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Competence of Faculty, Staff, and Administrators in Hispanic Culture: Evidence from Three Surveys of Personnel and Students at Hispanic-Serving Institutions

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Abstract

Survey data were gathered from college and university faculty, staff, and administrators at Hispanic-Serving Institutions (HSI) regarding Hispanic culture and Hispanic students as part of an NSF-funded investigation that focused on the characteristics and programming of HSIs as well as the background and experiences of their students. Two surveys of students were also conducted. A minimum of 44 HSIs in Texas, New Mexico, and Colorado were represented in the 393 usable responses gathered from faculty, staff, and administrators. Fourteen HSIs in New Mexico and Texas were represented in student survey data gathered in 2018 and three in north Texas in a survey completed in 2019. Responses from 213 Hispanic students were isolated from the 2018 student survey and 307 from the 2019 data. This material was used to verify and expand on the findings from the survey of faculty, staff, and administrators. A consistent and strong difference of opinion was found between Hispanic faculty, staff, and administrators at the HSIs and their non-Hispanic peers regarding information available to higher education professionals about Hispanic culture, the elements of Hispanic culture, and the characteristics and background of Hispanic students. Survey responses of Hispanic students confirmed, at many points, that the perspective of the Hispanic faculty, staff, and administrators was accurate. It appears, based on this information, that the non-Hispanic employees at the HSIs were less well informed about Hispanic culture and a major portion of their student population than would be desirable. The findings, while from the south-central United States, can inform multiple academic and support services at Hispanic-Serving Institutions and other colleges and universities as they include information about how Hispanic culture is understood by Hispanics, detail gaps in competence regarding Hispanic culture among faculty, staff, and administrators at HSIs, and describe characteristics and the cultural orientation of Hispanic students attending the HSIs in the sample.

Introduction

Chun and Evans (2016) noted —most institutions [of higher education] have struggled to develop integrated and intentional approaches to addressing cultural competence” (p. 7). Thus, —the operationalization of cultural competence within the undergraduate experience remains an elusive and often neglected goal” (p. 7). Yet, Minority-Serving Institutions (MSI), like Hispanic-Serving Institutions (HSI) and Tribal Colleges, carry labels that seem to communicate a focus on and level of skill in this area. HSIs, though, develop in a very different way than some other types of MSIs, for example Tribal Colleges and Historically Black Colleges and Universities (HBCU), and this influences the way they relate to Hispanic culture. While all three types of colleges are grouped as MSIs, both Tribal Colleges and HBCUs have a purposeful association with the ethos and milieu of a segment of the United States’ population as a foundational and defining characteristic. Garcia (2019) notes this is not the case with HSIs. Their designation is based on the percentage of enrolled students who identify as Hispanic (Office of the Law Revision Counsel, n.d.) rather than the college or university seeking to create an environment that recognizes, supports, and builds on patterns relevant to Hispanic culture. The extent to which HSIs enact inclusive supportive environments that draw on cultural values to advance their mission and the learning and skill development of Hispanic students relates to choices made by their leaders in the present context rather than continuing a commitment that has existed since the institution was founded.

Since nearly two-thirds of the undergraduates in the US who identify as Hispanic attend HSIs (Revilla-Garcia, 2018), knowing whether these colleges and universities are attune to a Hispanic ethos is a matter of some importance. This is the case for several reasons. First, the percentage of all Hispanic students in higher education that attend HSIs is high, 65% in 2016-2017 (Revilla-Garcia, 2018). Second, there are demographic shifts occurring in the United States. Hispanics are the largest segment of the US population after Whites (Flores, 2017). Population growth in this segment is faster than for all others but Asians who represent a much smaller portion of the US population. Hispanics are, on average, the youngest of all the US' ethnic groups. And four US states have minority-majority populations with Hispanics as the primary minority population in three of them (California – 40%; New Mexico – 48%; Texas 39%) (Nittle, 2019). That 52.4% of students in Texas public schools were Hispanic in the 2017-2018 school year (Nagy, Whallun & Kallus, 2018) illustrates the impact on higher education of Hispanics being the youngest segment of the US population. Very soon, every other in-state student Texas colleges and universities recruit will be Hispanic. Finally, student success theory has for decades emphasized cultural support for and limiting “acculturative stress” (Chun, Marin, Schwartz, Pham & Castro-Olivo, 2016, p. 385) felt by minority students. Whether the employees at HSIs, who educate and provide support services to the majority of Hispanics in higher education, exhibit competence in Hispanic culture will influence the experience and even the potential for success of this large and growing group of students.

Review of Relevant Literature

Searches of the literature were conducted regarding cultural competence on the part of college employees. A customized search function that combines outcomes from multiple education and social science databases was the primary tool employed. The primary search terms were culture, competence, and cultural competence with which faculty, staff, university, college, training, Hispanic-Serving Institutions, Hispanic, and Hispanic students were paired to focus the results.

Overview of the Literature

There is a broad interest in helping college students achieve competence navigating the variety of cultures they will encounter in their personal and professional lives. As Haupt and Connolly Knox (2018) stated, “By increasing cultural competency knowledge, skills, and abilities...our graduates... [become] more credible, empathetic, relatable, and trustworthy, and less inclined to negatively apply biases, stereotypes, and pre-conceived notions” (p.538). These are worthy goals and they are being pursued around the globe, in Europe (Kedzior et al, 2015; Koskinen et al, 2012) and the United Kingdom (Kruse, Rakha & Calderone, 2018), in Australia (Pillay & James, 2015), in Hong Kong (Bodycott, Mak & Ramburuth, 2014), and in the United States (Haupt & Connolly Knox, 2018). These efforts are occurring in a variety of academic fields including “emergency management and homeland security” (Haupt & Connolly Knox, 2018, p. 538), education (Sandell & Tupy, 2015), medicine (Swanberg et al, 2015), and nursing (Jeffreys & Dogan, 2012).

The materials located in the literature describe a variety of activities enacted with undergraduates and graduate students and the outcomes of investigations. These include curricula being created (Koskinen et al, 2012; Garcia Oacha & McDonald, 2019) and assessed (Bodycott, Mak & Ramburuth, 2014), the impact of study abroad programming (Blankvoort, Kaelin, Poerbodipoero & Guidetti, 2019) and a “simulation game” (Bucker & Korzilius, 2015), recommendations regarding what has not worked (Chun, 2010) and what has (Pillay & James, 2015), and studies of specific interventions (Sandell & Tupy, 2015; Swanberg et al, 2015). Yet, only two publications were found that addressed the cultural competence of college and university employees.

Articles Addressing Cultural Competence of Employees in Higher Education

Kruse, Rakha, and Calderone (2018) discuss cultural competence training at universities in the “UK, EU and US” (p 733). Their description of the current state of affairs is “cultural competency efforts on campuses remain largely under theorized and diffuse” (p. 733). In response, they constructed an “agenda...highlighting outcomes of cultural competency learning and underscoring the role of campus leadership in the development of supportive characteristics” (p. 733) which they suggest as being “attention to shared knowledge, professional learning at all levels of the organization, inclusive instructional methods, integration with other campus initiatives, and inclusivity of diversity foci” (p. 733).

Only one publication was found that discussed the cultural competence of employees of an institution of higher education, faculty in a medical school. Thompson et al (2010) surveyed over 200 medical students and found “students perceive the cultural competency of their attendings and residents to be the same or lower” (p. 91) than their own. The authors felt this finding noted an “important area for future research and curricular reform” (p. 91) as faculty play a “critical role...in the education of medical students” (p. 91). The same can be said of faculty at all institutions of higher education. But, the role of administrators in setting institutional tone and policy, determining programming initiatives, and directing funding, topics included in Kruse, Rakha, and Calderone’s (2018) discussion, should also be considered as should students’ day-to-day interaction with staff at the institution.

Method

The research completed was a direct response to the National Science Foundation’s (NSF) request for conferences to identify critical challenges for and important opportunities in science, technology, engineering, and mathematics (STEM) education at two- and four-year HSIs. That request was communicated in the Dear Colleague Letter NSF 17-092. Dr. Preuss of West Texas A&M University (WTAMU) designed the research plan that was submitted as part of the *Consejos Colectivos* conference team’s application. When NSF award 1764268 was made, he operated as a member of the conference planning team and, during and following the conference, as the lead researcher. All the members of research team were from WTAMU and are co-authors of this article.

The research objective of the project was to produce original and timely information about the challenges and opportunities in STEM education at HSIs focusing on: (1) improving Latinx STEM education, (2) building capacity for STEM research, and (3) implementing appropriate institutional change (NSF, 2017). A sequential, mixed-methods investigation of the challenges and opportunities for HSIs in these areas was conducted beginning with literature review and focus group data gathered from conference participants and continuing with targeted interviews and survey research following the conference. A sequential exploratory pattern was deemed appropriate as there was little extant information about the topics under investigation. This made literature review and qualitative investigation then triangulation between data sources followed by validation with a larger sample the preferable approach.

As an exploratory investigation the overall research questions were broad but included foci within topic areas. This discussion addresses a specific subset of ideas, the level of understanding of Hispanic culture among faculty, staff, and administrators at the Hispanic-Serving Institutions in the sample, institutional practices relevant to communication about or accommodation of the characteristics of Hispanic culture, and responses received from Hispanic students attending HSIs about these concepts. This involves reporting findings from three different surveys conducted as part of NSF award 1764268.

Findings from secondary research informed the investigative process from the earliest stages and data collection occurred in a variety of forms: (1) topic-specific focus groups conducted during each concurrent session of the *Consejos Colectivos* conference at El Centro College in February of 2018, (2) semi-structured interviews with students and representative stakeholders from groups that had been underrepresented in the focus groups, (3) a survey of faculty, staff, and administrators at HSIs in a seven-state region, and (4) surveys of students at HSIs in the seven-state region. All research materials and methods were submitted for review and approval by the Institutional Review Board (IRB) at West Texas A&M University. The informant populations were faculty, staff, and administrators from HSIs in New Mexico and Texas who attended the *Consejos Colectivos* conference, representatives of Texas non-profits who advocate for or provide services to Hispanic students, and students, faculty, staff, and administrators at HSIs in a seven-state region of the south-central United States. This broadly inclusive set of informants allowed for the greatest variety of perspectives regarding each topic addressed.

Focus groups with faculty, staff, and administrators from HSIs were conducted at the *Consejos Colectivos* conference in Dallas at the end of February, 2018. The discussion prompts for these conversations were developed based on information from the literature, input from representatives of the Texas Association of Chicanos in Higher Education (TACHE), suggestions offered by members of the conference organizing committee, and the experience of members of the research team. There were three general focus group topics and a set of questions specific to each. The question sets can be found in Preuss et al, 2019.

The focus group participants were selected at random from the list of Consejos Colectivos conference registrants. The parties selected were contacted by e-mail and asked to participate in a designated focus group during one of the concurrent sessions of the conference. Thirty-seven persons were asked to participate in three focus groups. Twenty-six of them agreed to participate. They represented seven four-year institutions in Texas and New Mexico and five community colleges in Texas. The same party, Dr. Michael Preuss, facilitated all three focus groups. The focus groups were recorded and transcripts were produced.

