The Graduation Boost:

Supporting Student Persistence at Lyon College

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Forward

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Executive Summary

In an effort to better understand the troubling trends around its declining graduation rates, Lyon College submitted a request to Vanderbilt University to conduct a study on student retention and persistence. Our research team created a study that aims to empirically address two questions: (1) to what extent do academic, social, and environmental factors influence student persistence and retention at Lyon? and (2) what are the student and institutional attributes that help to promote student success?

Informed by Braxton, Doyle, Hartley, Hirschy, Jones, and McLendon's (2014) revision of Tinto's Interactionalist Model for Residential Colleges and Universities, we applied two methodologies to our research questions. First, we completed a quantitative analysis of existing attrition data that Lyon collected from students who departed from the college over a span of ten years. This dimension of the analysis highlighted the trends in student characteristics for those students who failed to persist. It also illuminated several key areas of focus for the second methodological analysis: a qualitative inquiry into the deeper factors influencing student success or departure outcomes at Lyon.

First focusing on the extent to which academic, social, and environmental factors influence student persistence and retention at Lyon, several key findings emerged from our team's research. Under academic factors, we found that Lyon students report mixed experiences on how well high school prepared them for college and that Lyon's academic rigor is simultaneously a source of pride and struggle. We mined student perspectives on Lyon's unique value proposition in the region and discovered the powerful impact of its high-touch

faculty. Further, we noted that Lyon's early alert system and shift to professional advising is viewed positively by students; however, advising and academic support structures weaken for upper-class students. Under social factors, Lyon's small size and distinctive setting pose unique opportunities and challenges for students' proactive social adjustment as conceptualized in Braxton et al.'s (2014) model. We also found that Lyon has not yet adequately contended with the changing racial demographics of its student population. Finally, Lyon's generous financial aid policy is critical to student recruitment and student success; however, ability to pay remains an obstacle for student's social integration. Lastly, under environmental factors, students experience misalignment between the school's narration of the campus/town environment and their actual experience of it. Further, students struggle to find sufficient mental health resources on campus. These key findings illustrate critical components that influence student persistence and retention at Lyon, which ultimately impact graduation rates.

Investigating the student and institutional attributes that help to promote student success, we found that meaningful engagement with faculty is a predictor for student persistence. We examined Lyon's affinity-based campus engagement model and found that the model is a prism that sheds light on the unique challenges facing athletes, those actively (or not so actively) engaged on campus, and the ways in which students and the institution experience tension between academics and affinity. We find the affinity-based model to be a double-edged sword with both positive and negative impacts on student institutional commitment and persistence. Finally, we address the finding that strengthening communal potential may help to retain Lyon students at risk for departure.

Informed by these findings, we offer several recommendations to the Lyon administration. The range of policy changes and practices include suggestions that may have both direct and indirect influence on improving Lyon's graduation rates. Some are policies toward which Lyon has already taken great strides. Other recommendations are still in their nascency. We encourage Lyon to:

- Recruit and enroll students who are more likely to persist;

- Create and sustain thick and coherent advising webs across years;

- Strengthen transfer pathways for students seeking a Lyon education;

- Address the student-identified issues impacting students' level of engagement on campus;

- Carefully track outcomes through self-reported student data and exit interviews;

- Create and refine traditions and experiences that uniquely bind students to Lyon;

- Sell the Lyon story clearly and accurately; and

- Review and refine Lyon's peer and aspirant pool.

These recommendations call for collaborative policies and practices among and between Admissions and recruitment, Academic Affairs and academic support services, Student Life and the counseling center, and Institutional Research.

Introduction

Small liberal arts colleges in the United States face an uncertain future. As enrollments decline and deficits mount, an increasing number of these institutions are closing their doors due to insurmountable financial challenges. While elite private institutions count on large applicant pools and generous endowments, small, mid-tier private colleges and universities with modest endowments - such as Lyon College - remain vulnerable, as demographic changes and decades of rising tuition prices leave them at risk of pricing themselves out of the market.

National Financial Trends in Small Private Colleges

There is increasing concern among higher education experts around the health of small private liberal arts colleges. Enrollments are dwindling, deficits are soaring, and many experts believe that more closings are imminent (Eide, 2018). More selective and elite institutions benefit from deeper applicant pools, expansive endowment resources, robust alumni networks, and institutional prestige that enables strong enrollment despite lower discount rates (Volkwein & Sweitzer, 2006). Public colleges and universities have their own financial challenges and dwindling state allocations, but they benefit from the security of the governmental purse. By contrast, small, private institutions with modest endowments are especially sensitive to enrollment and market fluctuations (Jaschik, 2019).

The tuition a student is willing to pay to obtain a college education is assumed to depend not only on the quantity of education desired but also the quality, size, age, location, and prestige of the school (Dimkpah, Eseonu, & Akpom, 2004). It has been demonstrated that private colleges adjust their tuition rates to demonstrate their quality as an institution. In

addition to covering instructional and other institutional costs, tuition pricing is tied to perceived institutional prestige (Goldman, Goldman, Gates, Brewer, & Brewer, 2004; Volkwin and Sweitzer, 2006). Yet after decades of tuition hikes to stay comparable to their more elite peers, institutions like Lyon are at risk of pricing themselves out of the market (Eide, 2018).

To help counteract the high sticker price, many colleges reduce costs through tuition discounting. In the 2017-18 academic year, the average tuition discount rate for first-time, full-time freshmen was 49.9 percent (NACUBO, 2018). In essence, this means that students only pay roughly one-half of the price that colleges and universities purport to charge.

Unfortunately, such aid policies leave some institutions unable to bring in enough revenue to cover their costs (Horn, 2018). Clayton Christensen, former professor at Harvard Business School, found that a 35 percent tuition discount rate was already a dangerous economic threshold for tuition-dependent institutions (Horn, 2018). Tuition dependent, liberal arts colleges like Lyon rely heavily upon steady and predictable enrollments to fulfill their institutional mission and meet their financial obligations, yet struggle with discounting rates that undercut critical revenues. And like at least 25 percent of their private college peers (Moody's Investors Service, 2018), Lyon struggles with annual operating deficits largely driven by under-enrollment.

Selective and Struggling: Lyon's Retention Problem

Despite being a selective institution with a 40 percent undergraduate admission rate and high alumni matriculation rates to professional schools, Lyon has struggled with retention and persistence-to-graduation. First-to-second year retention rates have hovered around 68 percent, with a projected rate of 63 percent for Fall 2019 to Fall 2020, compared to 72.6

percent (SD=18.3) among four-year private colleges nationally (ACT, 2017).[1] Lyon has seen a dramatic subsequent decrease in persistence rates among sophomore, junior, and senior students, leading to a 37 percent six-year graduation rate in recent years (Figures 1 and 2; Facts About Lyon, n.d.), compared to 57.9 percent among four-year private colleges nationally.[2] Students who persist to graduation enjoy relative success, with 98 percent of students placed in a full-time job or graduate program within six months of graduation.

