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Community Ecology Model of Socio-academic Integration: Understanding Interactions of Racially Minoritized Students at Four HSIs in the Southwest

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Abstract
In this article, we use Pichon's (2019) Community Ecology Model of Socio-academic Integration (CEMSAI) as a framework to conduct an environmental scan at four Hispanic Serving Institutions(HSIs): two community colleges and two research institutions. Special attention was given to how this model can help educational leaders understand how minoritized students (native or non-native to the campus) interact within these ecosystems, especially as it relates to the serving role of the institutions. The CEMSAI framework allowed us to: (a) know student profile; (b) understand the historical and cultural context of the institution; (c) determine how students use resources and space on campus; (d) observe how students develop and grow on campus (what is changing?);(e) assess the use of resources on college student change and development; and (f) systematically document changes as it relates to structural/space, curricular and co-curricular, climate, and strategic initiatives to address student success. Specifically, we learned what it is

like to be the dominant minority student at an HSI: What is it like to be a majority on campus and in the community and not always see that culture reflected within the ecosystem? This could be connected to the service role of the institution. Serving institutions, which tend to be closer to Mexico, appeared to be more socio-academically integrated.

Keywords: community ecology, socio-academic integration, minoritized students, Hispanic serving institutions, Southwest

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As institutions of higher education become more diverse, educational leaders have to become more attuned to how their students are striving and thriving on their campuses while making sure that they are providing services to meet their students' needs. This paper uses community ecology theory to shed light on how minoritized students at Hispanic Serving Institutions (HSIs) demonstrate integration within the ecosystem of their campuses. It is important for educational leadership to understand the nuanced experiences of their students and how it impacts retention, diversity, graduation, campus climate, and other indicators of success. This paper reports the findings of several organizational scans using Pichon's (2019) Community Ecology Model of Socio-academic Integration (CEMSAI) as a framework to understand what is going on within the ecosystem. Specifically, we used the framework to answer the following questions:

1. What is the student body profile?
2. How are the students interacting within the unique ecosystems?
3. How do these interactions impact students' socio-academic integration?

Findings suggest that more work has to be done to better understand the dominant minority students' experiences at HSIs, specifically, what it is like to be a majority on campus and in the community and not always see that culture reflected within the ecosystem.

Background

The number of Hispanic Serving Institutions (HSIs) is expected to rise significantly over the next half-century, yet little is known about how the environment impacts socio-academic integration, especially for those

students who are racially minoritized[6]. HSIs are colleges, universities, or systems/districts in which the Hispanic student enrollment is at least 25% of the total enrollment (Hispanic Association of Colleges and Universities [HACU] n.d.). According to data reported by HACU, many of these institutions are within the Southwest region of the country. Research (Arana et al., 2011; Borden & Sharpe, 2015; Flores & Park, 2015; Santiago, 2008) suggests that HSIs provide a more fertile ground for academic success of racially minoritized students than predominantly/historically White Institutions (P/HWIs). National data trends show that the percentage of baccalaureates awarded to minorities attending HSIs continue to outnumber those of other P/HWIs (regardless of institutional types) with HBCUs graduating the most minorities (88% of their degrees were conferred to minorities; Borden & Sharpe, 2015; Li, 2007). From 1984 to 2004, HSIs enrolled 50% of the Latino students, 19% of the Asian students, 13% of the American Indian students, and 11% of the African American students (Li, 2007). In 2013, HSIs conferred 58% of their degrees to minorities; more specifically, eight percent were conferred to African Americans/Blacks while 39% were conferred to Hispanics (Borden & Sharpe, 2015). Because HSIs are a major point of access to higher education for minoritized students, Garcia et al. (2019) urge leaders to be more intentional in developing support structures that facilitate student success because these students oftentimes face challenges with integration in higher education (e.g., Bazana, & Mogotsi, 2017; Davidson & Wilson, 2012; Maestas et al., 2007; Rienties et al., 2012; Severiens & Wolff, 2008; Soria et al., 2013; Stewart, 2013; Woodford & Kulick, 2015). This may be especially true if the HSIs are struggling with their serving roles (Garcia, 2017). Garcia identifies and defines these roles accordingly: “producing” (high outcomes/low culture), “serving” (high

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[6]. Stewart (2013) defines racially minoritized students as Asian American, Black, Latino, Bi/multiracial, and American Indian while Vacarro and Newman (2016) broadened the definition beyond racially minoritized individuals to also include "…members of other historically oppressed social identity groups (e.g., people with disabilities, LGBT people, people with low socioeconomic status, or individuals whose religious or spiritual background is not Christian)…" (pp. 925-926). Thus, *minoritized students* refer to individuals who are not the majority population on campus based on race, ability, sexual orientation, income, religion, and other memberships.

outcomes/high culture), “enrolling” (low outcomes/low culture), and “enhancing” (low outcomes/high culture). However, these serving roles are not easily recognized and require intentional observation. Environmental scans can assist leaders understand their institutions’ role in socio-academic integration and how their students are interacting within the institution.