Student participants at the Consejos Colectivos conference were purposefully excluded from the focus groups. This decision was taken for two reasons. First, students might have been intimidated by the faculty, staff, and administrators in the focus groups. This could impact their willingness to speak and the content of their responses. Second, the higher education professionals in the focus groups might have altered the topics addressed in their responses with students present. It was felt that these were sufficient reasons to exclude students. This, however, meant that to have student input in the initial stage of the research another form of data gathering was necessary. Short, semi-structured interviews were planned to fill this gap. Similar interviews were also planned as a means of filling any gaps in representation left by random selection of focus group participants. With several faculty members, staff persons, and administrators participating in each of the focus groups, the only informant gap was for advocates. Even though this was the case, a small number of interviews were completed with female administrators from HSIs as the count of female administrators in the focus groups was lower than that of male administrators.

Immediately following the conference, student, advocate, and female administrator interviewees were sought. In all cases a convenience sampling pattern was enacted. Interviewees were sought through the personal networks of members of the research team. This decision was made due to severe time constraints. To be able to deploy surveys, which were to be based on the focus group and interview data, the qualitative data had to be collected, transcribed, coded, and the codebooks reconciled in 30 days. That left another 20 days for surveys to be developed so they could be deployed before the end of the spring semester in 2018. Eight students were interviewed. One male and two females were students at HSIs that were comprehensive, regional state universities. The remaining students attended community colleges that were HSIs. Four were male and one was a female. All the students attended college in Texas. Two advocates were interviewed. One was a male and one was a female. Both served in leadership roles for non-profit organizations. The male was a full-time employee of a non-profit in a metropolitan region of Texas. The female was a volunteer leader of a state-wide non-profit whose full-time role was as an administrator at an emerging HSI. Two female administrators at HSIs were also interviewed. One worked at a regional, comprehensive state university and the other at a community college. All the interviews were recorded and transcribed.

The qualitative data, focus group and interview transcripts, were divided into two groups, input from students and material supplied by faculty, staff, administrators, and advocates. All members of the research team completed open coding of each transcript (Kolb, 2012). Four worked independently while two others, Dr. Preuss and Jason Rodin, collaborated to produce a shared codebook. The student interviews, the smaller set, were coded first. When each team member had completed coding the student interview transcripts, meetings were held in which line-by-line discussion of codes was completed and a common codebook negotiated. The same process was completed subsequently for the focus group transcripts and for the administrator and advocate interviews. In this process, it became apparent that splitting the qualitative data into student and professional input had been appropriate as the codebooks derived had substantial differences. The result was two corporate codebooks, one representing faculty, staff, administrator (FSA) and advocate data and a second representing the student data.

The codebooks were used to develop surveys in conjunction with the Psychosociocultural Model of College Success for Latinx students (Castellanos & Gloria, 2007) and the work of Santiago, Taylor, and Calderon (2015). Castellanos and Gloria's theory suggests five factors contribute to college persistence among Latinx students: (1) psychological, social, and cultural strengths and supports, (2) the degree to which the student struggles with cultural congruity, (3) the level of acculturative stress, (4) sense of belonging, and (5) self-efficacy. Santiago, Taylor, and Calderón's (2015) work informed some of the structure of the FSA survey and foci of both surveys through its 10 evidence-based institutional characteristics with the potential to improve Latinx success in STEM. The following concepts were included in at least one of the surveys: (1) conducting targeted outreach to Latinx students, (2) fostering an environment of institutional commitment to student success, (3) establishing institutional partnerships that make it easier for Latinx students to advance in the pipeline, (4) improving advising, (5) establishing peer mentoring programs, (6) supporting faculty development, (7) enhancing relevant academic support programs, (8) providing research and fellowship opportunities for students, and (9) securing industry cooperation to ease transitions into the workplace.

The survey development process was completed in approximately 20 days in meetings held by the research team. Sample questions were written primarily by Dr. Preuss and discussed by the group with alternative questions suggested by team members in meetings. The questions were refined through corporate discussion across more than a dozen meetings all of which lasted multiple hours. A survey was developed for distribution to students at Hispanic-Serving Institutions in a seven state region (AR, CO, KS, LA, NM, OK, TX). A second survey for faculty, staff, and administrators at the same institutions and in the same region was also developed. The intention for the student survey was to identify student background, experience, and opinion. The intention for the faculty, staff and administrative survey was to identify institutional commitments and characteristics, the background and experience level of as well as the programming facilitated by institutional employees, and to understand the views of the employees. Both surveys were piloted and assessed for face validity. The student survey was piloted with a group of ten student volunteers at WTAMU and the faculty, staff, and administration survey was piloted with a small number of faculty and staff at WTAMU. The surveys were reviewed for face validity by representatives of TACHE. Both surveys were administered using the Qualtrics survey platform and each included some logic limitations. For example, if a respondent stated s/he was less than 18 years of age or replied s/he did not understand or agree to the conditions of the survey, survey logic took them to a thank you page and prevented engagement with the survey instrument. Another logic pattern employed made follow-on questions available only to individuals who provided specific responses (e.g., if a respondent indicated standing as a faculty person, several follow-on questions were made available about the nature of the individual's faculty appointment).

While deployed simultaneously in the spring of 2018, the means by which participation was solicited were not identical for the FSA and student surveys. The link to the FSA survey was distributed in several ways. A broadcast e-mail was sent to over 1,500 employees at 119 HSIs in the seven-state region. This contact list had been developed by the research team using the US Department of Education and Hispanic Association of Colleges and Universities listings of HSIs for the year 2016. One team member then accessed the website of each of the HSIs and searched for STEM, student support, and administrative contacts. The result was a list of over 1,500 contacts. Thirty-one persons who attended the *Consejos Colectivos* conference had also agreed to act as "Research Champions." These persons were contacted via e-mail and provided an IRB approved e-mail for use in soliciting survey participation from their institutional colleagues. A third means of distributing the FSA survey link was provided by the Texas Association of Chicanos in Higher Education. TACHE's leadership distributed the survey link to their membership via e-mail. Finally, the research team asked faculty, staff, and administrators they knew at HSIs to complete the survey. The link to the student survey in the spring of 2018 was also distributed in a number of ways. A second broadcast e-mail was sent using the list of over 1,500 employees at the HSIs in the seven-state region asking them to forward a survey link to students at their institutions. The 31 "Research Champions" from the *Consejos Colectivos* conference were contacted via e-mail and provided an IRB approved e-mail for use in soliciting survey participation from students at their institution and the TACHE leadership distributed the link to their membership. Finally, the research team solicited participation in the survey at WTAMU by approaching students in the dining commons and the student center.

Both surveys remained open for a three-week period at the end of the spring semester in 2018. Once they were closed, the response sets were downloaded to an Excel spreadsheet. 494 faculty, staff, and administrators accessed the FSA survey. The research team completed an initial review of the responses and excluded 91 incomplete response sets and ten submissions by advocates. The remaining 393 were subjected to statistical analysis. They represented at least 44 distinct institutions in three states (CO, NM, TX). A minimum number of institutions represented is known as the FSA survey did not request the name of the respondent's employer. This decision was taken to prevent the possibility of identifying informants should only one party respond at an institution. IP addresses were harvested from the survey tracking data and traced. This was completed without referencing the demographics associated with each submission and the analyses, IP tracing and analysis of the informants' responses, were never re-associated making identification of specific persons impossible even if only one party replied from an institution. There were, however, individuals who completed the survey by accessing the internet from a server that was not associated with an institution of higher education. IP addresses, latitude, and longitude placed most of these persons in communities in which HSIs were found or near those communities. It was assumed they completed the survey from home or off campus. All responses received from Kansas were submitted from off campus sites. The three individuals who completed the survey from a location outside the seven-state region were assumed to be traveling. As approximately 25% of the institutional affiliations for respondents could not be identified, the minimum number of institutions represented has been reported. A total of 587 students at 15 colleges and universities in Colorado, New Mexico, and Texas accessed the student survey in spring of 2018. These parties were from one university in Colorado, three four-year and two two-year institutions in New Mexico, and five four-year and four two-year institutions in Texas. The research team reviewed the file and cleaned the data of inconsistent and incomplete responses which left a total

of 464 usable response sets from students attending the 14 HSIs in New Mexico and Texas. The limited number of responses from the university in Colorado was not included as it was not an HSI.

In the spring of 2019, the research team revised the student survey. This involved removing some queries that had proven ineffective, adding a demographic marker, rephrasing some questions, shifting response patterns to ten-point or larger scales from select all that apply and five-point Likert scales, replacing the original familism and locus of control questions with valid and reliable question sets, and shifting the focus of a subset of questions from role models to mentors. The revised survey was deployed sequentially at three Hispanic-Serving Institutions in north Texas. It was first deployed at a community college in the spring of 2019. The research team solicited student participation by approaching students in the dining commons, the student center, and between classes in academic buildings. Faculty members were also asked to present in their classes that students had the opportunity to participate in the survey. After initiating solicitation at the community college, respondents were also sought at a regional, comprehensive state university using the same methods. Following that effort, the focus shifted to a second community college. The research team solicited participation by working with faculty who distributed the link to the survey in their classes or via e-mail. These processes were completed with the permission of the appropriate administrators at each institution. By the mid-fall of 2019, 830 persons had accessed the second student survey. Six were found to be students who selected "Other" as the institution they attended but did not provide the name of their college or university in the associated data entry field. Eight more were students who identified themselves as attending an R01 institution in the region that became an HSI in 2017. The remaining 70 parties accessed the survey without completing it. Each of these groups of responses was excluded from data analysis as they came from outside the population of interest and/or were without usable information. There were 746 usable response sets.

Statistical analyses of responses for each survey were conducted using SPSS with methods appropriate to each form of data. The data sets could be disaggregated in multiple ways as reported in Preuss et al 2019 and 2020. For this consideration, which focuses on descriptive patterns, the primary form of disaggregation was separation of responses from persons identifying as Hispanic from those who did not. Further disaggregation within these groups was also possible but only completed for this paper on a limited basis and the application of the additional forms of disaggregation are noted in the text as they become relevant. The analysis process was exploratory rather than hypothesis-driven. The purpose was to identify meaningful differences in the response sets and to search for important patterns as opposed to testing a theoretical construct or the impact of an intervention. This approach was made necessary by the dearth of information in the literature describing HSIs, their staffing, patterns, practices, programming, and their students.

Results and Discussion

In the discussion that follows, all data came from Hispanic-Serving Institutions. The percentages of respondents affirming characteristics of their college or university or agreeing with a prompt are reported rather than the percentage of institutions exhibiting the characteristic or at which the prompt was affirmed. This is the case for the FSA survey since, as noted above, there were 393 usable responses that come from a minimum of 44 institutions. Approximately one-fourth of the respondents, 99 out of 393, could not be identified with a home institution although 96 of them were submitted from within the seven-state region and from communities where HSIs were located or very near those communities.

Estimating a total number of institutions represented based on the FSA figures, it appears that as many as 60 institutions could have been represented. That would mean an average of over six respondents per institution rather than one per institution, with the known range of responses per institution extending from one up to 77. Even when limited to the institutions that could be identified, responses were received from a substantial proportion of the HSIs to which the survey was sent. Forty-four colleges and universities represents 37% of the 119 HSIs in the region as of 2016. The student data sets also represent the opinions and experiences of the individuals responding and were not disaggregated to report findings specific to each of the 14 colleges and universities represented in the 2018 data set or the three in the 2019 data set.