Figure 1. Retention and Graduation Rates for Classes Entering Falls 2004 to 2015

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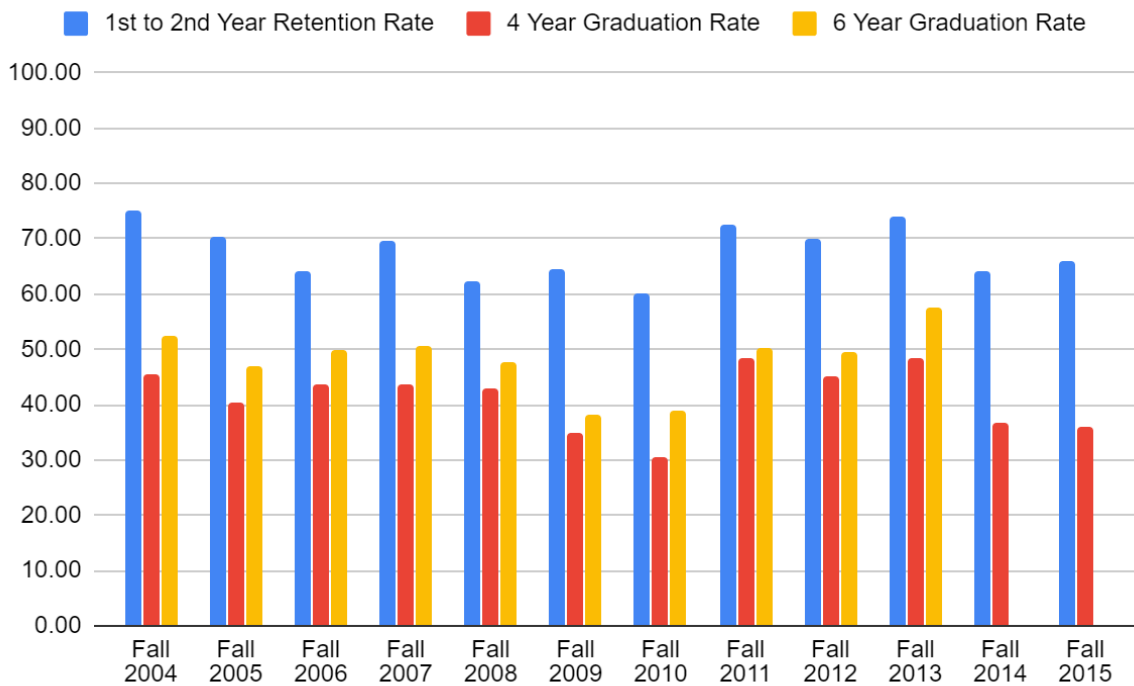
[1] Among ACT's classification of "selective" (as designated by ACT Test middle 50% scores between 21-26) four-year private institutions that offer only bachelor's degrees, the average first-to-second year retention rate is 82.6 percent (SD=9.1).

[2] Among peers in Lyon's ACT classification, the six-year graduation rate is 70.2 percent.

Figure 2. Persistence Rates by Year for Classes Entering Falls 2004 to 2016
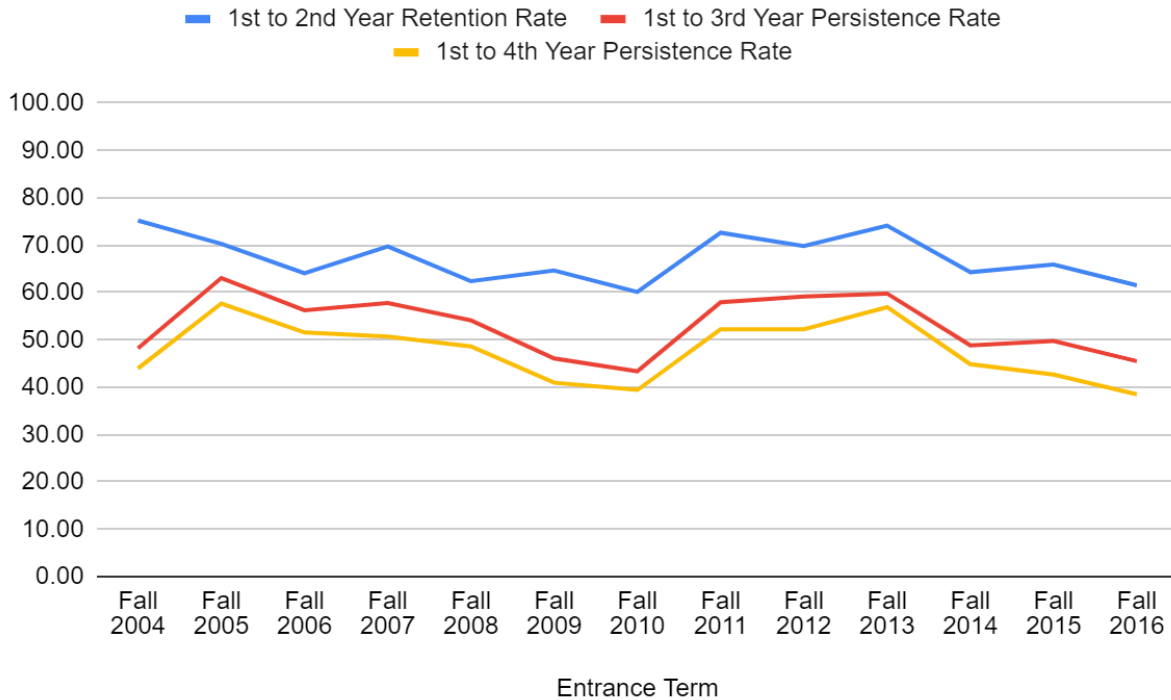
Low graduation rates are a problem for Lyon College for a multitude of reasons. In addition to the immediate implications for the college's financial health, institutional stability is called into question as dwindling student enrollment threatens the core academic mission, program viability, and prevailing staffing structures. Additionally, the administration surmises that poor graduation rates have a negative impact on the school's overall brand and public perception.

