) with qualitative research methods training. After an overview in research methodology, the graduate research assistants were tasked with mining the qualitative data of student responses for coded themes (Hilal & Alabri, 2013; Wong, 2008). Research findings are presented by coded themes using both deductive and inductive analytical approaches for exploring factors that contribute to student success. At Stanislaus State, "Student Success" is defined as follows (2018):

Stanislaus State recognizes that student success occurs when our students are engaged and supported in their quest for knowledge and understanding. Student success is realized when our students are equipped and empowered to positively transform their lives, to inform the practice of their chosen profession, and to exercise civic rights and responsibilities to transform their communities.

At Stanislaus State,
- *We use the power of education, community, and civic engagement to transform lives.*
- *Student success occurs when we engage and support our students in a quest for knowledge and understanding that encourages and empowers them to identify their personal goals and professional aspirations. Successful students strive to make their own unique contributions to our diverse world.*
- *We support our students by expanding opportunities and enriching experiences that broaden their awareness of others' perspectives and develop their intellectual capacity and ethical character.*
- *Student success is achieved when our students can imagine a better world and are empowered to make it a reality within the Central Valley region and beyond.*

Methods
The methodology used in this research study parallels the methods used by Chambers and Chiang (2012) who examined undergraduate student experiences by conducting a similar qualitative content analysis using open-ended responses from NSSE. More specifically, they sought to understand the perception and

attitudes of students towards their experience of developing skills, awareness, and confidence when pursuing an undergraduate education. Chambers and Chiang (2012) state that open-ended questions are beneficial for contextualizing statistical findings compared to closed-ended questions. They assert that open-ended responses provide the audience with quotes to illustrate significant points, gaps in knowledge, and details about individual experiences that are disaggregated. Furthermore, qualitative analysis of coded themes allows researchers to identify patterns and themes through the coding, classifying, categorizing, and word frequency counts of the dense, unstructured information found in open-ended responses.

The qualitative research methodology utilized in this study was developed by following the principles of qualitative data analysis which is a process of systematically searching, arranging, categorizing participant artifacts, such as, interview transcripts, observation notes, or other textual or non-textual materials that allows for the processing of vast quantities of raw data by identifying significant patterns, synthesizing meaning, and interpreting through building coded themes using a logical chain of evidence (Wong, 2008). Additionally, this study uses the method of Interpretative Phenomenological Analysis (IPA) to provide a detailed and structured analysis of the lived experiences of students through elucidating and clarifying their experiences within the context of the college environment (Eatough & Smith, 2008). Through IPA, the team developed coded themes and organized them using NSSE engagement indicators (see Table 2).

The research team utilized NVivo software for the coding process. The NVivo qualitative data analysis software is a tool that helps researchers facilitate and organize thematic coding across multiple coders, which can improve the validity and reliability of the research. It also allows the researcher to maintain a set of key criteria for validating the data using the principles of Credibility, Authenticity, Criticality, and Integrity (Whittemore et al., 2001). Credibility is concerned with whether the results are an accurate interpretation of the participants' meaning. Authenticity relates to whether different voices are being heard and interpreted. Criticality focuses on whether there is a critical analysis and evaluation of all aspects of the research. Integrity relates to whether the researchers are acting self-critically to identify subjective biases.

A non-probability and convenience sampling strategy was used to collect data from the Stan State students completing the open-ended responses using the NSSE survey. This data was originally gathered for institutional data collection that was unrelated to conducting assessment related research. The student data was collected from all first-year and senior students with email addresses in the University's enrollment database. The sample data, in Figure 1, represents a sub-sample of the data gathered from a sample of Stan State students (First-Year Students and Seniors) who completed the open-ended items included in the NSSE instrument in 2011 (n=122), 2014 (n=81), and 2017 (n=130). A convenience sampling strategy was used because students had the voluntary option of completing the survey and its open-ended response section. Therefore, we used only the open-ended data that was completed by students and reported with the NSSE data set.