Provision of Information about Hispanic Culture and Students

The research group believed, similar to the recommendation made subsequently by Kruse, Rakha and Calderone (2018), that "campus leadership in the development of supportive characteristics...[and] attention to shared knowledge...at all levels of the organization" (p. 733) was an important characteristic to measure. To

accomplish this, a question with the stem, “My institution provides persons in my role...,” was included. There were four statements describing specific types of information and one describing a professional development topic listed to complete the stem. Informants were asked to select all that applied at their institution. Table 1 lists the five phrases used and the percent agreement among the HSI employees. The overall response rate is reported for the first three prompts as there were no differences found when comparing responses from employees of two-year (2YR/CC) and four-year institutions (4YR) and disaggregation by ethnicity is not applicable to this consideration. The percent agreement by institution type is noted for the last two prompts as significant differences were found for them when comparing responses from 2YR and 4YR institutions.

Table 1. Provision of Information by HSIs to their Employees

Prompts	Percent Agreement		
	Overall	2YR	4YR
My institution provides persons in my role...			
...information about Hispanic culture.	10.2%		
...information about the needs and concerns of 1 st generation students.	20.1%		
...information about the needs and concerns of Hispanic students.	13.6%		
...information about the needs and concerns of low-income students.	17.1%	27.3%*	14.3%*
...professional development regarding Hispanic cultural competency.	6.9%	12.5%*	5.6%*

* Indicates a statistically significant difference found.

At the colleges and universities represented in the sample, one-fifth or less of the respondents reported receiving information distributed by their institution about the needs and concerns of first-generation, low-income, and Hispanic students. Approximately 10% reported receipt of information about Hispanic culture. Less than 7.0% overall and less than 6.0% at four-year institutions noted provision of professional development offerings addressing competence in Hispanic culture. Comparisons between responses from four-year and two-year schools found two significant differences with weak effect sizes. These occurred for information about low-income students ($p = .004$, $\phi = -.146$) and the professional development prompt ($p = .026$, $\phi = -.112$). Community college personnel reported the provision of the information and professional development at higher levels than parties from four-year institutions did.

Understanding of Hispanic Culture among Employees at HSIs

Several questions were included in the FSA survey about Hispanic culture. The first of these was a thirteen-part query that asked for responses regarding one general statement, 10 cultural elements, the idea that diversity exists within the broad concept Hispanic culture, and the general assumption that Hispanic values include a common set of beliefs. Following that, a two-part question was presented asking for responses regarding the availability of information about “challenges Hispanics face in higher education” and “comparing Hispanic culture to higher education culture.” Respondents were asked, in all cases, to employ a five-point Likert scale running from “Strongly Disagree” to “Strongly Agree” to register their opinion.

Table 2 contains responses to the general query, “Hispanic cultural values are understood by higher education,” and the two-part question regarding the availability of information. Statistically significant differences were found based on ethnicity. Pearson’s r , denoted by the letter r in the table headers, was calculated using the Z scores and the number of cases to provide a means of describing the effect size for the relationships (Field, 2013). For Pearson’s r , 0.1 is a small effect, 0.3 is a moderate effect, and 0.5 is a large effect. The abbreviation MR in the table stands for mean rank, H stands for Hispanic, and NH represents non-Hispanic. Hispanics were more likely to disagree, with small effect sizes, with all three statements.

Table 2. Hispanic versus Non-Hispanic Responses Regarding Hispanic Cultural Values and Higher Education

Prompts	Analysis	p Value	Z Score	MR H	MR NH	r
Hispanic cultural values are understood by higher education.	Mann Whitney U	.006	2.77	167.7	204.9	.14
Actionable information is available about challenges Hispanics face in higher education.	Mann Whitney U	.007	2.68	165.0	200.5	.14
Actionable information is available comparing Hispanic culture to higher education culture.	Mann Whitney U	.001	3.21	158.4	200.9	.16

The thirteen-part question noted above included the “Hispanic cultural values are understood by higher education” prompt (Table 2), a group of 10 values present in Mexican-American culture, one general understanding, and one commonly held assumption. Twelve of these queries were intended to assess understanding of Hispanic culture among the employees of the HSIs. A statement briefly describing each of these queries appears in Table 3. The general understanding in the set of prompts was that diversity exists within the broad category Hispanic culture. This diversity exists in commitments and practice based on national or regional background (Castillo, Conoley & Brossart, 2004), regionalism (Aoki, 2010), and variability across time, generations, and even the contexts in which the values are enacted (Arbona, Flores & Novy, 1995; Niemann, Romero & Arbona, 2000). The assumption included was that Hispanic culture shares a common set of beliefs.

A focus on patterns specific to Mexican-Americans was pursued based on the region of the United States in which the survey was conducted. The seven-state region was, starting in the west and moving east, New Mexico, Colorado, Kansas, Oklahoma, Texas, Louisiana, and Arkansas. Much of this region of the country was, at one time, part of Mexico (Ionita, n.d.). As this is the case, the predominant form of Hispanic culture across the region is Mexican-American although there are also representatives of other groups, Cubans, Puerto Ricans, Hondurans, etc., in the region, most noticeably in the urban areas like Albuquerque, Denver, Dallas, Houston, Kansas City, and Oklahoma City.

All the topics addressed in the thirteen-part question were derived from themes that arose in the qualitative portion of the investigation. They were verified as worthy of inclusion with sources in the literature and through interaction with Hispanic/Latino employees of West Texas A&M University. Brief statements describing the elements of Mexican-American culture, the understanding that diversity exists in the broad category Hispanic culture, and the one commonly held assumption included in the survey follow in Table 3. To the right of each are two or more sources from the literature that discuss the cultural construct or general concept.

Table 3. Elements of Mexican-American Culture in the FSA Survey

Cultural Element	Verifying Sources	Cultural Element	Verifying Sources
Emphasis on hard work.	Aoki, 2010; Duda, 1985; Luzzo, 1997	Valuing of patience and politeness (Simpatia).	Knight et al, 2010; Lorenzo-Blanco et al, 2012; Knight, Mazza & Carlo, 2018
Diversity exists in Hispanic culture (i.e., Cuban, Puerto Rican, etc. and that it can change).	Arbona, Flores & Novy, 1995; Fragoso & Kashubeck, 2000; Marrun, 2015; Sund, 2014; Valencia, 1989	Priority given to strong family relationships.	Knight et al, 2010; Knight, Mazza & Carlo, 2018; Lorenzo-Blanco et al, 2012; Schwartz, 1971
Confidence in one's ability to succeed.	Arellano & Padilla, 1996; Knight et al, 2010	Deference to authority.	Schwartz, 1971; Knight et al, 2010; Knight, Mazza & Carlo, 2018
Accepting uncertainty in life (fatalism).	Cuellar, Arnold & Gonzalez, 1995; Schwartz, 1971; Scott, 2001	Priority placed on earning income/filling a gender role over extending education.	Castillo, Conoley & Brossart, 2004; Niemann, Romero & Arbona, 2000
Taking each day as it comes (orientation to time).	Schwartz, 1971; Curry & Luque-Ekrich, 1995	Reinforcement of gender norms in family roles.	Fragoso & Kashubeck, 2000; Knight et al, 2010; Niemann, Romero & Arbona, 2000
Believe that events are predetermined (fatalism).	Cuellar, Arnold & Gonzalez, 1995; Schwartz, 1971; Scott, 2001	Include a common set of beliefs.	Marrun, 2015; Sund, 2014; Valencia, 1989

The question stem “Hispanic culture values...” was employed for queries assessing faculty, staff, and administrators understanding of Hispanic culture, specifically Mexican-American culture. Brief statements or descriptions for each of the 10 cultural elements, the idea that diversity exists in the broad concept of Hispanic culture, and the general assumption that Hispanic values include a common set of beliefs were listed following the stem. These statements were generated by the project team based on qualitative data, sources in the literature, and personal experience rather than being drawn from an existing, empirically-validated question set. Informants were asked to use a standard five-point Likert scale running from “Strongly Disagree” to “Strongly

Agree” to note their level of agreement with each statement. Table 4 contains the results from the comparison of responses received from faculty, staff, and administrative respondents who identified as Hispanic and those who did not. As above, the abbreviation MR in the table stands for mean rank, H stands for Hispanic, and NH represents non-Hispanic.

Table 4. Hispanic versus Non-Hispanic FSA Responses Regarding Hispanic Cultural Values

Prompts	Analysis	p Value	Z Score	MR H	MR NH	r
...emphasize hard work.	Mann Whitney U	<.001	-5.78	256.7	181.0	-.29
...are diverse.	Mann Whitney U	<.001	-4.04	236.6	185.2	-.20
...include confidence in one’s ability to succeed.	Mann Whitney U	<.001	-4.01	237.4	184.4	-.20
...include accepting uncertainty in life.	Mann Whitney U	.040	-2.05	216.9	190.4	-.10
...include taking each day as it comes.	Mann Whitney U	.081	-1.75	213.2	190.7	-.09
...hold that events are predetermined.	Mann Whitney U	.179	-1.34	209.0	191.9	-.07
...esteem patience and politeness.	Mann Whitney U	<.001	-4.07	236.4	183.8	-.21
...prioritize strong family relationships.	Mann Whitney U	.003	-2.97	223.0	187.5	-.15
...reinforce deferring to authority.	Mann Whitney U	<.001	-3.71	233.1	184.7	-.19
...prioritize earning income over attending college.	Mann Whitney U	.011	-2.54	221.7	188.4	-.13
...reinforce gender norms in family roles.	Mann Whitney U	.005	-2.81	224.5	188.3	-.14
...hold a common set of beliefs.	Mann Whitney U	<.001	-3.50	232.4	185.7	-.18

In every case, Hispanic faculty, staff, and administrators were more likely to agree with the statements than their non-Hispanic peers. In ten of those instances, the differences were statistically significant: nine with small effect and one, emphasis on hard work, with moderate effect. This is an important finding as it suggests there is a substantial difference along ethnic lines in perspective of what are elements of Hispanic culture among faculty, staff, and administrators at the Hispanic-Serving Institutions in the sample. Even when the cultural value listed is commonly understood to be a life style pattern for Hispanics, like prioritizing strong family relationships, Hispanics were more likely to agree at highly significant levels. The ratings provided by the Hispanic respondents can also be interpreted as confirming a set of cultural values as Hispanic adults working in higher education at all levels, in varying roles, and in four states agreed with them.

Understanding of the Background and Characteristics of Hispanic Students by Employees at HSIs

In addition to considering known cultural values, the research team also wished to understand the perspective faculty, staff, and administrators at HSIs had of their Hispanic students. Two questions were asked regarding the background and characteristics of Hispanic students. The first had the stem —Hispanic students have...” (see Table 5) and the second had the stem —Hispanic students are...” (see Table 6). The descriptive response statements for each question were developed based on the qualitative data gathered in the first phase of the project and literature review conducted when writing the proposal and planning the question sets for focus groups and interviews. The distinctive element of the material gathered in this part of the study is its focus on the perspective of faculty, staff, and administrators regarding these ideas rather than an investigation of the influence of one or more on outcomes for students. That is, a focus on what is understood about the students rather than what influences their behavior or academic results. Some of the statements on the FSA survey referred to STEM as the study was funded by the National Science Foundation and had, among its other goals, understanding challenges and opportunities in STEM education at HSIs (NSF, 2017). Tables 5 and 6 contain the results of comparisons between responses received in spring of 2018 from persons working at the HSIs who identified as Hispanic and those who did not identify as Hispanic regarding the background and characteristics of Hispanic students.

Table 5. Hispanic versus Non-Hispanic FSA Responses: “Hispanic Students Have...”