Environmental scans originated as a business tool to gather organizational data as it relates to internal and external threats and opportunities for decision making (Aguilar, 1967; Morrison, 1992). These scans are usually initiated within the first few months or first year of accepting a new position, taking on a new initiative, realigning resources and priorities with changing needs, and just trying to understand what is going on. More than any other factor, the environment is a central feature that affects structure, processes, and decision making (Duncan, 1972; Salancik & Pfeffer, 1978). Environmental influences impact both the organization and leadership within. An organization’s existence is contingent on its ability to adapt and act in a way that is consistent with the environment (DiMaggio & Powell, 1983; Meyer & Rowan, 1977; Tolbert, 1985). Environmental scanning in business is a method by which observation of events and occurrences are examined for in-depth consideration by high-level management (Culnan, 1983; Daft et al., 1988; Hambrick, 1981). Scanning allows for the structured collection of information that aides in the organization’s ability to acclimate to the external environment (Choo, 2001). By utilizing an environmental scan, organizations can be better equipped to advance and modify a strategic plan founded on information that has been obtained (Lapin, 2004; Salinas & Lozano, 2017). Therefore, careful examination of the environment is extremely useful to encourage organizational success and is extremely necessary in higher education.

In this paper, we use Pichon’s (2019) Community Ecology Model of Socio-academic Integration (CEMSAI) as a framework to conduct an environmental scan at four HSIs: two community colleges and two research institutions. Special attention is given to how this model can help educational leaders understand how racially minoritized students (as native or non-native inhabitants to the campus) interact within these ecosystems, taking into consideration the serving role of the institutions. Based on the findings, the authors provide suggestions for using the CEMSAI framework and practices.

Theoretical Framework

For this paper, Pichon's (2019) Community Ecological Model of Socio-academic Integration (CEMSAI)[7] was used to describe observed experiences of racially minoritized students at HSIs. Using the CEMSAI as a theoretical framework for the environmental scan allowed us to answer three key questions: (1) What is the student body profile? (2) How are the students interacting within the unique ecosystems? (3) How do these interactions impact students' socio-academic integration? This model combines theoretical concepts from community ecology (Raven et al., 2017) and socio-academic integration (Deil-Amen, 2011). The model began with understanding the student body profile and/or membership indicators (e.g., race/ethnicity, gender, income, major, sexual orientation, religion), which allowed us to determine if persons were native or non-native inhabitants within the ecosystem. Then, it allowed us to understand the students' experiences within the ecological system at a particular institution, especially as it related to socio-academic integration. Attention was given to community ecology theory in higher education and socio-academic integration—the key components of CEMSAI.

Community Ecology Theory in Higher Education

Community ecology theory provides an excellent framework to explain what is going on within higher education. Different types of institutions (e.g., Community College, Hispanic Serving Institution, Historical or Predominantly Black, Research University, Liberal Arts, Seminary) are likely to have unique ecosystems based on their different characteristics and student body profiles. For this model, we used three cyclical components of community ecology theory: intergroup interactions, adaptation, succession. That is, intergroup interactions impact adaptation, adaptation impacts succession, and succession impacts intergroup interactions.

Intergroup interactions in higher education. Intergroup interaction concerning community ecology theory consists of competitive exclusion (i.e., "driving out" of one of the competitors), resource partitioning (i.e., limit their use of certain resources or use divergent resources), realized niche (i.e., patterns of how inhabitants actually use the physical space and resources available within the environment to survive), and cooperation

[7] Excerpts used to explain the model appear in another publication.

(i.e., the give-and-take relationship between inhabitants over time; Raven et al., 2017). When applying notions of intergroup interaction in higher education, we focus on how students use the space on campus: how students arrive on campus and compete with others (e.g., peers, faculty, staff, administrators) within that space for limited resources (e.g., classes, academic support, food, residence halls). Reyes (2013) examined ecocultural niches for students of color to explain individual and social factors that impact their adjustment to college. He found that the role of "in-group ethnic affiliations or enclaves can play in supporting the higher educational experiences of students of color" (p. 47). That is, students tend to spend time with others like themselves.