_____

**Figure 1. Class Level of Overall NSSE Survey Sample
and the Number of Open-Ended Responses Collected**
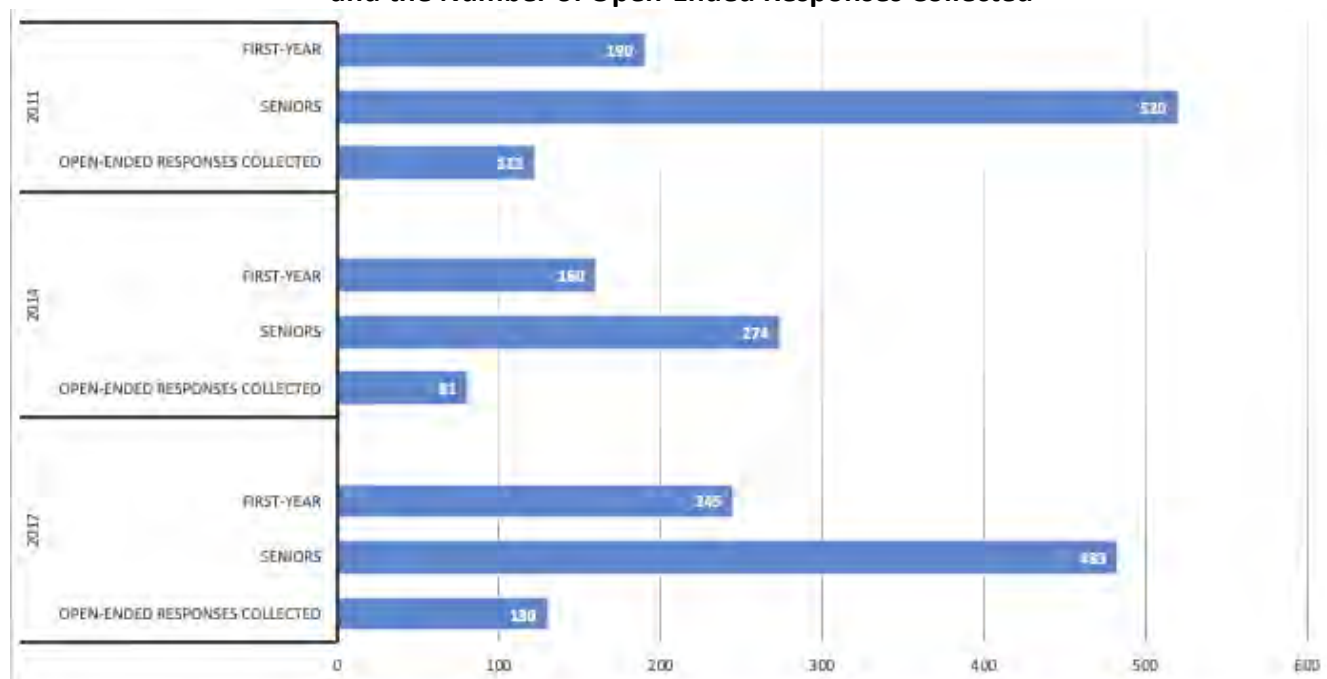
The Graduate Assistants developed an initial coding framework for open-ended responses using free codes. The research team re-coded the data using the following engagement indicators (see Table 2) to develop a hierarchical coding framework. Some responses fit the NSSE Engagement Indicators, but others did not. For the latter, we created new codes.

Table 2. NSSE Engagement Indicators

Theme	Engagement Indicators
Academic Challenge	Higher-Order Learning Reflective & Integrative Learning Learning Strategies Quantitative Reasoning
Learning with Peers	Collaborative Learning Discussions with Diverse Others
Experiences with Faculty	Student-Faculty Interaction Effective Teaching Practices
Campus Environment	Quality of Interactions Supportive Environment

_____

Using the NSSE data, the team analyzed the following indicators and compared those indicators among cohorts:

(1) Student success and satisfaction from participation in educationally purposeful activities at Stan State.

(2) Stan State requirements and the enriching and rigorous nature of coursework.

(3) Student attitudes and perceptions of the college environment at Stan State for facilitating graduation and retention rates.

(4) Thematic and coded estimates of educational and personal growth since starting college among Stan State freshmen and graduating senior students.

(5) Descriptive statistics of background and demographic information among Stan State students.

(6) Attitudes towards HIPs that promote equity, diversity, and quality of the learning among Stan State students.