Prompts	Analysis	p Value	Z Score	MR H	MR NH	r
...parents who influence their decisions.	Mann Whitney U	.051	-1.95	212.4	188.5	-.10
...families who demand time/resources.	Mann Whitney U	.006	-2.73	221.1	186.5	-.14
...difficulty with college culture.	Mann Whitney U	<.001	-7.03	265.3	173.0	-.36
...language barriers hindering academic success.	Mann Whitney U	<.001	-4.66	242.3	180.6	-.24
...limited personal history with STEM professionals.	Mann Whitney U	<.001	-4.78	242.7	180.0	-.24
...preferences for majors leading to local employment.	Mann Whitney U	.004	-2.89	223.9	186.1	-.15

For the six “have” statements, there was one marginally significant finding and five significant to strongly significant findings by ethnicity. Effect sizes ranged from small to moderate, three small, two moderately small, and one moderate. Hispanics were, like with the descriptions of Hispanic cultural orientation, more likely to agree with these statements in every instance. Like above, several of the less pronounced differences were for statements of commonly held beliefs, like parents who influence students’ decisions and families who demand time/resources, yet the Hispanic respondents were still more likely to state these patterns existed for Hispanic students. A similar pattern was found in respect to the “Hispanic students are...” questions.

Table 6. Hispanic versus Non-Hispanic FSA Responses: “Hispanic Students Are...”

Prompts	Analysis	p Value	Z Score	MR H	MR NH	r
...under-prepared for college math.	Mann Whitney U	<.001	-3.68	231.4	184.5	-.19
...under-prepared to navigate college processes.	Mann Whitney U	<.001	-6.14	258.0	177.9	-.31
...primarily 1st gen students.	Mann Whitney U	.002	-3.09	225.5	186.7	-.16
...from low SES backgrounds.	Mann Whitney U	.001	-3.23	224.3	183.9	-.16
...working to attend college.	Mann Whitney U	<.001	-4.35	239.1	183.7	-.22
...routinely involved w/ family members.	Mann Whitney U	.004	-2.91	224.3	187.7	-.15
...unlikely to seek help.	Mann Whitney U	<.001	-5.87	256.8	178.9	-.30
...under-represented in upper-level STEM classes.	Mann Whitney U	<.001	-6.48	263.2	177.2	-.33
...unaware of STEM opportunities.	Mann Whitney U	<.001	-6.05	258.1	178.6	-.31
...intimidated by STEM.	Mann Whitney U	<.001	-6.74	264.7	176.8	-.34
...not identifying w/ STEM.	Mann Whitney U	<.001	-6.10	257.3	178.8	-.31
...arriving with inaccurate information about college.	Mann Whitney U	<.001	-4.87	244.9	182.1	-.25
...going to college in or near their home towns.	Mann Whitney U	<.001	-4.03	233.4	183.3	-.20

For this list of 13 characteristics, all the comparisons along ethnic lines were strongly to highly statistically significant with effect sizes ranging from small to moderate. There were more moderately small and moderate findings than for the preceding sets of comparisons. Half the comparisons had moderate effect sizes while two others had moderately small effect sizes. Again, in every case Hispanic faculty, staff, and administrators were more likely to see these statements as accurate descriptions of Hispanic students.

Faculty, staff, and administrators at the HSIs were also asked about barriers to participation in student organizations and extra-curricular activities for Hispanic students studying in STEM fields. This was a five-part question with three statements related to practical concerns, living off campus, heavy course loads and work commitments, and two others relevant to the present consideration, family commitments and language barriers (see Table 7). Of the two, Hispanic respondents saw language barriers as a possible explanation at significantly higher levels than non-Hispanics. This occurred with a small effect size, indicating a less pronounced difference of opinion as might have been expected given the changes in language usage in the American Hispanic population over the last decade reported by Flores (2017).

Table 7. Hispanic versus Non-Hispanic FSA Responses: Barriers for Hispanic Students

Prompts	Analysis	p Value	Z Score	MR H	MR NH	r
...family commitments.	Mann Whitney U	.002	-3.15	217.9	178.7	-.16
...language barriers.	Mann Whitney U	.228	-1.21	198.0	182.7	-.06

In regards to the questions asked about Hispanic culture and students, there was a consistent and strong difference of opinion between Hispanic faculty, staff, and administrators at the HSIs in the sample and their non-Hispanic counterparts regarding information available about Hispanic culture, the elements of Hispanic culture, and the characteristics and background of Hispanic students. It appears, based on this information, that the non-Hispanic employees at HSIs were less well informed about Hispanic culture and a major portion of their student population than would be desirable. Haupt and Connolly Knox (2018), when writing about why students should be trained for cultural competence, noted forestalling the inclination “to negatively apply biases, stereotypes, and pre-conceived notions” (p. 538). While there is no evidence in the data gathered that the non-Hispanic faculty, staff, and administrators are operating in this manner, having them be better informed about Hispanic culture would make them “more credible, empathetic, relatable, and trustworthy” (Haupt & Connolly Knox, 2018, p. 538) when working with their Hispanic students than they currently might be.

Support for Hispanic Students

A great many questions were asked on the FSA survey about institutional processes, practices, facilities, and programming. Only a limited number of those topics will be discussed here. Each is relevant to developing a conception of the level of cultural understanding of and accommodation regarding Hispanic culture taking place at the HSIs in the sample. Consideration of a broad range of additional information about HSIs can be found in Preuss et al 2019 including their staffing, facilities, practices, and programming, information about how they evaluate some practices, and grant-funded endeavors in which they engage.

Use of Research or Institutional Data, Holistic Approach, and Emphasis on Hispanic Contributions

Survey takers were asked a three-part question with the stem “In respect to student support...” The two statements completing this statement that are applicable to the present discussion appear in the left-hand column of Table 8. Informants were asked to respond using a five-point Likert scale, Strongly Disagree (SD), Disagree (D), Neither Agree or Disagree (NAD), Agree (A), and Strongly Agree (SA). Very few parties disagreed with the statements and the majority selected Neither Agree or Disagree. Approximately 31% of respondents indicated that student support programming at their institution was based on published research or strong institutional data while just over 36% felt these services took an approach that included consideration of the psychological, social and cultural background of the student (see Table 8). No significant differences were found between the responses from Hispanic and non-Hispanic employees of the institutions represented, although there was a significant difference ($p = .038$) with a small effect size between CCs and four-year institutions for use of research or institutional data with the same occurring for taking a holistic approach ($p = .004$). Respondents from the 2YR schools were more likely to agree with both (see Table 10).

Table 8. Overall Responses Regarding Use of Data and Holistic Approach

Prompts	Percent Selecting				
	SD	D	NAD	A	SA
...based on published research or strong institutional data.	2.2%	7.2%	59.6%	26.9%	4.2%
...a holistic approach (academic, psychological, social, and cultural needs).	3.0%	8.9%	51.2%	30.7%	6.1%

A separate question also addressed implementation of a holistic approach in service provided to students. It had the stem “Regarding practices, programs, and services at my institution...” Survey takers were asked to report on the presence of 26 distinct forms of engagement with students (see Preuss et al 2019 for details). Responses were submitted as “Yes,” “No,” or “I don’t know” for each form of engagement. Information was requested in respect to the respondent’s department and the STEM departments at their institution. In addition to asking about a holistic approach to student service, this list included one other topic relevant to the current discussion,

–emphasis within courses on Hispanic contributions.” Table 9 contains the overall rate of affirmation and the affirmation rate for 2YR and 4YR institutions. The STEM department totals were limited to persons who had identified themselves as working in a STEM department as analysis for dozens of questions in the FSA data set revealed that persons outside STEM departments were most likely to respond that they did not know what was being offered in STEM. Focusing on STEM department employees eliminated this uncertainty.

Table 9. Overall Responses: Holistic Approach by Department and Emphasis on Hispanic Contributions

Prompts	Percent Agreement		
	Overall	2YR	4YR
...department...holistic approach to support (academic, psychological, social, cultural).	40.0%	53.6%	35.3%
...STEM department...holistic approach to support (academic, psychological, social, cultural).	21.4%	36.1%	14.8%
...department...emphasis within courses on Hispanic contributions.	12.4%	25.4%	8.0%
...STEM department... emphasis within courses on Hispanic contributions.	6.8%	11.1%	4.9%

While there were a variety of analyses completed in respect to this information, the results pertinent to this discussion appear in Table 10. They are all for comparison of responses from faculty, staff, and administrators at community colleges to those of their peers at four-year institutions.

Table 10. 2YR versus 4YR: Holistic Approach and Emphasis on Hispanic Contributions

Prompts	Analysis	p Value	Z Score	MR 2YR	MR 4YR	r or phi
...based on published research or strong institutional data.	Mann Whitney U	.038	-2.08	199.2	175.5	-.11
...a holistic approach (academic, psychological, social, and cultural needs).	Mann Whitney U	.004	-2.87	207.0	173.0	-.15
...department...holistic approach to support (academic, psychological, social, cultural).	Chi-Square	.018	N/A	N/A	N/A	+.173
...STEM department...holistic approach to support (academic, psychological, social, cultural).	Chi-Square	.004	N/A	N/A	N/A	+.305
...department...emphasis within courses on Hispanic contributions.	Chi-Square	< .001	N/A	N/A	N/A	+.240
...STEM department... emphasis within courses on Hispanic contributions.	Chi-Square	.276	N/A	N/A	N/A	+.148

There were consistent and significant differences between the reports from community college personnel and those from employees of four-year institutions in respect to use of research and institutional data in student services, for taking a holistic approach to student support in general and at the department level, and for departments emphasizing the contributions of Hispanics in areas of study. The sole exception was emphasis on Hispanic contributions to the field by STEM departments, reported by less than 7% of all respondents. In each comparison, the community college personnel were more likely to report the description applied to practice on their campus than their peers at four-year institutions.

Low Student to Teacher Ratio

A final topic of interest regarding support for Hispanic students is student to teacher ratio. This is a pattern monitored by institutions of higher education and that is often reported in fact books and in online descriptions of colleges and universities. It is also applicable to the topic at hand as Hispanic culture is “traditionally collectivistic” (Ojeda, Edwards, Hardin & Pina-Watson, 2014, p. 66) and “emphasizes interdependence and relationships” (p. 66). Logically, having this orientation would make a low student to teacher ratio desirable as personal interaction and formation of a relationship is more plausible. For this reason, several questions were included in the 2018 FSA survey in this topic area. Table 11 lists level of agreement by faculty members and administrators regarding the importance of low student to teacher ratios. Responses from staff are not included as the decision makers in this area are faculty and administrators, faculty in course planning and implementation and administrators in respect to courses offered and desired class size.

Table 11. Low Student to Teacher Ratio

Prompts	Faculty Agreement	Administrator Agreement
A low student to teacher ratio is important...for facilitating faculty/student rapport.	92.0%	92.5%
...in STEM instruction.	84.6%	85.7%
...for Hispanic students.	67.1%	81.6%
...for 1 st gen students.	77.9%	89.8%
...for students from low SES background.	69.8%	89.6%
...for female STEM students.	59.7%	77.6%

While there was general agreement that low student to teacher ratios are important for rapport, faculty responded less frequently that this was valuable for Hispanic students than in general, in STEM, for first-generation students, and for students from low socio-economic backgrounds. The only group about which faculty were less certain there would be a benefit were female STEM students, which seems at odds with the high rating for STEM instruction. While the order of the descriptions by level of agreement for administrators differed from that of faculty, they also were less positive that Hispanic students would benefit placing them at the same point as faculty, fourth out of five groups, when ranked from highest level to lowest level of agreement.