When resources are limited on campus, students have to become more creative in how they compete for resources. Effectively competing for resources may include using certain resources at different times or simply not using them at all. For example, students may attend tutoring centers at a time when other students are less likely to be in the space because they believe they may not be able to compete with the other students for time with the tutors. Specifically, students (less prepared or new to the community) may use the Academic Center from 3:00 to 5:00 because they may believe they may have a better chance of getting their questions answered. Subsequently, this may also be a time when tutors are less available--physically and/or mentally--to provide the best services. Because of these multiple limitations related to the use of space (not feeling as though they can compete for time with tutors and not getting good services when present), students may also use different resources not being used by others either within the university community or outside of the community. For example, Bonner et al. (2015) found that African American students at an HSI were more likely to seek tutorial assistance from other programs that catered to their specific needs (e.g., TRIO, Student Athletics, peers, supervisors, counselors) or within their external communities (e.g., teachers from high school, church members, family, friends) than from the campus-sponsored services.

Concerning cooperation, campus personnel oftentimes struggle to create mutually symbiotic relationships and environments in which both students and personnel can benefit. They are more likely to engage in commensalistic and parasitic relationships. In such relationships, one member is the benefactor and the other member contributes to the success of the other member and is either not rewarded for it (i.e., commensalistic) or is harmed in the process (i.e., parasitic). Either way, the member leaves

the relationship and/or the campus feeling ignored, devalued, unappreciated, or stymied. Therefore, these symbiotic relationships are important, and administrators need to focus more on mutually symbiotic relationships than commensalistic or parasitic ones. Students benefit from the environment on campus, and the institution benefits from the students. An example of this could be when institutions qualify for certain federal funding for "serving" specific student populations but then there is a perception that they do little to ensure that those students benefit from the status or the resources generated because of their presence. If these relationships are more commensalism or parasitic, campus administrators have to consider how to make them more mutualistic relationships.

Adaptation in higher education. As inhabitants seek to survive and thrive within the community, they acquire adaptations as a means of reducing the impact of intergroup interactions that threaten their existence and survival (Raven et al., 2017). When applying these notions of community ecology within higher education settings, students adapt to survive among other students much in the same way. For example, if students perceive a threat to their studies, they will adapt by developing a form of mimicry or camouflaging. Mimicry in students could manifest itself in being extra prepared (i.e., high performing in academic and social settings) or taking on behaviors of the majority culture (even to the detriment of those who look like them) while camouflage is when the students will try to blend into the landscape. Patterson (2004) noted that the "…higher education environment selects the organisms that have the best 'fit,' those which most successfully compete for their ecological niche survival" (p. 72). Students who apply the most appropriate survivalist adaptations to fit into the environment are more likely to persist.

It may appear that students who employ mimicry and camouflage strategies are doing well because there is no real disruption to the observed expectations. However, this may not be true. Students who engage in mimicry behaviors may do so even if the behaviors are less welcoming to others who look like them. Furthermore, students who engage in camouflaging are less likely to interact with other students who look like them for fear of being detected by others. This may be an unrecognized hiding-in-plain-sight phenomenon at play (Raven et al., 2017). Although it appears that these students may be well adapted to the environment, persistence or retention rates may shed light on whether or not these adaptive strategies are truly effective. Strange and Banning (2015) argued

that if students are not engaging within the space, then the environment is not conducive to learning.

Succession in higher education. Thus, research on succession is promising in predicting the success of inhabitants within higher education. *Succession*, a critical piece to understanding ecology, focuses on environmental changes over time through disturbance of the environment and/or community (Emery, 2010; Klitching, 2013; Kneitel, 2010; Prior et al., 2015; Raven et al., 2017). The act of disturbances in higher education can open niches that allow all students to flourish (i.e., causing competitors to change behavior; creating a new habitat that is more conducive to the non-native inhabitants) creating a new and hopefully improved form of diversity in which all inhabitants can exist, survive, and thrive. Specifically, the disturbance in higher education results in a more diverse student body and campus. Usually, diversity can be observed through attendance at events, classrooms, walking across campus, use of resources, types of events offered, and degrees awarded.

In using succession to understand what is going on, there are several questions that have to be addressed: How has the environment changed because of the presence of these diverse students? How tolerant, facilitative, and inhibitous is the environment to these diverse students? The students change because of their experiences on campus and the campus environment changes because the students are there. The longer diverse students attend institutions, the more likely they are to impact the environment, making it a more conducive environment for success for those that come after them. If it appears that there are no visible changes to the environment, then one is cautioned to review other qualitative and quantifiable data. There are additional questions that can be addressed: What is the retention rate of these students? What is the graduation rate? How much do they participate in governance of the institution? Do we have a culturally responsive curriculum? What policy changes are made? What menu changes are made?