Table 3. Code and Indicators for Open-Ended Responses

Academic Challenge
    Academic Experiences
        What Helped Students Improve
        Academic Rigor
        Academic Stress
        Graduate School Preparedness
Campus Environment
    Infrastructure
        Classrooms
        Dining
        Library Facilities
        Athletic Facilities
        Campus Aesthetics
        Housing
        I.T.
        Parking
    Quality of Campus Interactions
        Staff Advising
        Financial Aid interactions
        Negative Student Staff Interactions
        Positive Student Staff Interactions
    Supportive Environment
        Bureaucracy
        Orientation
        Lack of Information
        Athletics
        Missed Opportunities
        Study Environments
        Campus Safety
        Class Size
        Commuter Campus
        Financial Cost
        Inclusion and Diversity
        Pathfinding
        Program Suggestions
        Program Statements
        Regret coming to CSU Stanislaus
        School Life Balance
        Student Life
Experiences with Faculty
    Student/Faculty Interaction
        Career Statements
        Research with Faculty
        Faculty Advising
    Teaching Practices
Learning with Peers
    Collaborations with Peers
    Discussions with Diverse Others
        Reactionary Statements

Results

The team observed that student open-ended responses tended to reflect NSSE engagement indicators such as Student/Faculty Interaction, Supportive Environment, and Quality of

_____

Campus Interactions. Codes such as Academic Challenge and Learning with Peers were coded less often because students mentioned these topics less often. New codes that were mentioned most often were *Career Statements*, *Student Life*, *Financial Cost*, *Lack of Available Classes*, and *Academic Advising Statements* (see Table 3).

Based on the qualitative analysis of coded themes and indicators, the team identified eight codes that recur frequently within the open-ended responses completed by students: (1) Academic Advising, (2) Career Readiness, (3) Financial Cost, (4) Negative Attitudes Towards Campus Resources, (5) Positive Attitudes Towards Campus Resources, (6) Professor Interactions, (7) Student Administrator Interactions, and (8) Student Faculty Interactions. These coded themes were disaggregated by NSSE completion year in Figure 2 and by student class year in Figure 3.

Figure 2. Frequency Count of NVivo Coded Themes by Year of NSSE Completion
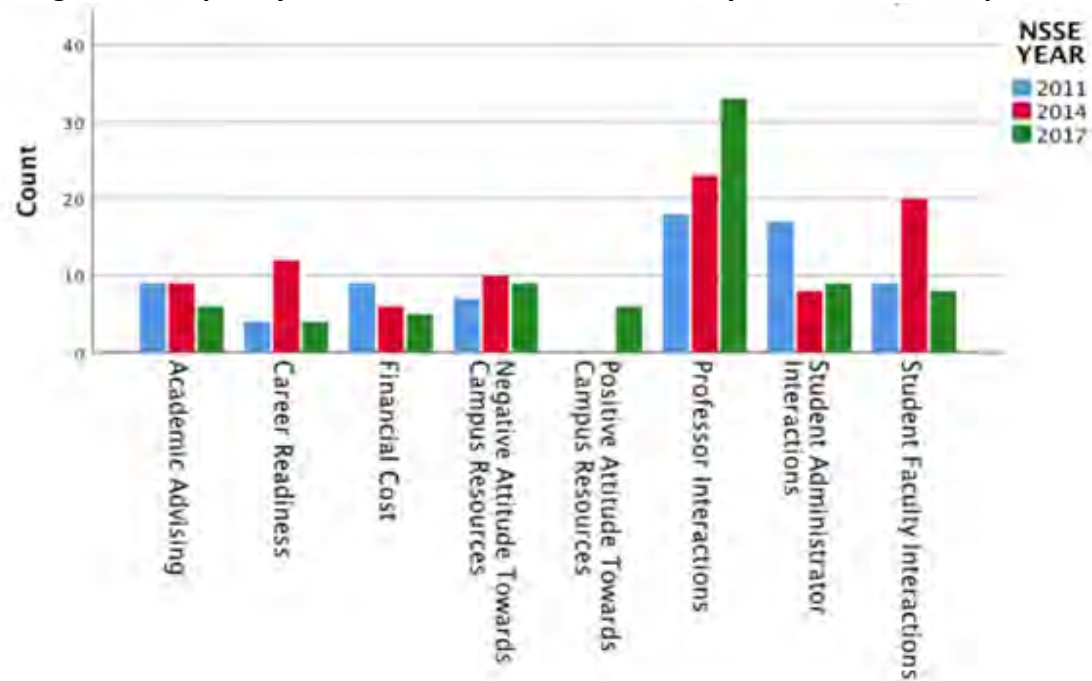
The disaggregated data indicates that students, especially students who completed the survey in 2017, frequently commented on *Professor Interactions* when responding to open-ended responses. Generally, as indicated in Figure 3, senior students commented more frequently about the specific coded themes compared with first-year students. This may indicate that an increasing amount of time that a student receives an education is associated with a stronger degree of appraisal with regards to their educational experience; seniors have spent more time in college and are more likely to provide richer and more contextualized data in their open-ended responses compared to first-year students.