Summary of FSA Survey Findings

In the 393 responses from faculty, staff, and administrators at HSIs in Colorado, New Mexico, Kansas, and Texas, there are two key divisions in respect to constructs related to Hispanic culture. The first is a difference of opinion along ethnic lines. Hispanic respondents were less likely to agree that there was applicable information about Hispanic culture available to higher education professionals and more likely to agree with the statements made in the survey in respect to Hispanic culture and the background and characteristics of their Hispanic students than their non-Hispanic peers.

While this is the first information of its kind, to the best of the authors' knowledge, that it was derived from responses from hundreds of informants at dozens of colleges and universities in a four state region should give the reader pause. Such a broad and consistent difference of opinion between Hispanic and non-Hispanic employees at HSIs points to, at a minimum, a notable difference in conception. This is a concern as student success theory and programming has for decades (Terenzini & Pascarella, 1991; Tinto, 1993) emphasized cultural support and limiting “acculturative stress” (Chun, Marin, Schwartz, Pham & Castro-Olivo, 2016, p. 385) for minority students.

As regards student support programming in patterns and areas relevant to Hispanic culture, being empirically based, taking a holistic approach, and emphasizing Hispanic contributions to academic disciplines, there were regular differences by institution type. Personnel at the HSIs that were community colleges reported these characteristics at their institution more than their peers at four-year schools at statistically significant levels in five of six comparisons and with small to moderate effect sizes. While low student to teacher ratios were generally thought of as helpful, faculty and administrators were less certain this was beneficial for Hispanic students than for students in general, students in STEM courses, first-generation students, and students from low socio-economic backgrounds.

Related Findings from Surveys of Students

Since the work reported above was a first-of-its-kind investigation and the survey questions were generated by the research team, having a means of verifying the results was desirable. This was possible, to certain extent, using the responses gathered from students at 14 HSIs in New Mexico and Texas in 2018 and, in a separate effort, at three HSIs in north Texas in 2019. While the students were not asked the same questions as the faculty, staff, and administrators, they were asked about their background, experiences, and opinions. In many cases, the students provided insights about themselves that align with the information sought from the faculty, staff, and administrators. The material that follows references responses from Hispanic students on the 2018 and 2019 surveys. Level of agreement or median and mode scores are reported, as applicable. While these will be an imprecise means of verifying the response patterns on the FSA survey, they represent responses from a separate Hispanic population operating in the same setting. They are also direct reports of opinion and experience from the students about whom the faculty, staff, and administrators were asked to comment. Median and mode is reported as together they can give a clearer indication of central tendency than reporting a mean score.

Questions from two empirically-validated instruments were included in the 2019 survey. The entire Pearlin Mastery Scale (Pearlin, Lieberman, Menaghan & Millan, 1981), a locus of control instrument that continues to be used in research (Adams, Figley & Boscarino, 2008; Eklund, Erlandsson, & Hagell, 2012), and the entire set of Latino Familism Scale questions developed by Steidel and Contreras (2003) were utilized. Both question sets were used with permission. Responses to questions from each will be considered in the material that follows but full consideration of the findings for familism and locus of control among Hispanic students attending HSIs will be presented in subsequent publications. The first area in which there is substantial overlap between the FSA and student surveys is Hispanic culture. Students provided information relevant to many elements of Hispanic culture although they were not asked about diversity in Hispanic culture, taking each day as it comes, having gender norms reinforced, or there being a common set of values. In each of the tables that follows, items from the FSA survey are listed to the left. These are elements of Hispanic culture or one of the descriptions of characteristics of Hispanic students. To the right of the FSA topic, related material from the two student surveys is presented.

Student Responses Related to Hard Work and Confidence in One's Ability to Succeed

The FSA results included two highly significant findings for these topics. Hard work as a Hispanic cultural value had a moderate effect size for the difference found in responses along ethnic lines. Confidence in one's ability to succeed had a moderately small effect size. Students were not asked questions that were direct equivalents of queries on the FSA survey. There were, though, questions about their level of personal confidence and confidence that people in categories in which Hispanic students often appear could be successful. Two of the questions about personal confidence that appeared on the 2019 survey were from the Pearlin Mastery Scale (Pearlin, Lieberman, Menaghan & Millan, 1981). The first is "I can do anything when I put my mind to it" and it is paired in Table 12 with "I feel confident I can achieve my goals in college," the prompt generated by the project team and used in the 2018 survey. The second is "What happens to me in the future mostly depends on me" which is paired with the research team's 2018 question "I am in control of my own success." The medians and modes reported are for a ten-point scale.

Table 12. Student Responses: Hard Work and Confidence

FSA Prompts	Applicable Question w/ Students	2018 Agrmnt	2019 Median	2019 Mode
...emphasize hard work.	If I work hard, I can reach my goals in college.	94.9%	N/A	N/A
...include confidence in one's ability to succeed.	I feel confident I can achieve my goals in college. (2019 – I can do anything when I put my mind to it.)	94.4%	7	7
	I am in control of my own success. (2019 – What happens to me in the future mostly depends on me.)	93.9%	7	7
	...can be as successful as anyone else...Latinos.	93.4%	10	10
	...can be as successful as anyone else...people whose parents did not attend college.	92.4%	10	10
	...can be as successful as anyone else...low-income.	86.4%	10	10

While the student responses were to a different set of questions than asked of the faculty, staff, and administrators, they do address the same concepts, hard work and personal confidence. The inclusion of the last two statements about potential for success by first-generation and low-income college students was deemed appropriate as Hispanic students often fit in these categories (Bailey, Jenkins & Leinbach, 2005; Castillo, Conoley, & Brossart, 2004; Dennis, Phinney, & Chuateco, 2005; Olive, 2008). On both surveys, the Hispanic students were confident in their ability to succeed and in the ability of Latinos, first-generation students, and low-income students to be as successful as anyone else (2019 - median of 10 and mode of 10 for all three). It appears that the Hispanic students exhibited two characteristics the Hispanic faculty, staff, and administrators felt they would, valuing the efficacy of hard work and being confident in their own ability to succeed.

Student Responses Related to Uncertainty in Life and Events Being Predetermined

Two FSA prompts, one statement generated by the project team to express concepts discussed by informants in the qualitative portion of the investigation and three statements from the Pearlin Mastery Scale (Pearlin, Lieberman, Menaghan & Millan, 1981) appear in Table 13. These are all related to a fatalistic outlook (Scott, 2001). This concept was included based on comments made in interviews and focus groups and because collectivist cultures, like the various Hispanic cultures (Ruiz, 2005), also exhibit fatalism (Diaz, Blanco, Bajo & Stavvaki, 2015; Unger et al, 2002). The three statements in the table from the Pearlin Mastery Scale are –Sometimes I feel that I am being pushed here and there in life,” –I have little control over things that happen to me,” and –Most of the time, I feel helpless when dealing with problems of life.”

Table 13. Student Responses: Uncertainty and Predetermined Events

FSA Prompts	Applicable Question w/ Students	2018	2019	2019
		Agrmnt	Median	Mode
...include accepting uncertainty in life.	There are obstacles to my success that are outside my control.	70.5%	N/A	N/A
...hold that events are predetermined.	Sometimes I feel that I am being pushed here and there in life.	N/A	5	5
	I have little control over things that happen to me.	N/A	4	4
	Most of the time, I feel helpless when dealing with problems of life.	N/A	4	4

The FSA results for differences regarding these ideas by ethnic identity had a significant finding for uncertainty but not for predetermined events. Both comparisons had small effects. The student responses appear to mimic this pattern. Over two-thirds of the students from 14 HSIs agreed there are obstacles in their lives that are outside their control on the 2018 survey. Yet, responses to the Pearlin Scale questions in 2019 show most of the Hispanic students had a mild and middle-of-the-road response to being pushed “here and there” by circumstances, having “little control over things that happen,” and feeling “helpless when dealing with problems.” The responses for these statements were not widely distributed as the median and modes were the same values.

Student Responses Related to Esteeming Patience and Politeness (Simpatia)

Two statements from the Latino Familism Scale (Steidel & Contreras, 2003) are the only near equivalents to the statement used on the FSA survey which was generated to represent the concept Simpatia (Triandis, Marin, Betancourt, Lisansky & Chang, 1982), which is expecting “more positive behaviors in positive social situations and de-emphasiz[ing] the appropriateness of negative behaviors in situations of conflict” (p. 4). Yet, they demonstrate the elements noted by Triandis, Marin, Betancourt, Lisansky and Chang as well as those listed by Ramirez-Esparza, Gosling, and Pennebaker, “Simpatia is a cultural script that characterizes Hispanics as agreeable, friendly, sympathetic, and polite” (2008, p. 703).

The Hispanic FSA respondents felt strongly about this characteristic as indicated by the high mean rank and the strength of the difference in their response when compared to non-Hispanics (Table 4). The students also had strong agreement, although for applications of the principle in a family setting. While with the student data responses were about respect for parents, grandparents, and older siblings even when there were differences in perspective, this can be seen as yet another point at which the FSA results from Hispanic faculty, staff, and administrators match the self-report from the Hispanic students surveyed. The student responses exhibit a

number of the characteristics of *simpatia*, being “agreeable, friendly, sympathetic, and polite” (Ramirez-Esparza, Gosling, & Pennebaker, 2008, p. 703) and “de-emphasiz[ing] the appropriateness of negative behaviors in situations of conflict” (Triandis, Marin, Betancourt, Lisansky & Chang, 1982, p. 4) albeit in the context of family relations. Since prioritizing strong family relationships was also found to be a value with which Hispanics on the FSA (Table 4) and students (Table 15) identified, there may have been a confounding effect in respect to queries regarding *simpatia*.

Table 14. Student Responses: Esteeming Patience and Politeness (*Simpatia*)

FSA Prompts	Applicable Question w/ Students	2018 Agrmnt	2019 Median	2019 Mode
...esteem patience and politeness.	Parents/grandparents should be treated with great respect regardless of their differences in views.	N/A	10	10
	A person should respect their older siblings regardless of their differences in views.	N/A	7	10

Student Responses Related to Prioritizing Strong Family Relationships

The presence of a validated familism scale for Latinos (Steidel & Contreras, 2003) and the degree to which this concept is discussed in the literature demonstrate that this is an accepted element of Hispanic culture. While there was only one statement about this cultural value in the “Hispanic culture includes...” set, there were two questions on the 2018 student survey that corresponded and five from Steidel and Contreras’ (2003) Latino Familism Scale used on the 2019 student survey that were relevant (Table 15).

Table 15. Student Responses: Prioritizing Strong Family Relationships

FSA Prompts	Applicable Question w/ Students	2018 Agrmnt	2019 Median	2019 Mode
...prioritizing strong family relationships.	I feel strongly attached to my family.	85.2%	N/A	N/A
	I believe family needs take precedence over college.	47.6%	N/A	N/A
	A person should cherish time spent with their relatives.	N/A	10	10
	Children should always help their parents with the support of younger siblings, for example, help them with homework, help the parents take care of the children, etc.	N/A	8	10
	A person should rely on their family if the need arises.	N/A	9	10
	A person should always support members of the extended family, for example, aunts, in-laws, etc., if they are in need even if it is a big sacrifice.	N/A	7	5
	A person should often do activities with their families, for example, eat meals, play games, go somewhere together, work on things together, etc.	N/A	10	10

Even though this is a value widely understood to be held by Hispanics, the Hispanic informants on the FSA survey were still more likely to affirm it than their non-Hispanic peers at statistically significant levels with a small effect. The student responses also affirm it, although the students appear ambivalent about how much sacrifice should be expected to support members of their extended families who are in need. Over 85% of the

Hispanic student respondents in 2018 said they felt strongly attached to their families and the relational prompts from the Latino Familism Scale have high medians and modes, with the exception of sacrificing for members of the extended family as has already been noted. The students continue to affirm the views of their older ethnic compatriots.