Socio-academic Integration

Interactions within the ecological system can lead to socio-academic integration, which is critical for students to persist. Scholars (e.g., Bensimon, 2007; Deil-Amen, 2011; Napoli & Wortman, 1998; Strauss & Volkwein, 2004; Tinto, 1993) have asserted that both social and academic integration are needed for students to persist. In Tinto's (1993)

Longitudinal Model of Institution Departure, he posited that the more academically and socially integrated students are within the institution, the more likely they are to commit to that institution and ultimately persist. Deil-Amen (2011) coined the term *socio-academic integration*, which refers to the symbiotic relationship between academic (i.e., interactions faculty, staff, and peers within the classroom) and social (i.e., interactions with faculty, staff, and peers outside of the classroom) experiences. Soria et al. (2013) added other indicators of academic integration (e.g., engagement with studies, academic involvement and initiative, time spent on academic activities) and social integration (e.g., satisfaction with educational experiences, sense of belonging and satisfaction, campus climate for diversity). Students who have good experiences in- and out-side of the classroom are more likely to stay while students who do not have good experiences become less committed to attending that institution and will ultimately leave prematurely.

The ability for minoritized students to compete with other students, secure resources, enjoy communal spaces, develop healthy adaptations, and exist within a diverse setting, the more likely the student is going to become socio-academically integrated within the institution system. If these students are not able to do these things, they are less likely to become integrated and are likely to leave prematurely. The longer the students are in the community, the more likely they are to impact the environment, thus, making it more conducive for success for those who come after.

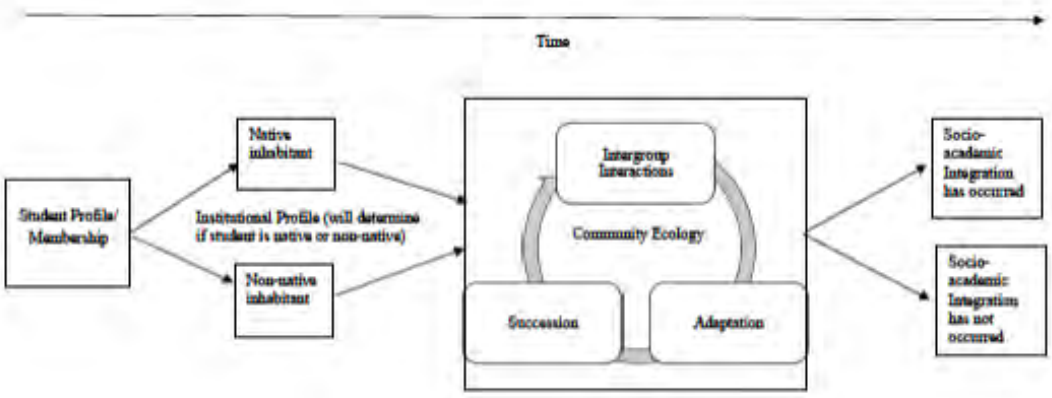

Figure 1. Community Ecological Model of Socio-academic Integration (CEMSAI) for Minoritized Students in Higher Education

CEMSAI as a Framework for an Environmental Scan at Four HSIs

Pichon's (2019) CEMSAI was used as a framework to conduct environmental scans at four HSIs. It allowed us to understand what was going on, through observations. Glesne (2006) noted that through observations, "…you learn firsthand how the actions of research participants correspond to their words; see patterns of behavior; experience the unexpected, as well as the expected…" (p. 49). These observations were the key method for understanding what is going on. We used the CEMSAI framework at four different HSIs: two community colleges and two research institutions. The institutions will be referred to as Community College 1 (CC1), Community College 2 (CC2), Research University 1 (RU1), and Research University 2 (RU2). Using the CEMSAI framework allowed for the following questions to be answered:

1. What is the student body profile?
2. How are the students interacting within the unique ecosystems?
3. How do these interactions impact students' socio-academic integration?

What is the student body profile?

Using the CEMSAI as a framework for an environmental scan helped us identify and contextualize who is operating within each institution's unique ecosystem. To do so, we were able to review institutional historical data, i.e., Institutional Fact Books, National Center for Education Statistics Integrated Postsecondary Education Data (IPEDS), National Survey of Student Engagement (NSSE), Exit/Alumni Survey, Student Surveys. This helped to identify trends in enrollment patterns, especially as it related to race/ethnicity, gender, college/division, first-generation status, Pell Grant eligibility, graduation and completion rates, institutional characteristics, or any specified data assessed by the institution. Since all institutions did not capture all of the same data and in the same ways, it was important to get "eyes on the situation" (i.e., does what you see in the data match what you see on campus?).