Perhaps most critically, administrators voice concern that the school is not living up to stated goals to double the size of the student body and raise Lyon's national profile - two hallmarks of the university's stated mission and 2022 strategic plan (Lyon College Strategic Plan, n.d.). The college seeks to develop a diverse community and enhance its residential experience, all while expanding its alumni connectivity and regional partnerships. To achieve these ends,

Lyon needs to better understand the nature and scope of its retention and persistence problem. This project seeks to build upon Lyon's considerable quantitative research through a holistic, qualitative examination of the study questions listed below. By the end of spring semester 2020, the research team will present findings to Lyon key stakeholders and offer, where appropriate, recommendations for next steps.

Why It Matters

The number of high school graduates is projected to slightly rise in the next decade, but between 2026 and 2031, high school graduates are expected to consistently decline, matching the drop in births that began with the 2007 recession (Prescott & Bransberger, 2012; Selingo, 2018). As a result, colleges and universities stand to lose an estimated 280,000 students (Moody's, 2018). Wary of continuing to raise tuition prices and unable to fund continued operations, some colleges have elected to close their doors or merge with other institutions. Those who persist seek creative ways to strengthen retention, cut spending, build new pricing models, or innovate beyond the traditional four-year residential college. Somewhat hopefully, however, the South is projected to be the only region with net growth by the end of 2027-28L 64,000 more graduates, a 5.5 percent increase (Prescott & Bransberg, 2012). To the extent that Lyon continues to proactively address and experiment with strategies for boosting both new and returning student enrollments across the region, it will continue to have agency in directing what kind of future it will have.

Project Questions

This Capstone project seeks to better understand the factors influencing student persistence and graduation rates at Lyon. We began with the following research questions:

1. To what extent do academic, social, and environmental factors influence student persistence and retention at Lyon?

2. What are the student and institutional attributes that help to promote student success?

Serving the Client: Application and Value

Data gathered from college databases, interviews, and surveys were examined to help clarify the key research questions as well as:

- Which Lyon students are at the highest risk of early departure (Quantitative analysis of RQ #2);

- The key point(s) at which student departures occur (Quantitative analysis of RQ #1 & 2);

- Student perceptions of their academic and social experience at Lyon (Qualitative analysis of RQ #1);

- Salient experiences and characteristics of students with risk factors who persisted to graduation (Quantitative and Qualitative analysis of RQ #2);

- Possible recommendations for improving student retention at Lyon.

We hope that the following findings will help to equip Lyon with the data needed to better assess current practices around financial aid, student advising, and campus culture and make informed decisions about needed changes to bolster the college's graduation rates.

Literature Review

General Theories of College Student Persistence

This review of the literature provided an overview of the key theories of student retention, attrition, and involvement that informed our capstone project at Lyon and our understanding of how students at Lyon may connect to, engage with, and ultimately persist in college. For the purpose of our work, we predominantly utilized Braxton, Doyle, Hartley, Hirschy, Jones, and McLendon's (2014) revision of Tinto's (1975; 1982; 1987; 1993) Interactionalist Model for Residential Colleges and Universities, as our context at Lyon was comprised of traditionally-aged students on a largely residential campus. After conducting our qualitative and quantitative research and analysis, our group also utilized Pascarella and Terenzini's (1980) scholarship on the role of student-faculty and student-peer relationships as mediators in the undergraduate residential experience. Finally, we broadly examined the extant literature around the multitude of academic, social, and environmental influencing student persistence in college. Our exploration of extant literature is organized around our two research questions.

RQ1: To what extent do academic, social, and environmental factors influence student persistence and retention at Lyon?

Academic Factors

While much of the scholarship around persistence focuses on involvement or student engagement, the direct academic factors influencing student persistence remain largely unexplored. Despite decades of new and compelling research on college student persistence and retention, theorist Vincent Tinto's interactionalist theory of persistence (dropout) remains

a seminal base upon which modern scholars and practitioners view and study the academic factors that contribute to undergraduate retention and persistence. Tinto (1986) characterized student persistence as a longitudinal process that couples students' perceptions and meaning assigned to interactions -both formal and informal- with various dimensions of a college or university. Tinto (1975) explained that academic systems of a university exist in both formal-- through academic performance-- and informal-- through student's interactions with faculty and staff-- capacities. Students' academic experiences at an institution ultimately shape their integration, goals, and outcomes. However, in a chapter in *Reworking the Student Departure Puzzle,* Braxton and Lien's (2000) assessment of empirical evidence regarding the effect of academic integration in the student departure process, called into question Tinto's proposition related to the direct effects of academic integration on student commitment. Because empirical evidence provides only modest support that academic integration wields a positive influence on subsequent commitment to the institution, to the goal of graduation from college and on student departure, Braxton and Lien assert that academic integration plays an inconsistent role in the student departure process. Braxton and Lien go as far to suggest the "abandonment of the construct of academic integration from further research" on student departure as an appropriate response to the lack of empirical evidence (p.23). In lieu of such an abandonment, the authors concluded that both specification and measurement of the academic integration construct needed to be completely revised. While the focused scholarship questions the role of academic integration in residential colleges and universities, the body of related research explores the role of pedagogical strategy, classrooms, and overall college readiness alongside student entry demographics.

Pedagogy, classrooms, and college readiness. The role of the classroom in college student departure has recently garnered additional consideration among scholars and practitioners. The classroom is a gateway for student involvement in the universities' academic and social communities (Tinto, Goodsell, & Russo, 1993). Faculty teaching skills have been shown to positively influence student course achievement (Pascarella, Nora, Edison, Haegdorn, & Braxton, 1996). Braxton, Bray, and Berger (2000) assert "students of faculty who exhibit teaching skills [such as organization, preparation, and clarity] also may have more time for participation in [social] communities because they feel more confident and relaxed in their academic environment" (p. 216). Braxton et al. (2000) also note that a student's institutional social connections may be positively or negatively impacted by in-class experiences, necessitating a greater examination of the influence of faculty teaching skills on student's social and academic integration, subsequent institutional commitment, and persistence.

In their study on student retention, Lotkowski, Robbins, and Noeth (2004) examined how non-academic factors, both alone and together with academic factors, influenced a student's decision to persist. They note that retention is typically associated with traditional measures of college readiness, such as high school GPA, courses completed, college admissions tests such as the SAT or ACT, and rigor of high school curricula. Moreover, they note that once a student is enrolled in college, retention is influenced by GPA, and numerous studies show that the higher a student's first-year GPA, the less likely that student is to drop out of college (Lotkowski et al., 2004).

Lotkowski et al.'s (2004) study on factors of academic self-confidence and achievement motivation found a strong relationship with college GPA, suggesting the merit in collegiate

programs that are focused on developing student competencies around achievement and self-confidence. Additionally, their study has significant implications for the future design of collegiate retention programs. The authors assert that postsecondary institutions must move past solely a co-curricular model to embrace the principle contribution that academic factors make towards improvements in college retention and persistence.