Student Responses Related to Deferring to Authority

Respect for authority, in families (Galanti, 2003), relationships (Ramirez-Esparza, Gosling, and Pennebaker, 2008), and society (Ruiz, 2005), as a part of Hispanic culture is well documented and has been for decades (Matos, 2015; Triandis, Marin, Betancourt, Lisansky & Chang, 1982). Key commitments relevant to this concept are represented in the Latino Familism Scale developed by Steidel and Contreras in 2003. Response patterns for three questions from the familism instrument that were part of the 2019 student survey are provided in Table 16 as evidence of the Hispanic students orientation to authority.

Table 16. Student Responses: Deferring to Authority

FSA Prompts	Applicable Question w/ Students	2018	2019	2019
		Agrmnt	Median	Mode
...reinforce deferring to authority.	The family should control the behavior of children younger than 18.	N/A	8	10
	Children should obey their parents without question even if they believe they are wrong.	N/A	6	10
	Parents/grandparents should be treated with great respect regardless of their differences in views.	N/A	10	10

The 2018 survey for students did not include a question applicable to this area. The three included as part of the familism section in 2019 suggest that the students accept concepts related to parental authority and the positional/relational authority conferred by advanced years and extended life experience. While these are several forms of respect for authority, they do not cover the entire spectrum of the concept. Yet, at least in these areas, the responses of Hispanic students at the HSIs in the 2019 sample demonstrate that their views agree with the perspective of the Hispanic faculty, staff, and administrators communicated on the FSA survey regarding respect for authority as an element of Hispanic culture.

Student Responses Related to Prioritizing Immediate Income Over College

Matos (2015) confronted the perception that Hispanic parents are “uninterested in education” (p. 436). He found “Participants in the study identified how they use the cultural capital transmitted to them by their families and communities, and how they create ‘finishing,’ a new form of capital” (p. 436). This does not align with the notion that Hispanic parents favor income-generating activity to college attendance for their early adult age children. The FSA consideration of Hispanic culture directly addressed this concept. Table 17 lists that statement, “prioritizing earning income over attending college,” and then a group of six statements from the student surveys. Three of these only appeared on the 2018 survey for students and three others appeared on both the 2018 and 2019 student surveys.

Table 17. Student Responses: Income versus College

FSA Prompts	Applicable Question w/ Students	2018	2019	2019
		Agrmnt	Median	Mode
...prioritize earning income over attending college.	Going to college is important in Hispanic culture.	60.2%	N/A	N/A
	In Hispanic culture, college is thought of as a luxury.	59.7%	7	10
	My family expects me to contribute financially.	40.8%	N/A	N/A
	I feel supported by my family in my educational pursuits.	86.3%	N/A	N/A
	Parents/family... value a college degree.	84.0%	10	10
	Parents/family... see that college is important to my future.	88.0%	10	10

The Hispanic respondents on the FSA survey felt prioritizing earning income over attending college described Hispanics to a greater extent than their non-Hispanic peers did with a small effect size. For a commonly held belief (Matos, 2015), the presence of the statistically significant difference and affirmation of the statement by Hispanics is notable. The student responses exhibit some duality. In 2018, they noted that college was important in Hispanic culture but considered college a luxury at almost the same rate. The 2019 data confirms that the Hispanic students were more likely to feel that Hispanic culture views college as a luxury. Students also indicated, at high levels, that their families supported their pursuit of education, valued a college degree, and saw college as important to the student's future. Yet, over 40% said that they were expected to contribute financially at home. It appears that at this point, the surveys touch on a circumstance involving confluence of values. The value of higher education is recognized and the familial orientation includes support of someone pursuing that important goal (Rodin, 2018) yet the sense that college is in some way a "special opportunity" or "luxury" also seems to be present. Aoki (2010), Arbona, Flores and Novy (1995), and Castillo, Conoley and Brossart (2004) all discuss the potential for confluence of and even conflict between values held by Hispanics as they navigate life in the broad cultural milieu of the United States or in higher education. That may be what is occurring for the Hispanic college students, several values are currently in conflict which may result, as the authors just cited note, in compromise, suppression of one value, or even the development of a new value.

The 40.8% of Hispanic students who noted their family expected them to contribute financially while in college was the lowest affirmation rate of the queries listed in Table 17. To provide additional perspective, the responses from Hispanic and non-Hispanic students for this question were compared. There was little to no difference between them ($p = .891$). It appears that approximately 40% of the families of students attending HSIs at the 14 institutions represented in the 2018 sample expect their sons and daughters to contribute financially while attending college. The wording of the query was not as precise as it might have been. The full question was "Please rate the following statements about your family and college - My family expects me to contribute financially." This could be understood to apply to paying for college rather than contributing to the household operating funds for the family of origin. This may have influenced the responses to the question. What can be said is that the student responses indicate their parents/family see college as important to the student's future, that they value a college degree, and that they communicate support of the student's pursuit of a degree while also, but possibly to a lesser degree, considering college to be a luxury. This is the first area in which the FSA responses from Hispanics did not simply align with the student responses. The wording of at least one question and a confluence of values related to attending college may have contributed to this.

Student Responses Related to Parental Influence and Family Demands

Parents of Hispanic college students are believed by many to exert influence over decisions the students make about commitments and allocation of resources. Arbona, Flores, and Novy (1995), Dennis, Phinney, and Chuateco (2005), Castillo, Conoley, and Brossart (2004), and Matos (2015) all discuss this topic. This idea was included in the 2018 FSA survey in response to information from the literature and comments made in focus groups and by interviewees. It was included in the "Hispanic students have..." question but divided into one statement about influence over decision making and another about use of time and resources. The Hispanic FSA informants agreed with these statements, at significant levels with small effect, more often than their non-Hispanic peers (Table 5). Two lines of evidence from Hispanic students are available, responses to five questions the research team generated and included in the 2018 student survey and responses to three questions from Steidel and Contreras' (2003) Latino Familism Scale used on the 2019 survey. The direct focus of all of the questions asked of students was time and resource allocation, although the inclusion of family expectations and prioritization of needs and concerns introduces the notion of influence over decision-making (see Table 18).

The student responses demonstrate a general expectation that they would provide practical assistance to their family of origin. This conclusion is supported by nearly 60% indicating in 2018 that their family expects them to "have time to help at home when I am attending school" and the high median and modes posted for the three familism queries in 2019. Beyond time invested and practical supports, financial assistance is also a reasonably strong theme. Almost 41% of the Hispanic student respondents in 2018 said they were expected to contribute financially although, as noted above, this might have been understood by the students to be for college tuition and fees rather fiscal support of family of origin and the response level did not differ significantly from non-Hispanic students. The familism query that notes commitment of finances as a possible means of "help for elderly parents in times of need" had a median of 10 and a mode of 10. And, participating in activities with family, patterns that require at least joint decision making and the investment of time, also had a median and mode of 10 on a ten-point scale. While the outworking of parental influence and family expectations will be nuanced and might vary from family to family and circumstance to circumstance, as evidenced by several of the

questions on the 2018 survey which asked about prioritization, the general orientation of the Hispanic students surveyed appears to match the understanding of Hispanic cultural values expressed by the Hispanic faculty, staff, and administrators.

Table 18. Student Responses: Parental Influence and Allocating Time/Resources for Family

FSA Prompts	Applicable Question w/ Students	2018 Agrmnt	2019 Median	2019 Mode
...parents who influence their decisions.	My family expects me to have time to help at home when I am attending school.	59.2%	N/A	N/A
...families who demand time/resources.	My family expects me to contribute financially.	40.8%	N/A	N/A
	I believe family needs take precedence over college.	47.6%	N/A	N/A
	My family expects their concerns to take priority over college.	27.2%	N/A	N/A
	I am expected to put family events and activities ahead of college.	26.0%	N/A	N/A
	Children should always help their parents with the support of younger siblings, for example, help them with homework, help the parents take care of the children, etc.	N/A	8	10
	A person should help their elderly parents in times of need, for example, help financially, housework, etc.	N/A	10	10
	A person should often do activities with their families, for example, eat meals, play games, go somewhere together, work on things together, etc.	N/A	10	10

The questions asked in 2018 about patterns of prioritization are also suggestive. While not proven to be valid and reliable, they elicited an intriguing set of responses. Nearly 48% of the Hispanic students from 14 HSIs said they believed “family needs take precedence over college.” While the related questions about family expectations in this area had 27.2% and 26.0% agreement, they show over one-quarter of the Hispanic students had families who positioned family concerns and activities ahead of college commitments on a priority scale. This has the strong potential to place college students from those families in situations in which two primary and valued life commitments are in conflict.

It was possible that the prioritization responses were influenced by the age of the respondents. If the Hispanic students in the pool were older, more were married or in long-term relationships, and/or caring for children, the results might have been skewed. The percentage of Hispanic respondents who fit each of these categories was compared to the non-Hispanic student pool. In each case, the percentages were nearly identical indicating that the Hispanic student pool was not skewed toward older students, students with households of their own, or who were caring for children. It appears, but not as strongly as for other constructs, which the student testimony about their experience in these areas, parental influence and allocating time and resources for family, continues to align with the perspective of the Hispanic faculty, staff, and administrators.

Student Responses Related to Difficulty with Higher Education Culture

Acculturative stress (Castellanos & Gloria, 2017; Ramos-Sanchez & Atkinson, 2011) from difficulty in adjusting to or within the culture of higher education is a common theme in discussions of minority student success. It is also regularly addressed as it applies to Hispanic students. Examples cited in this paper are Arbona, Flores, and Novy (1995), Luzzo (1997), Castillo, Conoley, and Brossart (2004), Bailey, Jenkins, and Leinbach (2005), Dennis, Phinney, and Chuateco (2005), Matos (2015), and Chun, Marin, Schwartz, Pham, and Castro-

Olivo (2016). This concept was addressed directly by one statement on the FSA survey in the “Hispanic students have...” set and by seven queries on the student surveys in 2018 and 2019 (see Table 19). This topic area was one in which the Hispanic respondents on the FSA survey differed most with their non-Hispanic colleagues as the effect size was moderate, $r = .36$ (see Table 5).

Table 19. Student Responses: Difficulty with Higher Education Culture

FSA Prompts	Applicable Question w/ Students	2018	2019	2019
		Agrmnt	Median	Mode
Hispanic students have difficulty with college culture.	College primarily positive.	85.5%	N/A	N/A
	Hispanics feel like outsiders in college.	23.0%	N/A	N/A
	I change my behavior to fit in in class.	30.0%	5	0
	I change my behavior to fit in when interacting with faculty and staff.	48.4%	6.5	5
	I change my behavior to fit in with college peers not from my culture.	28.2%	5	0
	I change my behavior to fit in with college peers who are from my culture.	10.3%	N/A	N/A

While the majority of Hispanic students on the 2018 survey noted that college had been a primarily positive experience, nearly one-quarter said that Hispanics feel like outsiders in college and nearly half acknowledged changing their behavior when interacting with faculty and staff. Approximately 30% also acknowledged changing their behavior in class and when interacting with peers from outside their culture. While the responses do not include information about what these changes are or what precipitated the sense that a change should be made, it is possible that some of the changes in view relate to personal patterns rather than cultural patterns as just over 10% also noted they change their behavior with peers who are from their culture. The responses from non-Hispanic students support this supposition.