The four HSIs using the CEMSAI had unique student bodies that may provide insight into how students navigate the ecosystem and become socio-academically integrated. For example, CC1 enrolled approximately 30,000 students. Of those numbers, 85% of the students were Hispanic/Latino, 7% were Caucasian/White, 2% were African American/Black, and 1% was Asian. Females made up the majority of the

student body (57%), and the average age was 20. First-generation college students made up 44% of the student body. Only 12% are enrolled in vocational/tech programs. CC2 enrolled approximately 11,000 students. Of that number, 73% of the students were Hispanic/Latino, 17% were Caucasian/White, 3% were African American/Black, 1% was Asian, .02% were Native American/American Indian. Females made up the majority of the student body (54%), and traditional age (18-24) students made up 54% of the student body. Also, 57% of the students were first-generation college students, and 64% are Pell Grant eligible. Approximately 30% were in non-degree seeking programs.

The research institutions were similar to the community college. RU1 is a public research university that enrolled approximately 25,000 students. Of those numbers, 80% of the students were Hispanic/Latino, 9% were Caucasian/White, 3% were African American/Black, and 1% were Asian. Females made up the majority of the students (57%), and the average age was 23. Also, 50% of the students were first-generation college students. RU2 enrolled approximately 20,000. Of those numbers, 43% of the students were Hispanic/Latino, 35% were Caucasian/White, 5.2% were Native American/American Indian, 4% were Asian, and 2.4% were African American/Black. Females made up the majority of the students (63%) and the age range from 18-25. Forty percent of the freshmen class is first generation college students.

Native and non-native inhabitants. Reviewing the data regarding the student body through the CEMSAI framework, we were able to determine the focus on native and non-native inhabitants. Although all four HSIs had a majority Hispanic/Latino student students, we quickly learned that the historical backdrop associated with HSIs, as it relates to being H/PWIs, created some dissonance with correlations between native and majority populations. Even though these HSIs were in a high Hispanic/Latino area, many of them retained their Eurocentric/White culture. This nuance forced us to rely heavily on Garcia's (2017) typologies of HSIs--producing (high outcomes/low culture), serving (high outcomes/high culture), enrolling (low outcomes/low culture), and enhancing (low outcomes/high culture)—to understand what was going on.

Specifically, CC1 and RU1 had an extremely large Hispanic/Latino student body and appeared to provide a more Hispanic/Latino culture taking into consideration the proximity to the U.S.-Mexico border. These institutions were considered "serving" based

on Garcia's (2017) typologies. They had high outcomes and high culture. Many signs were in both Spanish and English, and students conversed with one another and with faculty and staff in both Spanish and English, sometimes in the same conversations. Remaining true to the understanding of who the students are, institutional leadership addressed head-on many of the issues Mexican Nationals faced regarding border restrictions, delays, and stress. The student body and organizations promoted solidarity by passing out literature, holding immigration forums, and providing resources to their peers. A feeling of oneness with the U.S.-Mexico border and being one with the campus surroundings was a noticeable quality and appeared to play into the inhabitant's ability to connect with and utilize the environment. This connectedness was displayed through active student participation, calmness, and a sense of belonging, further preserving the unique atmosphere.

However, the HSIs further away from the U.S.-Mexico Border, although high in numbers, appeared to have a less Hispanic/Latino culture. CC2 would be considered "enrolling," low outcomes/low culture, while RU2 would be considered "producing," high outcomes/high culture, based on Garcia's (2017) typologies. Both institutions had little dominant majority student culture present on campus; CC2 also had low outcomes while RU2 was able to have high outcomes. This visual piece is interwoven into the scenery, people, activities, and most all of campus life. These institutions appeared to be less intentional about incorporating Hispanic/Latin culture into what appeared to be more of an H/PWI culture that just happened to have a large Hispanic student body. Historically, students on those campuses had often complained about the lack of Hispanic/Latino culture within these spaces (e.g., leadership, faculty and staff, curriculum, guest speakers), based fliers for forums, testimonios, and platicas. The CEMSAI framework allowed us to distinguish who were the dominant students on each campus. So, although the Hispanic/Latino students were the majoritymembers on all four campuses, they were not the native student body. The use of the CEMSAI framework as an environmental scan highlighted this chasm.

How are the students interacting within the unique ecosystems?

Using the CEMSAI framework for the environmental scan at the four HSIs helped us understand how students (native and non-native) interacted within, adapted to, and made an impact on the ecosystem, i.e., campus—what is going on? If students can create meaningful and/or

lasting relationships, compete for resources, use space to meet their needs, they can adapt behaviors that allow themselves and other students to be successful.

Intergroup interactions. In observing the intergroup interactions of students at the four HSIs, we were able to triangulate preliminary findings based on historical student data and cultural nuances within the ecosystem. Overall, all four institutions showed all students competing for and using resources on campus (lounges, dining halls, computer labs, class labs, technology outlets). The campuses were always busy; people were constantly moving inside and outside of the buildings. There were moderate to high levels of conversation taking place all over, depending on locations. This illustrated the use of meaningful resources and communal spaces in which students could come together.