Additionally, the coded theme for *Student Faculty Interactions* indicates that students observe that access to the faculty in their respective degree program is limited but they seek more orientation and guidance. Figure 4 presents the top 12 most frequently mentioned codes that are disaggregated by year of survey

_____

completion. Codes not labeled 'Positive' or Negative' refer to frequently mentioned experiences on the college campus; the research team did not attempt to determine whether campus, staff, or faculty objectively produced good or bad experiences. Codes with *Positive* or *Negative* labels were interpreted as emotional experiences that could be perceived as good or bad experiences based on textual analysis and use of interpretative phenomenological analysis (Chambers & Chiang, 2012; Eatough & Smith, 2008).

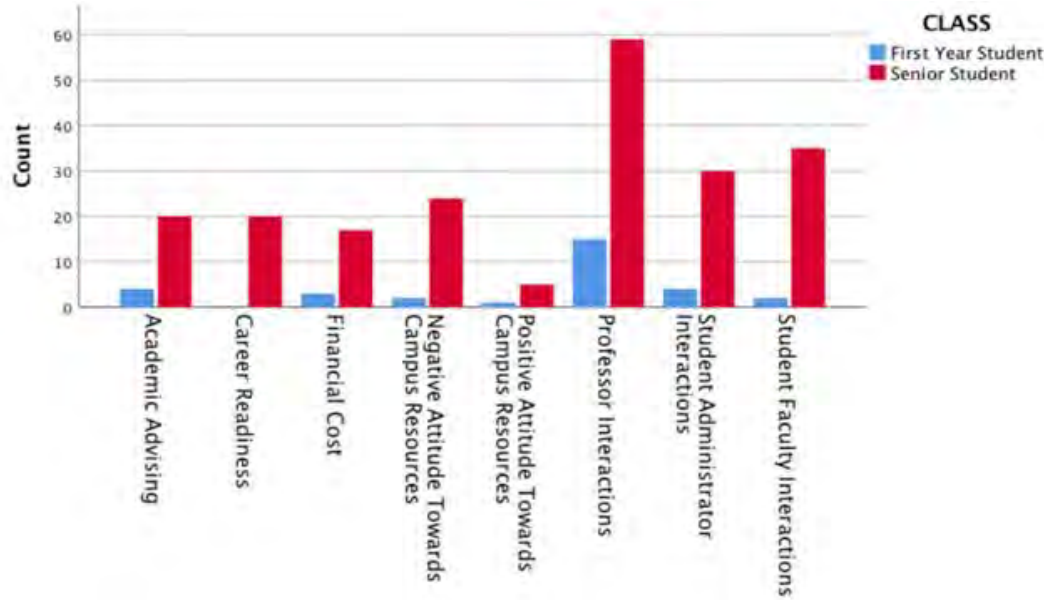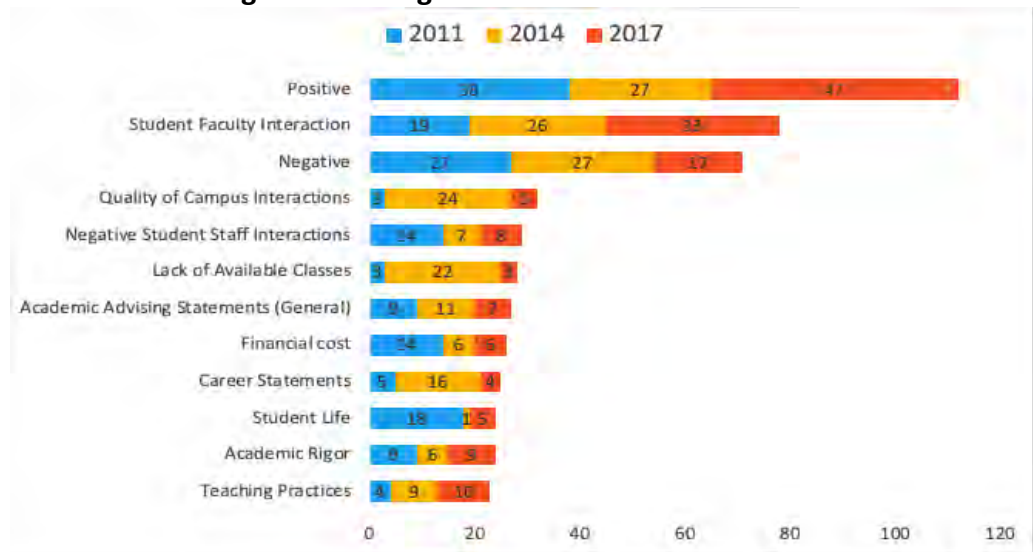**Figure 3. Frequency Count of NVivo Coded Themes by Student Class Year**