Academic preparation and student background characteristics. Differences in academic preparation have a significant impact on students' college readiness. Academic preparation not only involves taking appropriate high school courses, but also passing the tests necessary to meet college admissions requirements. Though academic skills are the prerequisite to college eligibility, they are mediated by students' family background, community expectations, and life experiences (Bowen, Kurzweil, & Tobin, 2005). These influences are further exacerbated by an educational system that does not adequately bridge K-12 and postsecondary contexts to support students' academic success.

According to Gamoran (2001), family background accounts for nearly the entire equity gap in college entry and graduation between black and white students. Socioeconomic differences account for differences in performance on college entrance exams such as the SAT or ACT, and college course placement exams (Bowen, Kurzweil, and Tobin, 2005). Students' racial and ethnic background has been shown to produce educational bias in the form of low classroom expectations and tracking (Ferguson, 2008; Ladd, 2008). These life experiences have a cumulative impact, building both bridges and barriers to postsecondary options (Bowen et al., 2005).

The issues surrounding academic preparation between students from different ethnic and/or racial populations, or between low socioeconomic families and families in more stable financial situations, are well documented. Students from low socioeconomic families who reside in states where income disparity is greatest tend to have lower test scores than students from higher socioeconomic families (Ferguson, 2008). Additionally, black students tend to be taught in classes with teachers who are less well trained, less satisfied with their career choice, and who have lower academic achievement expectations for their students (Ladd, 2008).

What has received less attention is the connection between the academic expectations students must meet to graduate from high school and how those expectations do, or do not, align with the academic demands of colleges and universities. In a study of six states, Venezia, Callan, Finney, Kirst, and Usdan (2005) found clear misalignment of academic standards between K-12 institutions and both the 2-year and 4-year colleges located within the same communities as the high schools included in the study. High school assessments measured different content and skills than do college entrance and placement exams, and high schools placed greater emphasis on keeping students in school than in preparing them for their postsecondary experiences (Venezia et al., 2005). Furthermore, as Venezia et al. (2005) stated, "students graduate from high school under one set of standards, and three months later, are required to meet a whole new set of standards in college" (p. 2).

This lack of curriculum alignment between K-12 and colleges resulted in students who are not academically prepared for college, and therefore, placed in remedial classes (Long, 2014; Venezia et al., 2005). A portion of this issue relates to knowledge of the academic requirements for college admission, as well as enrollment in college preparatory coursework in

high school. For example, in Texas in 1992, of the 72 percent of students included in a research study regarding postsecondary education who enrolled in college, fewer than half had taken college preparatory courses in high school (Venezia et al., 2005). In a study conducted in Maryland, 95 percent of first-time college students at Baltimore City Community College required mathematics remedial classes, and two-thirds required remediation in math, English, and reading (Venezia et al., 2005).

Social Factors

The extent to which social factors influence college student persistence has received much more empirical attention than the contributing academic factors. Prevailing scholarship centers around themes of social capital, the influence of social networks, the role of educationally purposeful activities such as orientation, residence life, and other co-curricular opportunities for students. Less attention has been paid to the role of campus racial climate. However, the research team found that, given Lyon's context as a predominantly white institution (PWI) and the low demographic representation of students of color on Lyon's campus, a review of the literature around campus racial climate was appropriate.

Social capital. Beyond the strong correlations between parental education (and income) and student educational attainment, families play a powerful role in conveying social capital and cultural capital to their children, resources that are strongly correlated with future success (Gamoran, 2001). Parent-to-child transmission of class advantages create clear differences in parent behavior, influencing the daily lives of students and resulting in distinct and divergent student experiences along racial, socioeconomic, and gender lines (Lareau, 2002). Social capital refers to involvement and affiliation with social groups that facilitate trust and access to

resources and opportunities, including access to institutions of higher learning (Tierney &

Venegas, 2006). Family social capital largely defines whether a student's inquiry about

postsecondary education is "Will I go to college?" or "*Where* will I go to college?" MacLeod

(1987) suggests that schooling promotes a belief that students bearing upper-class cultural

capital will be successful, and, conversely, that working-class students will not. Social capital is

not defined as a single entity. Rather, it comprises a variety of different entities which make

possible the achievement of certain ends that in its absence would not be possible.

Social networks. Interpersonal relationships, both on and off campus, play a

considerable role in bolstering student success in college. Students come to college with diverse

sets of norms and values which influence their relationships with faculty, staff, peers, family,

friends and mentors (Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006). The success of these

relationships all contributes to a student's commitment towards graduation (Kuh, 2005).

A social network refers to the "structures or relationships linking social actors"

(Marsden, 2004, p. 2727). These relationships and the extent to which they support students in

educationally purposeful activities or present obstacles, or challenges often vary among

multiple dimensions (Kuh et al., 2006). Berger and Milem (1999) found that students whose

values, norms, and behavior are already congruent with the dominant patterns on campus

were most likely to persist. Similarly, they, along with Attinasi (1989), punctuated the

importance of creating early connections with peers and faculty members. Social networks

ultimately provide students with a psychological safety net. Pescosolido (1994) explains, "it is

only in the center of the net, where social networks are balanced and moderate in their

provision of integration and/or regulation, in which individuals can be safely caught" (p. 276).

Perhaps most critically, social networks help to explain why the process of social integration is more challenging for certain groups of students (Chamberlain, 2005).

Campus racial climate. The role of campus racial climate and perceived discrimination in student social integration and persistence is well-documented in numerous studies of minority and non-minority students, alike (Cabrera & Nora, 1994; Hurtado, 1992, 1994). Several studies have found that on-campus racial discrimination has a negative impact on student persistence (Cabrera, Nora, Terenzini, Pascarella, & Haegdorn, 1999). Cabrera et al. (1999) posit that practices focused on improving campus racial climate-- such as encouraging diverse representation, utilizing multicultural curricula, and collaborative classroom environments-- could have a positive impact on student persistence. Although these practices have been shown to influence student perceptions around safety, security, and sense of integration, their explicit connection to student retention and persistence have not been empirically explored.

Ability to pay. Ability to pay is one of the antecedents to social integration, as well as student entry characteristic, in Braxton et al.'s (2014) revised theory of student persistence in residential colleges and universities. Braxton et al. (2014) proposes its influence on social integration based on Cabrera et al.'s (1990) contention that "the ability to pay tends to reduce barriers to student participation in the social communities of their college...because of the lower salience of their financial concerns about paying for college" (p. 86). Similarly, students are more likely to persist if they perceive that the benefits associated with attending a specific college outweigh the costs associated with attendance (Braxton, 2003). Ability to pay is a key psychosocial factor that has a sizable impact on a student's ability to persist.