The 2018 Hispanic student response rates for change in behavior were very similar to those for non-Hispanics, for fitting in in class (H 30.0%, NH 27.9%), with college peers from outside my culture (H 28.2%, NH 22.7%), and with college peers from my culture (H 10.3%, NH 12.7%). No significant differences were found by comparing responses from the two groups in these areas. There was, however, a significant difference with a small effect size between responses from Hispanic students and non-Hispanic students for behavior change when interacting with faculty and staff, 48.4% of Hispanic student respondents agreed while 33.1% of non-Hispanic students did ($p = .001$, $\phi = .155$).

The median and mode scores from 2019 are similar to the 2018 finding for interacting with faculty and staff as the most common rating was five on a ten-point scale with a median slightly above the mid-point. There was marked variation in responses for changing behavior in class and with college peers from outside one's culture. Both had mid-points of five on a ten-point scale but zero for their mode. These ratings also appears to align with the 2018 values but demonstrate that there may be gradation in the perception of need to alter or enacting alteration of one's behavior. Comparison of the Hispanic and non-Hispanic responses in 2019 regarding changing behavior when interacting with faculty and staff approached significance ($p = .055$). The primary difference in the distribution of responses for non-Hispanic students who provided more low ratings, twice as many submitting ratings of zero and two, one-third more submitting ratings of one and three.

A finding reported separately in Preuss et al (2020) also is applicable here as it addresses student reports of cultural understanding on the part of institutional representatives. On the 2019 survey, students were asked to indicate whether persons providing seven forms of service at their schools exhibited understanding in respect to “my culture.” Ratings were requested for each on a ten-point scale. Table 20 contains the results for this set of queries comparing the responses of Hispanic and non-Hispanic students.

Table 20. Student Responses: 2019 Ratings for Understands My Culture

Prompts	Comparison	p value	Z Score	Hisp MR	Non-H MR	r
Advising/mentoring.	Hisp/non-Hisp	< .001	-5.95	256.56	338.14	-0.24
Instruction/teaching.	Hisp/non-Hisp	< .001	-7.09	258.44	357.88	-0.28
Financial aid office.	Hisp/non-Hisp	< .001	-4.89	265.55	334.01	-0.20
Tutoring service/lab.	Hisp/non-Hisp	< .001	-6.59	249.49	340.71	-0.27
Student organizations.	Hisp/non-Hisp	< .001	-4.74	251.49	315.53	-0.20
Scholarship office.	Hisp/non-Hisp	< .001	-4.36	255.25	314.78	-0.18
Career services.	Hisp/non-Hisp	< .001	-5.13	244.60	313.63	-0.22

In every form of engagement with students listed on the survey, including instruction, Hispanic students were significantly more likely to say the institution's employees did not understand their culture with moderately small effect sizes for each comparison. This provides at least a partial explanation for the difference in response patterns along ethnic lines regarding changing behavior when interacting with faculty and staff. That this consistent and broad pattern occurred demonstrates extended breadth of culturally related difficulties for Hispanic students within the HSIs represented in the sample. These are likely to include "verbal, behavioral, or environmental indignities" (Sue et al, 2007, p. 271), called microaggressions, that can occur both intentionally and unintentionally in cross-cultural interaction. At its root, these are based in differences in understanding of what are "normal" appearance, behavior, expectations, and values (Keller & Galgay, 2010) which is common in and can present significant challenge for inter-racial and inter-cultural settings (Storti, 2007). Experiences of this type, or a wish to avoid them, may be contributing to Hispanic students being more likely than their non-Hispanic peers to alter their behavior when interacting with faculty and staff (Table 19). All Hispanic students may not feel like outsiders in higher education but those in the 2019 sample felt that their culture was not understood by the representatives of their college or university. While the 2019 sample was regional and the number of institutions represented was small, this finding is a significant concern given the emphasis on cultural congruity and limiting acculturative stress (Castellanos & Gloria, 2017; Chun, Marin, Schwartz, Pham & Castro-Olivo, 2016) in student support theories that focus on serving Hispanic students.

Student Responses Related to Being Under-Prepared for College Processes and Being First-Gen Students

Patterns of experiential, practical, and academic under-preparation for Hispanic students were discussed by informants in the focus groups and interviews in the first phase of this investigation. The informants also discussed their perceptions of the impact on Hispanic students of being first-generation college students. These are national rather than regional concerns. Addressing the needs of students who are underprepared for college has been an emphasis of the Lumina Foundation for decades and has resulted in an area of specialization in higher education, developmental education. Under-preparation of students is also frequently addressed in the literature with Barbatis (2010), Greene, Marti, and McClenney (2008), and Nora and Crisp (2012) all discussing college preparation patterns specific to Hispanic students.

In many cases, these discussions extend to limitations in social and cultural capital exhibited by first-generation students. Dennis, Phinney, and Chuateco (2005) and Olive (2008) are examples of scholars who have written about the prevalence of this characteristic among Hispanics and the impact of first-generation student status. The research team included students' ability to navigate college processes and being first-generation students in the FSA survey based on the qualitative portion of the study and the literature demonstrating that these are active and on-going concerns in higher education and in respect to Hispanic college students. The questions about college processes and first-generation student standing were part of the "Hispanic students are..." question set on the FSA instrument. A question was asked about academic preparation for college mathematics (Table 6) but there was no equivalent to it on the student surveys. There were, though, 14 questions from the 2018 and 2019 student surveys related to student preparation to navigate college processes and being a first-generation college student.

Hispanic faculty, staff, and administrators felt more strongly and at a significantly different level than their non-Hispanic colleagues that the Hispanic students at their HSIs were "primarily first generation students." This was the case with a weak effect size even though there is a general notion that Hispanic students tend to be the first in their families to attend or complete college and published research exists in this topic area as has just been noted above. On the 2019 survey, students were asked to place themselves in one of five categories. Three represent definitions of first-generation student standing used in different contexts in higher education. These exist because the Higher Education Act of 1965 defines first-generation students as individuals "whose parents did not complete a baccalaureate degree" (US Department of Health, Education, and Welfare, 1965, para. 19) but does not address Associate degrees or persons with some college attendance.

The Center for First-Generation Student Success notes this and other challenges with defining the phrase first-generation college student (first-gen) and discusses alternate definitions (CFGCC, 2017). The research team sought to accommodate the most restrictive definition while also including an Associate's degree as a completed college credential. The first of the descriptions offered to students was "I am the first person in my family to attend college," the most restrictive definition. The two others were "One or more family members have attended college but I will be the first to finish a two-year degree" and "One or more family members have attended college but I will be the first to finish a four-year degree." The remaining options were "One or more family members have graduated college and received their degree" and "I don't know the college attendance

history of my family members.” The percentage of students stating that they were first-gen listed in Table 21 combines the responses received for all three definitions of a first-generation student (first to attend – 37.8%, first with 2YR degree – 12.4%, first with 4YR degree – 15.6%). This information aligns with the perspective of the Hispanic employees that the Hispanic students at their HSIs were “primarily first generation students” although the 2019 student survey had fewer institutions represented than the 2018 FSA survey.

The social and cultural capital of Hispanic college students relevant to college and how these factors impact student success have been a point of interest in higher education (Crisp & Nora, 2010; Sandoval-Lucero, Maes, & Klingsmith, 2014; Wells, 2008; Zambrana, & Zoppi, 2002). Because of this and references made by informants in the qualitative portion of the study, a series of queries were included in the 2018 and 2019 student surveys that sought to understand the knowledge base in the student’s family of origin regarding college processes and patterns and the level of assistance the student received with a variety of college-going tasks. A group of six questions about knowledge of processes and patterns was developed by the project team as well as list of seven college tasks students typically complete. On the 2018 survey, a three-point rating scale (Yes, Somewhat, No) was employed with five of the questions about the knowledge base in the family of origin. The exception was learning about applying for financial aid, which was part of group of questions for which a five-point Likert scale was used. In 2019, a ten-point sliding scale was employed for all six prompts. In order to report the response patterns in as similar a manner as possible, the responses of “Yes” and “Somewhat” were combined in the 2018 percentages reported for the family knowledge subset in Table 21. The percentage of “Yes” responses in each category is listed as bullet points below. The agreement level reported for learning about financial aid in Table 21 is a combination of the “Agree” and “Strongly Agree” responses on the five-point scale.

- My parent(s)/family know how college processes work – 28.7%.
- My parent(s)/family know about financing college – 36.1%.
- My parent(s)/family know about degree programs – 20.7%.
- My parent(s)/family can help with course selection – 16.7%.
- My parent(s)/family know how much work college is – 40.7%.

Table 21. Student Responses: Under-Prepared and Being First-Generation Students

FSA Prompts	Applicable Question w/ Students	2018 Yes/ Smwht	2019 Median	2019 Mode
...are under-prepared to navigate college processes.	My parent(s)/family know how college processes work.	66.5%	6	10
	My parent(s)/family know about financing college.	76.9%	6.5	10
...are primarily first-generation students.	My parent(s)/family know about degree programs.	57.7%	6	10
	My parent(s)/family can help with course selection.	33.0%	3	0
	My parent(s)/family know how much work college is.	76.6%	7.5	10
	I had to learn about applying for financial aid on my own.	48.3%	7	10
		2018 Agrmnt	2019 Agrmnt	
	Identified self as a first-generation student.	N/A	65.8%	
	Parents/family were helpful in completing (able to give accurate advice in completing the task)...			
	...FAFSA.	64.8%	55.3%	
	...institution financial aid application.	47.9%	48.0%	
	...scholarship applications.	N/A	43.8%	
	...loan application paperwork.	33.3%	36.1%	
	...degree and course selection.	25.4%	37.2%	
	...addressing problems in college.	35.2%	49.0%	
	...helping me find opportunities at college.	23.9%	N/A	N/A

The response levels for 2018 and 2019 were similar for all but one of the knowledge base queries. The exception was students having to learn about applying for financial aid on their own. The level of knowledge on the part of the family of origin for knowing how college processes work, about financing college, and about college degree programs had 60% or more agreement in 2018 and median scores of six, or more, and modes of 10 in 2019. These are comparable response patterns indicating a general agreement with these statements. This, however, seems out of line with over 65% of the 2019 respondents labeling themselves as first-generation students and may be related to the way the prompts were worded. The questions were intended to elicit responses about possession of specific, up-to-date, and applicable knowledge in these areas but the phrasing, which was concise to keep the survey as brief as possible, is open to other interpretations like have a general exposure to these ideas. The survey results appear to indicate more knowledge on the part of families than was anticipated but the imprecise wording may have impacted the result.

These results align with the responses for parents and family knowing how much work college is. Students in both years indicated this was the case for most of their families at similar levels. Over 75% of the Hispanic students affirmed this in 2018 and the median score for 2019 response was 7.5 with a mode of 10. These positive patterns did not continue for the more specific statements about help with course selection and learning about applying for financial aid.