Figure 4. Coding Counts For Waves 2011-2017

_____

**Figure 5. Word Cloud of Commonly Used Syntax from
Students who Completed Open Ended Responses**

Finally, in relation to the coded themes and the word cloud presented in Figure 5, the following quotes pulled from open-ended responses provide context to the findings. In particular, the quote in Statement 2 is suggestive of approaching higher education from a customer service model perspective, which can be viewed as being at odds with the perspective of some members of faculty governance who believe that student understanding and knowledge of teaching assessment, faculty performance, and course evaluation is questionable, debatable, and impacted by biases, which has been repeatedly demonstrated in research on student evaluations of teaching (Fan et al., 2019; Rosen, 2018).

Statement 1: "Over the years, I learned that decisions or choices you make in your early college years are the most crucial and vital to your success along with planning and planning some more. I think when I stared school, I was lost and still am or at least I have a better idea of what I might want to do…"

Statement 2: "Please understand, that although we are adults, we are also still students. There are professors who understand this aspect and then there are those that either forget or simply do not care. These professors provide a greater barrier to student. I recommend that all professors- regardless of tenure- be evaluated each semester (or at minimum, once a year) by the students, and that the information collected be utilized to ensure that something

is done in the interest and for the benefit of students and learning…"

The findings provide evidence that themes can be generated from open-text responses to the NSSE, and that these themes do relate to student perceptions of their overall learning experience. Coded themes allowed for the meaningful deconstruction of open-ended responses and to present student success indicators using visual illustrations to represent the findings (Hilal & Alabri, 2013). Upon further examination of the visual representations, the team has uncovered a number of student success indicators that are consistent across student classes (first year vs. seniors) and years (e.g. 2011, 2014, and 2017), discussed below.

Discussion

The results of this qualitative analysis of Stan State NSSE data (2011, 2014, 2017) may help researchers better understand and improve graduation rates and eliminate achievement gaps among students in higher educational institutions. The findings from this study should be used to inform and understand which practices, programming, and opportunities may be essential elements contributing to student success. The results from this research study may have practical application for college counselors, academic advisors, institutional research officers, and researchers to learn more about how students perceive their Stan State experience. In addition to our findings, the Faculty Scholar/student research model may be adopted by other campuses to directly engage both students and faculty in institutional research and assessment processes for achieving student success.

Based on the analysis of the data observed, students, especially senior students, have frequently commented on *Professor Interactions* when responding to open-ended responses. *Professor Interactions* are coded as interactions that occur in the classroom setting, when the professor is addressing the whole classroom of students through announcements, lectures, discussions, and responding to student questions. Additionally, the coded theme for *Student Faculty Interactions* indicates that students believe that access to the faculty body in their respective degree program is limited and they seek more orientation and guidance. *Student Faculty Interactions* are coded as interactions that occur when the student is trying to communicate with the faculty member on a one-on-one basis over email or during office hours. We observed that our coding for *Professor Interactions* and *Student Faculty Interactions* are related given the important role faculty play in fostering a sense of belonging on campus and for building opportunities for student engagement.

These findings compliment the results of Gidley et al. (2010), which showed the differences between quality, success, participation, and empowerment in higher education and how those key terms change depending on institutional ideology. More specifically, access and equity are now being used to emphasize the needs of various groups that are disadvantaged or minoritized. However, Gidley et al. (2010) explain that degrees of social inclusion can be understood differently depending on the institutional ideology subscribed to, with the narrowest being the neoliberal notion of social inclusion as access, social justice as participation/engagement, and the widest interpretation involves social inclusion through empowerment (p. 7).

Kuh (2007) points to HIPs like learning communities, study abroad opportunities, and internships as methods for improving student

success. These HIPs provide students with more participatory engagement, access to faculty, and regular feedback on their performance, which leads toward productive activities, deeper learning, higher quality interactions with faculty. Kuh (2007) states that both students and institutions must share responsibility in helping students achieve success in college. Helping faculty members emphasize these learning practices correlates to students engaging in these activities (Kuh, 2007, p. 8).