Regardless of background, affordability is on the minds of today's college students. Seemiller and Grace (2014) found the cost of higher education to be one of the greatest concerns among Generation Z college students. Generation Z students refer to students born between 1995-2010, and these students will comprise the majority of the college student population until roughly 2030. Today's college students are also focused on financial security (Seemiller & Grace, 2014) and may see the price of college as a prohibiting factor.

Attending college can be a very costly, but worthwhile investment for students. The economic benefits of attending college and completing a degree can be significant (Ma, Pender, & Welch, 2016). Reported annual median incomes for individuals who complete a bachelor's degree are nearly $15,000 more than those who start college but do not complete a degree and nearly $20,000 more than individuals who do not attend college at all (Ma et al., 2016).

Student financial affects not only *whether* students attend college, but also *where* they choose to attend (Dynarski & Scott-Clayton, 2013). A number of studies have explored the impact of financial aid on college choice (Bartik et al., 2015; Dynarski, 2000; Nora, 2006). Moreover, the receipt of scholarships has the potential to impact student outcomes. Merit-based scholarships, for example, have been shown in some studies to incentivize students to maintain a high level of academic performance in ways that benefit student persistence and degree completion (Nora, 2006). Need-based scholarships can selectively target students who might not otherwise be able to enroll in ways that encourage representation from historically underrepresented populations (Castleman & Long, 2013). Federal loans provide mechanisms for students to borrow against anticipated future earnings to fund educational needs in the present.

This is not to say that all aid is positive. Merit-based aid has been criticized for disproportionately benefiting students from upper-class backgrounds whose families are already able to pay (Bowen, Kurzweil, & Tobin, 2005; Baum, 2015). Price discrimination - in which an institution selectively discounts tuition costs to incentivize certain students to enroll - can reward students whose backgrounds enabled what Vargas (2004) calls "academic self-efficacy," a trait positively correlated with high academic achievement and success in college. While the practice of price discrimination often assists exceptional students, who might not otherwise be able to afford college, it can also serve to reinforce and reproduce socioeconomic status and social capital (Jencks & Phillips, 1998; Marin, 2002).

Student concerns related to cost influence *where* students enroll alongside their ability to *remain enrolled* after matriculating. Receiving financial aid, especially in the first year, has been shown to positively influence persistence (Perna, 2000). Similarly, Castleman and Long (2013) found that aid eligibility has a positive relationship with first-year student persistence and overall degree completion. However, the type of financial aid a student receives is noteworthy, as students are more likely to persist when awarded grant aid as opposed to utilizing loans to finance attendance (Swail, 2003). These findings around the relationship between type of aid received and the student's ability to persist are especially salient for minority and low-income students (Swail, 2003).

Recipients of financial aid are more able to socially integrate and engage in extra and co-curricular experiences, such as clubs and organizations. Tinto (1975) conceptualizes this engagement as critical in support of persistence. Cabrera, Castaneda, Nora, & Hengstler (1992) postulate that receiving financial aid affords students more time to engage with peers on

campus, as they might not have competing responsibilities around work and employment that make campus engagement more challenging. Therefore, Cabrera et al. (1992) found that receiving financial aid provided more robust opportunities for students to engage in purposeful activities that lead to greater social integration.

Environmental Factors

There are a number of environmental factors that influence a student's ability to persist. More specifically, our research team seeks to better understand the role that different environmental factors, such as the campus climate, geography and context, and campus resources (such as student support services) play in strengthening students' social integration, subsequent institutional commitment, and ultimate goal of graduation.

Campus context. The structural characteristics of an institution encompass features such as size, sector, mission, residential character, and the built environment. Several key structural characteristics are empirically linked with traditional measures of student success. Saupe, Smith, and Xin (1999) found selectivity and persistence to be highly correlated. It comes as no surprise that highly selective institutions that enroll academically well-prepared students graduate them at higher rates. Tinto (2004) indicated that the only institutional-level variables that influenced student persistence at highly selective institutions were size and selectivity, estimating that about 15 to 20% of student departure stems from academic difficulties. As we discuss above, persistence among college students is influenced by a number of complex social factors and background characteristics, many of which are student-level (gender, socioeconomic status, engagement levels, etc.). Kuh, Kinzie, Buckley, Bridges, and Hayek (2006) note that smaller campuses like Lyon are also more likely to be geographically isolated, which

increases the chances that students will live in a community of peers either on-campus or close to campus, ultimately contributing to their overall social and academic integration.

Student-centered campus cultures are encouraged and supported through the cultivation of human scale settings and an ethos of learning that "pervades all aspects of the institution" (Kuh et al., 2006, p. 71). These types of learning environments are no accident. Rather, they are intentionally designed in order to affect student learning and better allow students to influence the unique shape of their campus environments (Strange & Banning, 2001). The natural and built physical environment of the campus are critical in shaping attitudes and behaviors. The physical campus space and structural environment make possible certain types of activities and limit or render others impossible. Additionally, Kuh et al., (2005) aptly noted that student's commitment, persistence, and ultimately their institutional loyalty can be strengthened by intentional efforts to create a strong "sense of place" through the connection of campus architecture and design to meaningful experiences and memories of activities. Of additional importance is the proximity of academic buildings and student success resources to student residential spaces, which can promote or inhibit interactions between students across majors, backgrounds, and social affiliations (Kuh, 2000). Moreover, given our team's findings around the impacts of student-faculty interaction at Lyon, it's important to note the ways in which institutions may encourage student-faculty interaction through the physical environment (Figure 3).