In using the CEMSAI framework, we were able to recognize realized niched spaces that were not equally shared by all students, especially those minoritized on campus. This was especially evident at RU2 in which student groups appeared to create realized niches in which their members used mainly. Although Caucasian/White students appeared to use all resources and be a part of all realized niches. Minoritized students on campus, including Hispanic/Latino students, found areas on campus in which more students who looked like them, were present; students congregated in areas of interests per race/ethnicity, gender, sexual orientation, religion, etcetera. For example, on most occasions, African American/Black students could be observed taking food from the dining hall and going to the Ethnic Studies Office to eat it. Like many of the African American students, the dining hall appeared to be a utilitarian area (get food) for them versus an area to hang out (social integration). Although the Asian students made up 4% and Native Americans/American Indians made up 5% of the student body, they were rarely observed in the main dining hall. This raised issues regarding dietary concerns; where the dining halls serving culturally diverse foods? Large numbers of Asian and Caucasian/White students on campus were mostly found in the medical/health buildings. Nuances such as these were more difficult to observe at CC1 since over 80% of the students were Hispanic/Latino. Although the minoritized students were active on campus, their numbers were extremely small. At several of the other institutions (RU1 and CC2), faculty and staff were observed collaborating with students in particular spaces. That was less obvious at CC1. At that institution, resources and realized niches tended to vary depending on age

and nationality. Traditional age college students tended to use campus resources (i.e., student organization office, student centers, lounges) while non-traditional were more likely to be observed using student business service offices (i.e., Financial Aid, Bursar, Advising). Additionally, Mexican Nationals tended to create smaller social groups in the space. For example, if eating together in the cafeteria, they sat at the table until everyone had eaten before leaving for class. They could be observed studying together in designated areas that appeared to be common spots on campus, usually off the beaten paths, for them to gather. Rarely did they speak English in those spaces; they spoke Spanish.

Adaptations. In observing the adaptations of students at the four HSIs, we were to determine how they employed strategies to survive. On the surface, there was a lot of mimicry and camouflaging that occurred on the campuses. That is, for the most part, students looked, dressed, and acted like those around them. This happens at most institutions all the time. However, at RU1 and RU2, students were wearing casual attire with shorts and t-shirts, backpacks and drinks or food in hand. Many students were gathered near the medical/health building wearing scrubs that display the school logos and colors. At RU2, white lab coats appeared to be the highest form of mimicry as the students moved through space with confidence, enunciating distinctly, walking tall, and usually in small groups engaged in conversation. It also became apparent that the white jackets appeared to be at the top of the hierarchy.

Additionally, at RU1, the labs in the engineering building were full of students working on projects with the students wearing white coats and working on hands-on projects. Students were gathered in the aerospace computer lab engaged with one another and the tasks with others in a lab wearing white coats working on moldings. At other HSIs, isolation through camouflaging was the main form of adaptation. At these four institutions, moving in packs, or small groups, was more commonplace for minoritized students. These packs varied based on the distance to the U.S.-Mexico border: institutions closer to the border were more likely to work in packs. At RU1, minoritized students sat with one another and engaged in conversations, walked to classes, and lounged in the common areas. Waiting for classes they engaged with one another. When they were not in small groups of two or more, they sat or stood alone looking at their mobile phones oftentimes with headphones plugged into their ears and not engaging with the outside world. Students at CC1 were more likely to be

arranged in groups based on age and nationality, especially within the Hispanic/Latino culture.

Moving further from the U.S.-Mexico border, there appeared to be fewer packs visible throughout campus. Instead, those were mostly in designated areas of space. For example, RU2 has a moderate Muslim student body, and on several occasions, female students with hijabs were oftentimes observed. Additionally, Native American students were observed sitting together in the student center. Another group often seen clustered together were student-athletes. They usually represented the varying genders and race/ethnicity, major, and other memberships. When visiting student business services at CC1, traditional-age college students tended to travel with two or more other persons, usually of their same interests and many times of the same ethnicity. A few of the other groups observed appeared to be more diverse and usually were a bit larger than the groups that were not as diverse. Trends of isolation continued at CC2, students. The only two groups that appeared to move in packs were Caucasian/White and Hispanic/Latino. The students "clustered" by racial lines in the lounge and eatery. Minoritized students appeared to travel alone, walking with earbuds or headphones in, preoccupied with smartphones or tablets, or focused on getting to their destination.