These research findings will inform practices and practical applications for both administrators and faculty by providing insight into the concerns and reflections that students have during their college educational experience. The research team advocates that administrators and faculty should work together to improve student perceptions of *Professor Interactions* and *Student Faculty Interactions* by encouraging faculty to improve their communication skills through workshops, trainings, and mentoring students. Furthermore, the team believes that early intervention programs that target freshmen and transfer students will help to improve student success indicators, retention rates, and graduation rates. Finally, our research reinforces the principles of equity, diversity, quality of learning, and social justice for students enrolled in our HSI. Based on the results of this research, this team recommends a significant push for increased funding, student recourses, and opportunities for

student and faculty interactions through mentorship programs, research opportunities, service learning, and academic internships. The research team believes a wider availability of these resources and experiential learning activities will improve student success indicators. Findings will continue to be reviewed, as more cohorts are surveyed, to understand which practices, programming, and opportunities may be essential elements contributing to student success over time. Finally, through this research experience, participants learned that the Faculty Scholar/ student research model is effective at creating a collaborative research environment between faculty and students, which the team recommends be adopted by other campuses or divisions to directly engage both students and faculty in institutional research and assessment processes.

Ethical Considerations
This study was approved for data collection, analysis, and dissemination by the Institutional Review Board at California State University, Stanislaus. All data collected from participants has been de-identified and reported in aggregate to protect the anonymity of participants.

Acknowledgments

References
Chambers, T., & Chiang, C. H. (2012). Understanding undergraduate students' experience: a content analysis using NSSE open-ended comments as an example. *Quality & Quantity*, *46*(4), 1113-1123.
Eatough, V., & Smith, J. A. (2008). Interpretative phenomenological analysis. *The Sage Handbook of Qualitative Research in Psychology*, *179*, 194.

_____

Finley, A., & McNair, T. (2013). Assessing underserved students' engagement in high impact practices. Washington, DC: Association of American Colleges and Universities.

Easley Jr, N., Bianco, M., & Leech, N. (2012). Ganas: A qualitative study examining Mexican heritage students' motivation to succeed in higher education. *Journal of Hispanic Higher Education*, *11*(2), 164-178.

Gidley, J. M., Hampson, G. P., Wheeler, L., & Bereded-Samuel, E. (2010). From access to success: An integrated approach to quality higher education informed by social inclusion theory and practice. *Higher Education Policy*, *23*(1), 123-147.

Hilal, A. H., & Alabri, S. S. (2013). Using NVivo for data analysis in qualitative research. *International Interdisciplinary Journal of Education, 2*(2), 181-186.

Huber, B. J. (2010). Does participation in multiple high impact practices affect student success at Cal State Northridge? Some preliminary insights. California State University Northridge, Office of Institutional Research.

Komarraju, M., Musulkin, S., & Bhattacharya, G. (2010). Role of student–faculty interactions in developing college students' academic self-concept, motivation, and achievement. *Journal of College Student Development*, *51*(3), 332-342.

Kuh, G.D. (2007). What Student Engagement Data Tell Us About College Readiness. *Peer Review, Association of American Colleges and Universities,* Winter 2007, 4-8.

Kuh, G. D., Kinzie, J., Schuh, J. H., & Whitt, E. J. (2011). Student success in college: Creating conditions that matter. John Wiley & Sons.

Whittemore, R., Chase, S. K., & Mandle, C. L. (2001). Validity in qualitative research. *Qualitative Health Research*, *11*(4), 522-537.

Wong, L. P. (2008). Data analysis in qualitative research: A brief guide to using NVivo. *Malaysian Family Physician: The Official Journal of the Academy of Family Physicians of Malaysia*, *3*(1), 14.

Zipf, G. K. (1949). Human behavior and the principle of least effort. Cambridge. MA: Addison-Wesley.

About the Authors

Dr. Sriram Chintakrindi is an Associate Professor in the Department of Criminal Justice at California State University, Stanislaus. He can be reached at: schintakrindi@csustan.edu

Meggan Jordan is an Associate Professor in the Department of Sociology at California State University, Stanislaus. She can be reached at: mjordan1@csustan.edu

Erin Littlepage is an Assessment, Student Success, and Community Partnerships Specialist and Civic Action Fellows, Program Manager in the Provost's Office at California State University, Stanislaus. She can be reached at: elittlepage@csustan.edu

Stuart Wooley is the Interim Associate Vice President for Academic Affairs at California State University, Stanislaus. He can be reached at: swooley@csustan.edu

Christian Pinedo was a Graduate Assistant at California State University, Stanislaus.

Maribel Duran was a Graduate Assistant at California State University, Stanislaus.

_____

Katie Olivant is a retired Academic Program Director at California State University, Stanislaus. She can be reached at: kolivant@csustan.edu