Figure 3. Pascarella model of Student-Faculty Informal Contact (Aljohani, 2016)
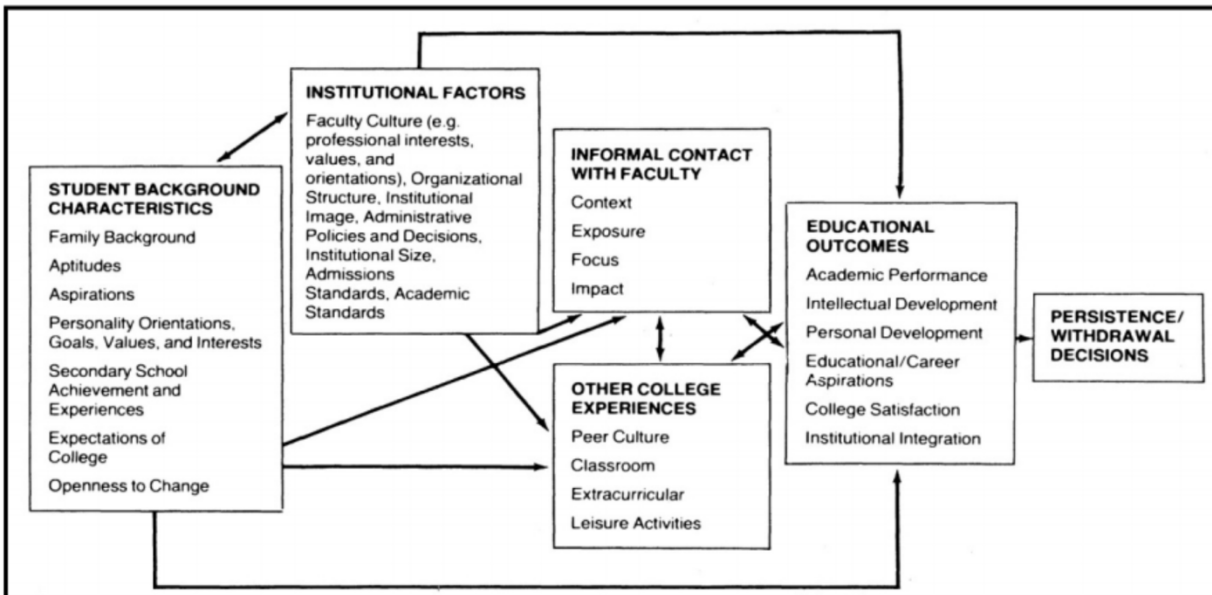
Schools may encourage these interactions before and after formal class times by offering benches and comfortable seating areas near classrooms. Additionally, creating well-equipped spaces for group study close to faculty offices may increase the opportunity for informal interactions between students and faculty (Kuh et al., 2005).

Although the physical space of a college or university can be intentionally constructed to communicate institutional values, quite often statues, paintings, and other components of the adapted environment can implicitly value or privilege some groups over others. For example, portraits solely of white male campus leaders displayed prominently in board rooms or the presence of confederate monuments on campuses in the American south can communicate a very specific set of values that underwrite belonging and connection in a way that privileges students from certain identities or backgrounds. Understanding the ways in which different groups of students perceive and react to physical spaces or iconography is a key step in efforts to enhance student success and overall integration (Banning and Cunard, 1996).

Campus resources. Effective partnerships among those individuals on campus who have the most contact with students are extremely important in creating a campus culture that supports student success (Kuh et al., 2006). As such, institutions that provide resources demonstrating a shared responsibility for student success are characterized by a great amount of respect and collaboration among community members. Universities that foster student success provide a number of campus resources alongside intellectually meaningful classroom experiences that encourage students to devote time and effort to their learning and holistic development (Kuh et al., 2005). Kuh et al. (2006) articulate a number of specific institutional conditions or community resources that are positively associated with student success, including peer support networks, emphasis on the first-year experience, resources that cultivate respect for diverse ways of knowing, academic support programs tailored to meet student needs, and active learning. Most of these conditions and their relevance in student success and persistence work is demonstrated by their effective use at a number of different universities across the country.

Many institutions concentrate resources on first-year students, infusing academic and social support systems such as advising, mental health support services, or tutoring into orientation or residential programs. Across postsecondary institutions, there are a number of critical sites in which students meet and form positive social bonds outside of the classroom. Two such sites are student orientation programs and residence halls. These environments encourage social bonds that help students form meaningful relationships across peer groups and help to promote greater social integration, leading to increased subsequent institutional commitment, and ultimately a greater likelihood of persistence. There is a long research history

of the impact on student acculturation, integration, and persistence of both orientation (Boudreau & Kromrey, 1994; Murtlaugh, Burns, & Schuster, 1999) and residence life programs (Astin, 1999). Additionally, other institutions have been successful in developing learning communities or service learning programs that help students create peer-to-peer and community-specific connections through engagement in these educationally purposeful activities.

In summary, the expansive scholarship around the academic, social and environmental factors that influence persistence and retention provides key theoretical constructs to inform our research on Lyon. In the academic realm, the academic and social integration factors within Tinto's interactionalist theory of persistence buttresses our research. The findings around college readiness - through academic preparation in high school and student background characteristics - further informed how we tailored our qualitative focus. In regard to social factors, Bordieu's seminal scholarship on social capital, compounded by the rich scholarship around ability to pay, were essential in framing our scholarly inquiry. In the context of environmental factors, the research around campus context and campus resources and its resulting findings in informing our methodology in exploring RQ1.

RQ2: What individual student and institutional attributes help promote student success and, ultimately, help students to persist?

Our team relied on several theoretical models of student involvement, persistence, and departure in examining the institutional and individual attributes that promote persistence. Namely, Astin's (1984) model of student involvement, Tinto's (1986) Interactionalist Theory of

student departure, and Braxton et. al's., (2014) revision provided the necessary theoretical scaffolding for our work at Lyon.

Astin's Theory of Student Involvement

Theories of student involvement aid in developing a well-informed picture of the ways in which student and institutional attributes intersect and ultimately affect student institutional commitment and commitment to graduate. Most notable is Astin's (1984) model of student involvement. Astin's (1984) model explains how desirable outcomes for institutions, such as academic achievement and student persistence, are influenced by students' co-curricular engagement. The theory postulates five key points:

1) Involvement refers to the investment of physical and psychological energy in various objects.

2) Involvement occurs along a continuum, and different students manifest different degrees of involvement in different objects at different times.

3) Involvement has both quantitative and qualitative features.

4) The amount of student learning and personal development associated with any educational program is directly proportional to the quality and quantity of student involvement in that program.

5) The effectiveness of any educational policy or practice is directly related to the capacity of that policy or practice to increase student involvement (Astin, 1984).

Astin's (1984) I-E-O model is comprised of three main elements: background characteristics, or "inputs," "environment" including experiences a student has during college, and "outcomes" which account for student characteristics, beliefs, and values after they have

graduated college. Astin's model provides a viable framework through which we framed our second research question, especially as we explored the intersection of student attributes (or inputs) and institutional attributes (environments) that foster overall student success at Lyon.

While Astin's model of student involvement is not directly related to the study of persistence, scholars and practitioners continue to study the relationship between student participation in 'educationally purposive activities' (Astin, 1984) and persistence (Kuh, 1995; Kuh & Umbach, 2005; Pascarella & Terenzini, 1991, 2005). Similarly, the theory has its roots in a longitudinal study of college dropouts (Astin, 1975) that sought to identify factors in the college environment that significantly affect a student's ability to persist. Astin (1975) found the factors that contributed to the student's persistence in college suggested involvement, whereas those that contributed to the student's departure implied a lack of involvement, suggesting a strong connection to our team's inquiry around persistence at Lyon.