Although students in isolation were observed at all four HSIs, it appeared to be more prevalent at the institutions further from the U.S.-Mexico border. This may speak to students' reliance on camouflaging, that is, hiding in plain sight. Institutions closer to the border and more open to celebrating the culture of the region engaged in more pack behavior. The CEMSAI allowed us to observe successful strategies for blending into the environment.

Succession. Succession is a snapshot created as an amalgamation of intergroup interactions and adaptations over time within the space. As the students change within the space, the space yields to accommodate the students. Examples of succession were plentiful throughout the HSIs. At RU1, native art and natural murals surrounded the outdoor spaces. The campus was kept in pristine condition with groomed gardens and grassy areas all of which were occupied over the day. One of the most notable features was the diversity of the student body. Minoritized students, especially Hispanic/Latino, could be seen at every venue. They engaged with each other and throughout their campus. English and Spanish could be heard among the conversations. Walking into the eateries, lounges, and classrooms, they were occupied with students of multiple races and

ethnicities. This was not only evident among the student body but as well within the staff and faculty populations. Academic buildings were decorated with pictures of diverse students showing off their accomplishments. There were research projects on display, pictures of students working in labs, students competing in athletics as well as a show of students working within the community on projects. The campus website also displayed diversity, highlighting institutional awards for commitment to Hispanic/Latino students and Border Scholars working on binational solutions and multiple faculty accomplishments. At RU2, succession appeared to be most evident in academic areas more so than social settings. For example, medical/health faculty appeared to be engaged with all students in the communal space within the building. All students, regardless of membership, were present on campus and engaging, to some extent, with regard to socio-academic integration. Additionally, although there was not a lot of intermingling among the varying student groups, the institution provided space for growth and development.

Succession at the community colleges was for different reasons. At CC1, you could see the impact of the Hispanic/Latino students' impact. Students regularly engaged in conversations in Spanish and English. Signs could be observed in both Spanish and English. The cafeterias prepared food that mirrored that of the community. It was noted that there were even accommodations for Mexican Nationals who had different needs from some of the Mexican-Americans. For example, there were signs providing directions to students for requiring emergency accommodations within the city due to border closings. These students could still be observed using the outside tables/benches to collaborate with one other. It was noted that the outdoor space allowed for peer-to-peer collaborations. At CC2, succession was more difficult to detect. But for the visual representation of diversity on campus of students moving through the buildings, the building spaces were not as intentional about celebrating diversity and/or recognizing the culture of the dominant student body. Other than pictures of university administration and a few bilingual fliers strategically placed in several different buildings, the space was culturally neutral. Of the four institutions, CC2, even though 70% of the student body was Hispanic/Latino, it had fewer indications of succession.

Using the CEMSAI framework, we learned how all students are impacting the institution. Indicators included both visual representations as well as historical data. HSIs strongly connected to traditional P/HWIs

have a more difficult time accepting new cultural realities of their dominant student body. HSIs accepting of their designation and the culturally rich histories and new traditions that come along with it, appear to create a more fertile ground for diversity to flourish.

What are indicators of student socio-academic integration?

Using the CEMSAI framework for an environmental scan at four HSIs allowed us to make connections between what we observed within the ecosystem and what it says about socio-academic integration. To develop socio-academic integration, minoritized students have to compete with other students, secure resources, enjoy communal spaces, develop healthy defensive strategies, and exist within a diverse setting. If these students are not able to do these things, they are less likely to become socio-academically integrated and are more likely to leave. This illuminated how the four HSIs utilized their rich campus resources and environments to embody genuine fulfillment and create a distinctive campus culture. We found that there were purposeful, culturally rich, institutional features that influence engagement, participation, and success. To understand if socio-academic integration has occurred, institutional leaders need to be able to access student data.

We learned that native and dominant students within a space can create environments that allow other student groups to become more socio-academically integrated at these four HSIs. The lack of engagement among non-native and/or minoritized students sheds light on whether or not these students are being integrated. This absence of interaction, especially at RU2 (producing) and CC2 (enrolling) institutions, demonstrated a lack of socio-academic integration. This could be confirmed by examining retention rates at these institutions (and by race/ethnicity) during that same time. However, retention data per race/ethnicity were not easily accessible due to new federal reporting guidelines. However, "serving" institutions (RU1 and CC1) appeared to allow for more socio-academically integration. When celebrating the institutions' rich culture at HSIs, it leaves opportunity for socio-integration to flourish among minoritized students, especially when walking and talking together in common spaces such as the library, classrooms, public areas, and dining areas. In these venues, students of multiple races and ethnicities were seen with one another as well as campus staff. These interactions encompassed casual gatherings, socio-academic interactions,

and displayed active engagement and intellectual assignments with the exploration of new and diverse experiences.