Most of the Hispanic students in 2018 and 2019 noted that their families were not able to help with course selection. In fact, the mode for the 2019 survey was zero while the median score was similar to the affirmation rate for 2018, a median of three and affirmation rate of 33%. It is either at this more detailed and specific point that general knowledge fails to be applicable or the more precise prompt elicited the response pattern sought.

The response patterns for the seven tasks students face and how helpful parents and family were in these areas, defined in the prompt as ability to give accurate advice, are reasonably similar for the two students surveys. For example, many families were reported to be helpful to the student respondents in completing FAFSA and institutional financial aid applications. This is a logical outcome as FAFSA data includes the family's tax information and family income is also a consideration with institutional financial aid. That 35% of Hispanic students in 2018 and 45% in 2019 noted their parents were not able to give accurate advice regarding the FAFSA and over 50% in both years reported this for institutional aid is worth noting.

Parental ability to provide accurate advice about addressing problems in college, over 35% affirmation in 2018 and nearing 50% in the 2019 data, is also a logical finding. Even though many of the parents appear to be unable to give accurate advice in a number of the areas listed, many of the problems students encounter in college relate to organization, institutional structures, and relationships. The primary patterns for solving these types of challenges are not unique to higher education. They are all based in gathering information about the situation, considering alternate approaches, and communicating with representatives of the organization or institution. These are baseline problem-resolution strategies practiced in all fields. Even parents with no understanding of college structures and patterns could suggest seeking further information, looking at new ways to approach a task or responsibility, and communicating with representatives of the institution as solutions.

The remainder of the seven prompts all had less than 50% agreement in 2018 and 2019. They can be arranged in a descending order that is roughly associated with the level of detailed and college-specific knowledge needed to assist the student. This pattern matches what would be expected from a group of students in which 65% were the first in their families to attend college and/or complete a degree.

To summarize, the student responses align with and generally confirm the perspective held by the Hispanic faculty, staff, and administrators in the 2018 sample. While some of the responses from students appear to indicate more ability on the part of parents/family to be helpful and provide accurate advice than might be anticipated, these were also areas in which the wording of the prompts was general and open to a number of interpretations. When the prompts are more specific, the Hispanic students were shown to receive low levels of helpful and accurate assistance from parents and family on tasks necessary at college with lower levels reported as the tasks become more college-specific and required greater understanding of college processes and procedures.

Conclusion

The research described in this document is first-of-its-kind in seeking to understand what faculty, staff, and administrators at Hispanic-Serving Institutions know and believe about Hispanic culture and the Hispanic

students they serve. The concepts included in the surveys were gathered from student, faculty, staff, and administrative informants at HSIs. They were also, as often as possible, informed by the literature. The result is a description of the perspectives of the faculty, staff, and administrators at HSIs that can at many points be verified using data gathered from students at HSIs in the same region as 100% of the colleges and universities the student respondents attended in 2018 and 2019 were represented in the FSA response group. The approach taken was exploratory as there is very little information available about HSIs, their employees, and students. As a result, the data primarily has a descriptive purpose. It documents what existed rather than providing the ability to explain why these patterns existed.

The samples were large and broad enough that they can be treated with confidence. Responses on the FSA survey are known to come from 37% of the 119 HSIs in the target region with the possibility that figure could have reached or exceeded 50% had the home institution of each respondent been identifiable. As reported in Preuss et al (2020), the number of respondents for both student surveys exceeds the level necessary for 95% confidence with a 5% margin of error. This is, therefore, an initial reporting of investigative results that can be treated with that level of confidence, considered representative of the situation at the institutions in the sample, and on which other studies can be based.

In the 393 responses from faculty, staff, and administrators at HSIs in Colorado, New Mexico, Kansas, and Texas, there were several key findings. The first was a difference of opinion that existed along ethnic lines. Hispanic faculty, staff, and administrators were less likely to agree that there was applicable information about Hispanic culture available to higher education professionals and more likely to agree with the statements made in the survey in respect to Hispanic culture and the background and characteristics of their Hispanic students than their non-Hispanic peers. Such a broad and consistent difference of opinion between Hispanic and non-Hispanic employees at HSIs points to, at a minimum, a notable difference in conception of Hispanic culture and understanding of Hispanic students. This is a concern as student success theory and programming has for decades (Terenzini & Pascarella, 1991; Tinto, 1993) emphasized cultural support and limiting “acculturative stress” (Chun, Marin, Schwartz, Pham & Castro-Olivo, 2016, p. 385) for minority students. The findings suggest that there is more conflict around Hispanic culture and the potential for more acculturative stress for Hispanic students at HSIs than might be anticipated. As noted by Sue et al (2007), Keller and Galgay (2010), and Storti (2007), even when people have the best of intentions, operating across cultures without clear and accurate perspectives can result in misunderstanding and insult. While the name Hispanic-Serving Institution seems to imply that these colleges and universities would be particularly attune to this potential, the evidence presented above indicates that was generally not the case.

As regards academic and student support programming using recommended patterns and areas relevant to Hispanic culture, that is being empirically based, taking a holistic approach, and emphasizing Hispanic contributions to academic disciplines, one-third or fewer of the FSA respondents reported these practices in use at their place of employment. There were also regular differences found between the responses from 2YR and 4YR institutions. Personnel at the HSIs that were community colleges reported these characteristics at their institution more than their peers at four-year schools at statistically significant levels, for five of six comparisons, with small to moderate effect sizes. While low student to teacher ratios were generally thought of as helpful, faculty and administrators were less certain this was beneficial for Hispanic students than for students in general, students in STEM courses, first-generation students, and students from low socio-economic backgrounds. These findings can be seen as evidence that, as stated by Kruse, Rakha, and Calderone (2018) “cultural competency efforts on campuses remain largely under theorized and diffuse” (p. 733).

When responses from 213 Hispanic students on the 2018 survey and 307 on the 2019 survey were compared to those of the Hispanic faculty, staff, and administrators, substantial alignment was found. This process was undertaken because the research team knew of no other data set similar to the 2018 FSA data gathered. The only means of verifying the results would be to compare them to responses from the same or a demonstrably similar population in the region. The only known data set with substantial overlap was the student responses gathered in the same region at the same time, and again a year later, by the research team. Every one of the colleges and universities attended by the student respondents, 14 institutions, was represented in the FSA data set. This means that the student data came from the very students about whom the faculty, staff, and administrators were commenting. The student responses also had the potential to verify the culture values orientation expressed by Hispanic FSA informants as the students were a separate Hispanic population that operated in the same institutions of higher education, the same communities, and the same region of the country.

The FSA and Hispanic student data identified a set of cultural values accepted by the Hispanic population of the region. These can be employed as the basis of institutional programming and professional development as well

as research. The FSA responses and comparison to Hispanic student responses also confirmed elements of a profile of Hispanic students attending HSIs in the region. This may be limited to Texas and the adjacent states, but it is still broadly applicable information as in 2017 there were over 120 HSIs in the seven-state region. The investigation also verified that HSIs in the region are not following much of the advice provided in the literature. Very few are distributing information about Hispanic culture and students to their faculty and staff, a form of sharing —“knowledge [and] professional learning” (p. 733) advocated by Kruse, Rakha, and Calderone (2018) to advance cultural competence at colleges and universities. Very few are emphasizing contributions of Hispanics to academic fields, another practice suggested by Kruse, Rakha, and Calderone. Castellano and Gloria’s (2007) emphasis on cultural strengths and supports and the recommendation of multiple authors to limit acculturative stress (Chun, Marin, Schwartz, Pham & Castro-Olivo, 2016; Santiago, Taylor & Calderon, 2015) appear to, at best, have been ineffectively activated at the HSIs in the sample. The finding from Hispanic students on the 2019 survey that institutional representatives enacting seven key areas of engagement with students, including instruction, do not “understand my culture” seems to confirm this. The study results act as a call for change at HSIs in respect to increasing understanding of Hispanic culture, of Hispanic students, and how to best provide instruction, service, and support for them.

Recommendations

The survey data described above revealed strong and consistent differences of opinion between Hispanic faculty, staff, and administrators at the HSIs and their non-Hispanic peers regarding information available about Hispanic culture, the elements of Hispanic culture, and the characteristics and background of Hispanic students. It also demonstrated that a different audience in the same setting, Hispanic students at some of the HSIs, exhibited the background, beliefs, and traits the Hispanic faculty, staff, and administrators thought they would. The data showed that very few HSIs are actively educating their employees about Hispanic culture and the backgrounds, needs, and concerns of Hispanic students although, in that limited group, the community college personnel were more likely to report implementation of several practices relevant to Hispanics and Hispanic culture.

What is being done in these areas appears to be incomplete or ineffective as the Hispanic students in the 2019 sample indicated that the HSI employees providing advising/mentoring, instruction/teaching, tutoring services, scholarship and financial aid assistance, career services, and who sponsor student organizations did not understand their culture. These circumstances illustrate a marked need for an increase of cultural competence on the part of many employees at the HSIs. This will not be effected or effective without “campus leadership [involved] in the development of supportive characteristics” (Kruse, Rakha & Calderone, 2018, p. 733). Increases in this area will make the HSIs and their employees “more credible, empathetic, relatable, and trustworthy” (Haupt & Connolly Knox, 2018, p. 538) in the eyes of students.

There are existing models to guide these efforts like those developed by Castellanos and Gloria (2007) and Santiago, Taylor, and Calderon (2015). There is also a great wealth of information about student success programming, advising, mentoring, instructional design, and other relevant topics available in the literature. To avoid extension of “under theorized and diffuse” (Kruse, Rakha & Calderone, 2018, p. 733) practice, the agenda suggested by Kruse, Rakha and Calderone, “attention to shared knowledge, professional learning at all levels of the organization, inclusive instructional methods, integration with other campus initiatives, and inclusivity of diversity foci” (p. 733), is an appropriate starting point for discussion and planning. The research results reported above can function as thought provoking and organizing material in a conversation of this type. While further investigation and elucidation in many areas is desirable, there is no time to delay.

As noted above, nearly two-thirds of the undergraduates in the US who identify as Hispanic attend HSIs (Revilla-Garcia, 2018). With 2.3 million Hispanics attending college in 2014 (Krogstad, 2016), that represents more than 1.5 million Hispanic students at HSIs. As the largest segment of the US population after Whites (Flores, 2017), the second fastest growing segment of the US population, and the youngest of all the US’ ethnic groups, Hispanics will be a larger percentage of the college ready population in the coming decades. This is already the case in some parts of the country like Texas where 52.4% of the students in the public schools were Hispanic in the 2017-2018 school year (Nagy, Whallun & Kallus, 2018). For a good number of colleges and universities, these demographic shifts have already resulted in student populations that are predominantly Hispanic. Notable institutions in this category are Texas A&M International University, Saint Mary’s University, the University of the Incarnate Word, California State University San Bernardino and Stanislaus, and the University of New Mexico (TAMIU, 2015). With declining enrollment from and declining birth rates in most segments of the US population (DeBarros & Adamy, 2019), young adults from Hispanic/Latino

backgrounds are the only portion of the market for US colleges and universities that is notably expanding. It is both appropriate and necessary that the institutions a large percentage of them have chosen to attend would establish culturally responsive supports, seek to limit “acculturative stress” (Chun, Marin, Schwartz, Pham & Castro-Olivo, 2016, p. 385) felt by the students, and work to develop “supportive characteristics” (Kruse, Rakha & Calderone, 2018, p. 733) to nurture a healthy and affirming environment for their Hispanic students. The findings reported in this paper can inform that process.

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