Tinto's (1986, 1975) Theory and Braxton et al.'s (2014) Revised Theory

Tinto's interactionalist theory. Despite decades of new and compelling research on college student persistence and retention, theorist Vincent Tinto's interactionalist theory of persistence (dropout) remains a foundation upon which modern scholars and practitioners view and study undergraduate retention and persistence. Tinto (1986) characterized student persistence as a longitudinal process that couples students' perceptions and meaning assigned to interactions -both formal and informal- with various dimensions of a college or university. Tinto's (1975) model suggested that student departure is, at least in part, linked to an individual's formal and informal academic experiences and social integration. His model is predominantly based on the construct of person-environment fit, underscoring an intimate

relationship between institutional attributes and individual attributes in determining which students ultimately persist.

Braxton et. al's (2014) revised theory. Finally, Braxton et al. 's Revised Theory for Residential Colleges and Universities provides the conceptual framework upon which our team focused our inquiry (Figure 4). Braxton et al's (2014) text explores the factors influencing the first-year persistence of students enrolled in residential colleges and universities by testing the revised theory of student persistence in these colleges that was first proposed ten years prior (Braxton, Hirschy & McClendon, 2004).

Figure 4. Theory of student departure (Braxton et al., 2014)
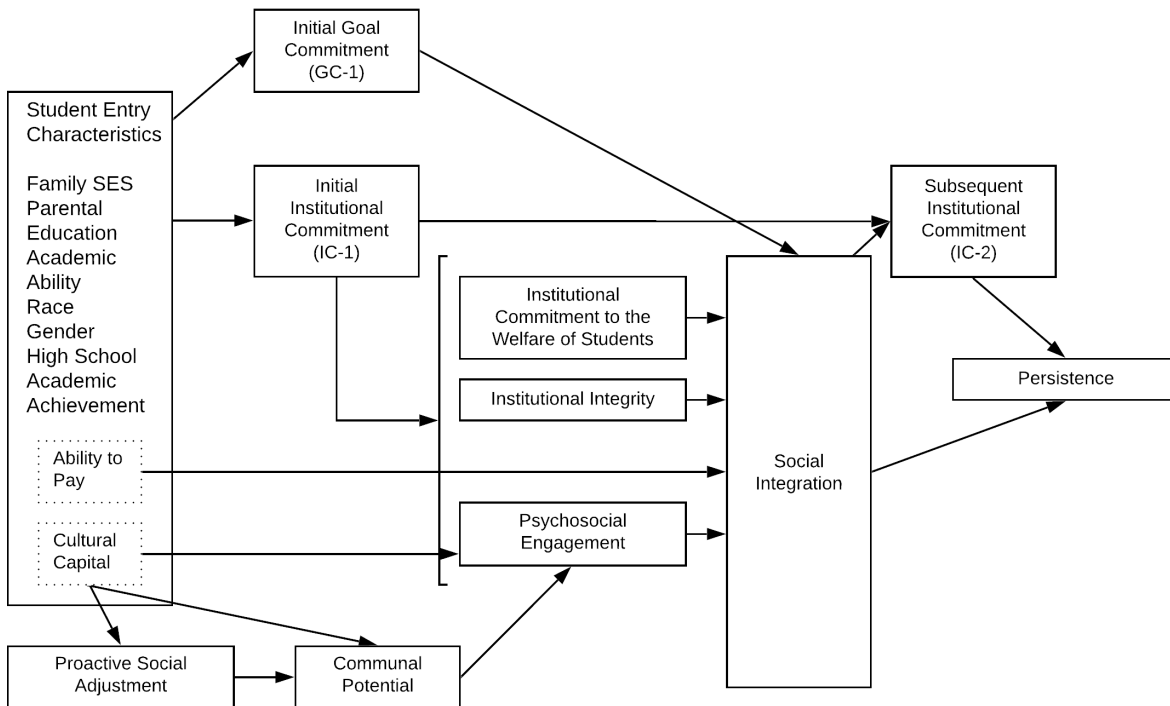
Braxton et al. (2014) builds upon prior research to conceptualize Tinto's Interactionalist Theory within the distinct settings of residential colleges and commuter campuses. Thirteen testable propositions emerged from the 1975 statement of Tinto's Interactionalist Theory

(Braxton, Sullivan, & Johnson, 1997). The propositions and their connection to our second research question are as follows:

1) Student entry characteristics affect the level of initial commitment to the institution. *(student attributes)*

2) Student entry characteristics affect the level of initial commitment to the goal of graduation from college. *(student attributes)*

3) Student entry characteristics directly affect the student's likelihood of persistence in college. *(student attributes)*

4) Initial commitment to the goal of graduation from college affects the level of academic integration. (*student and institutional attributes*)

5) Initial commitment to the goal of graduation from college affects the level of social integration. *(student and institutional attributes)*

6) Initial commitment to the institution affects the level of social integration. (*student attributes*)

7) Initial commitment to the institution affects the level of academic integration. (*student attributes*)

8) The greater degree of academic integration, the greater the level of subsequent commitment to the institution. *(student and institutional attributes)*

9) **The greater degree of social integration, the greater the level of subsequent commitment to the institution. (*student and institutional attributes*)

10) The initial level of institutional commitment affects the subsequent level of institutional commitment. *(institutional attributes)*

11) The initial level of commitment to the goal of graduation from college affects the subsequent level of commitment to the goal of college graduation. *(student attributes)*

12) The greater the level of subsequent commitment to the goal of graduation from college, the greater the likelihood of student persistence in college. *(student and institutional attributes)*

13) **The greater the level of subsequent commitment to the institution, the greater the likelihood of student persistence in college. *(student and institutional attributes)*

Propositions 9 and 13 (starred above) are foundational in Braxton et al.'s (2014) revised theory of college student persistence for residential colleges and universities. Social integration is a key component of the revised theory, as it reflects the student's perception of their social affiliation with others and their degree of alignment with the greater university social community's attitudes, beliefs, norms, and values (Tinto, 1975). Social integration and subsequent institutional commitment rely heavily on the interplay between individual student characteristics and institutional characteristics. While student and institutional attributes are individually significant in the student persistence conversation, there exists a dynamic relationship between the two in relation to a student's social integration. Braxton et. al.'s, (2014) revised theory focuses on six key factors that influence social integration. These six factors comprise the core of the revised theory for residential colleges and universities and served as the scaffolding for our own inquiry.