Discussion

In this paper, we used the Community Ecology Model for Socio-academic Integration (CEMSAI) as a framework for an environmental scan at four HSIs. Understanding who is on campus and what is going on within the ecosystem allowed us to identify key interactions that may influence socio-academic integration. Drawing from the underlying principles of community ecology, we too gave attention to the process by which interactions between the organization and the environment can foster mutual adaptation (Bubolz & Sontag, 1993). Further, the principles of CEMSI ensured a broader conceptualization of the subcultures that existed on campus which could enhance minoritized student success in these environments. Scholarship on college environments underscores the significance of ecological and/or environmental factors which are important to understanding campus environments (Banning & Bryner, 2001). Scanning the environment allowed for a holistic understanding of imperative influences that played into student success (Choo, 2001; Sutton, 1998).

For HSIs, student profile was an extremely important characteristic to assess. Because of the location of the institution (Southwest), as well as the HSI designation, it was imperative to assess if the "serving" role accurately reflected the institution per Garcia's (2017) model: producing (high outcomes/low culture), serving (high outcomes/high culture), enrolling (low outcomes/low culture), and enhancing (low outcomes/high culture). Also, the information gained through observation of intergroup interactions, adaptation, and succession which allowed for the comprehension of social interactions among members was extremely useful in helping us learn what is going on. Socio-academic integration within the ecosystem exposed meaningful engagement activities on campus. Lastly, in understanding the student profile, leaders can offer services that speak to students' preparedness, learning, engagement, and on-campus behaviors. Thus, leaders can utilize this model to select and filter through data about students within their ecosystem.

Overall, the CEMSI was a beneficial tool for identifying and analyzing the environment for a greater knowledge of interactions. Slaughter (1999) explained that scans are used as a foundational framework that allows leaders to choose what to look for and what

information would yield useful information for making future decisions to improve student success. The CEMSAI framework can do just that; it allowed educational leaders to:

1. know student profile;
2. understand the historical and cultural context of the institution;
3. determine how students use resources and space on campus;
4. observe how students develop and grow on campus (what is changing?);
5. assess the use of resources on college student change and development; and
6. systematically document changes as it relates to structural/space, curricular and co-curricular, climate, and strategic initiatives to address student success.

More importantly, the use of the CEMSAI as a framework for an environmental scan prompted a discussion about dominant and native student populations: are they the same? The CEMSAI allowed us to examine what it is like to be a dominant minority at an HSI. Specifically, it allowed us to observe what it is like to be a majority on campus and in the community and not always see that culture reflected within the ecosystem. This was especially true the further away from the U.S.-Mexico border. In many ways,students who used realized niches were less likely to compete for resources, and engaged in camouflaging adaptation strategies—which is commonly observed in non-dominant/non-native populations within an ecosystem (Bonner et al., 2015; Patterson, 2004; Raven et al., 2017; Reyes, 2013). Thus, HSIs truly have to determine which role they wish to play per Garcia's (2017) typologies: producing (high outcomes/low culture), serving (high outcomes/high culture), enrolling (low outcomes/low culture), and enhancing (low outcomes/high culture). This could give some HSIs much needed purpose and mission that better reflect their student body.

Implications

The CEMSAI as a framework for an environmental scan for HSIs calls for educational leaders to know their students. One, because HSIs tend to mirror the city populations, it is important for leaders to know who is on their campus. In knowing who is on campus, leaders will be better able to develop engaging programming that matches who is on campus now as opposed to who was once on campus. There needs to be more intentional programming that better reflects the student body. Two, HSIs

can use historical, observational, and cultural data to develop a snapshot of who is on campus and the identity of the institution. Leaders need to know if they are enrolling, enhancing, producing, or serving their students, and more importantly, which culture is dominating or serving as a native ground for socio-academic integration to how students negotiate the system. There needs to be more intentional programming to improve outcomes for students. Three, HSIs will be able to determine how students are using the resources. Because students may not feel as comfortable using resources on campus (relegating themselves to smaller realized niches), they are likely to look for those resources in the community. Which students are using which resources will identify issues related to climate and culture. Therefore, it is important for HSIs to also develop partnerships within the community that benefit students' overall success. Four, HSIs can determine how the use of these specific resources impact college student growth and development. By examining retention and graduation rates, institutions will be better able to determine if students are using resources designed to assist them. There needs to be more targeted research that seeks to improve student success. More attention should focus on institutional barriers. Finally, to ensure that students can become more socio-academically integrated within the institutions, HSIs have to determine the impact of resources on students and how they are changing over time, and more importantly, how development and growth are measured within the ecosystem. Institutions have to observe and note changes in the environment. This includes checking in with students to see how they changed during their time within the ecosystem.

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