Ability to pay. Although ability to pay is an antecedent of social integration (Braxton, 2014), it is also a student entry characteristic. Cabrera, Nora, & Castaneda (1990) contend that

the ability to pay can reduce barriers to student participation in collegiate communities. Similarly, Braxton, Hirschy, and McLendon (2004) assert that the greater the student's satisfaction with cost of attendance, the greater their social integration. Ability to pay emerged as a key theme in our qualitative inquiry, as nearly all faculty, staff, and student participants cited finances or ability to pay as influencing their satisfaction with or success at Lyon.

Institutional commitment to student welfare. Student perceptions around institutional commitment to student welfare were critical to our understanding of the student departure puzzle at Lyon. Institutional commitment to student welfare, as defined by Braxton et al., (2004), is "abiding concern for the growth and development of its students expressed by a given college or university" (p. 86). This dimension is largely dependent on the greater culture of a college or university. An institution's actions, decisions, and communications are a key indicator of institutional culture. Braxton and Hirschy (2004) developed the dimensions of institutional commitment to student welfare from a variety of research findings (Berger & Braxton, 1998; Braxton, Milem, & Sullivan, 2000; Pascarella, Terenzini, & Wolfe, 1986). Taken together, these formulations support the understanding that the more a student perceives that the institution is committed to the welfare of its students, the greater the level of social integration (Braxton et al., 2014). Specifically, this factor helped our team pose critical questions around Lyon's institutional culture.

Communal potential. Communal potential is related to the extent to which a student perceives that a population of students exists within the numerous communities of their institution that hold values, beliefs, and goals that are similar to their own (Braxton & Hirschy, 2004; Braxton et al., 2004). Anticipation around community membership signifies communal

potential (Braxton et al., 2014). Students develop perceptions around their communal potential based on experiences in classrooms (Tinto, 1997, 2000), in residence halls (Berger & Braxton, 1998), and among student peer groups (Newcomb, 1966), and the more a student perceives the potential for community on campus, the greater the student's level of social integration (Braxton et al., 2014). Our team explored communal potential at Lyon as it related to student's racial and ethnic identities, the new and evolving role of athletics and athletic identity, and through individual student perceptions around experiences with academic and co-curricular engagement.

Institutional integrity. In Braxton et al.'s (2014) revised model, student's social integration is related to the degree of accord between an institution's stated mission and goals and the actions of faculty, staff, and administrators (Braxton & Hirschy, 2004; Braxton et al., 2004). As Braxton et al. (2014) noted, "like commitment of the institution to student welfare, institutional integrity also reflects the culture of a college or university given that institutional integrity pertains to the actions, decisions, and communications of organizational members" (p.88). Institutional integrity manifests when a university remains faithful to its stated mission or goals (Braxton et al., 2014). The greater a student perceives the college exhibits institutional integrity, the greater the level of social integration (Braxton et al., 2014). Institutional integrity manifests in policies, rules, and regulations that are administered in a fair and consistent manner, as this fairness positively influences student's social integration. Similarly, institutional integrity is seen as the extent to which student expectations around college are fulfilled, as students who experience fulfillment of their expectations related to college experience a higher degree of social integration (Braxton et al., 2014). Through our observational and qualitative

data collection and analysis, institutional integrity, much like ability to pay, emerged as a critical theme. Namely, a tension emerged between Lyon's current unique value proposition, its history as an esteemed liberal arts college, and its future aspirations.

Proactive social adjustment. Proactive social adjustment refers to a student's individual recognition around the need to adjust to the many social situations in a collegiate setting in a proactive manner. Proactive social activities can include a student's participation in orientation or development of strategies around stress reduction and coping with stress (Braxton et al., 2014). Braxton et al.'s (2014) revised theory posits the greater the student's use of proactive social adjustment strategies, the greater the level of social integration.

Psychosocial engagement. Psychosocial engagement is related to the amount of psychological energy students invest in their peer-to-peer social interactions and their participation in co- and extracurricular activities (Braxton et al., 2004). There are aspects of collegiate life that require and demand a considerable amount of time and psychological energy from college students. The greater the level of psychological energy that a student invests in numerous social interactions at their university, the greater their degree of social integration. Psychosocial engagement directly parallels Astin's (1984) conceptualization of involvement previously explored in this review. However, psychosocial engagement as defined by Braxton et al. (2014) refers to a more specific form of involvement as it relates to the amount of physical and psychological energy that students invest in their academic experience. The proposition around psychosocial engagement is perhaps most salient in Lyon's model of affinity recruitment. Taken together, the qualitative and quantitative data elucidate the integral role of psychosocial engagement in student persistence at Lyon specifically.

A Note on Our Exploration of the Literature

While these theories highlight distinct factors or environments that contribute to student persistence and departure, none exist within a vacuum. Rather, taken together, they all implicitly support and validate the interconnectedness of student and institutional attributes in promoting student persistence. Stated simply, our exploration of these theories did not yield one or even several *key* individual or institutional attributes that positively or negatively impacted persistence. Rather, there exists a dynamic relationship between institutional and individual attributes in the departure puzzle. In a "perfect storm" of the two, individual student attributes and institutional attributes dynamically align to bolster a student's academic and social integration, their initial and subsequent institutional commitment, and ultimately, their commitment to the goal of graduation.

Contextual Analysis

About Lyon College

Founded in 1872 in affiliation with the Presbyterian Church (USA), Lyon is a selective, residential college located in Batesville, Arkansas, about 80 miles northeast of Little Rock.

Originally called Arkansas College, the private college has been, since its inception, a coeducational school with a focus on a classical liberal arts education. Nestled in the foothills of the Ozarks along the White River, Lyon sits on the northeast edge of Batesville, a

town of about 10,000 residents that is noted as the oldest existing city in the state.

While around 70 percent of the student body hails from the state of Arkansas, Lyon's nearly 700 undergraduate students represent 28 states and 13 countries, with male-identifying students comprising around 55 percent of the student population (NCES, 2018). The student body is predominantly White, with Black students comprising around 30 percent of the undergraduate population and under-represented minorities, 17 percent (NCES, 2018). The campus remains primarily residential, with residence halls grouped into "houses" with faculty living alongside undergraduates. In the past year, in an attempt to strengthen the undergraduate living experience, Lyon announced the designation of a pet-friendly residence

hall (Lyon Pet Policy, n.d.) and affirmed an additional commitment to allowing comfort animals in all residences.

Lyon offers sixteen majors leading to the Bachelor of Arts (B.A.) and Bachelor of Science (B.S.) degrees, as well as the opportunity for students to design an individualized major tailored to their academic interests. The most popular majors at the college are Biology, Business, and Psychology (Figure 5).

Figure 5. Lyon graduating student fields of study and areas of employment.

First Destination Data Gathered by the Office of Institutional Research from Graduating Classes of 2015-19.
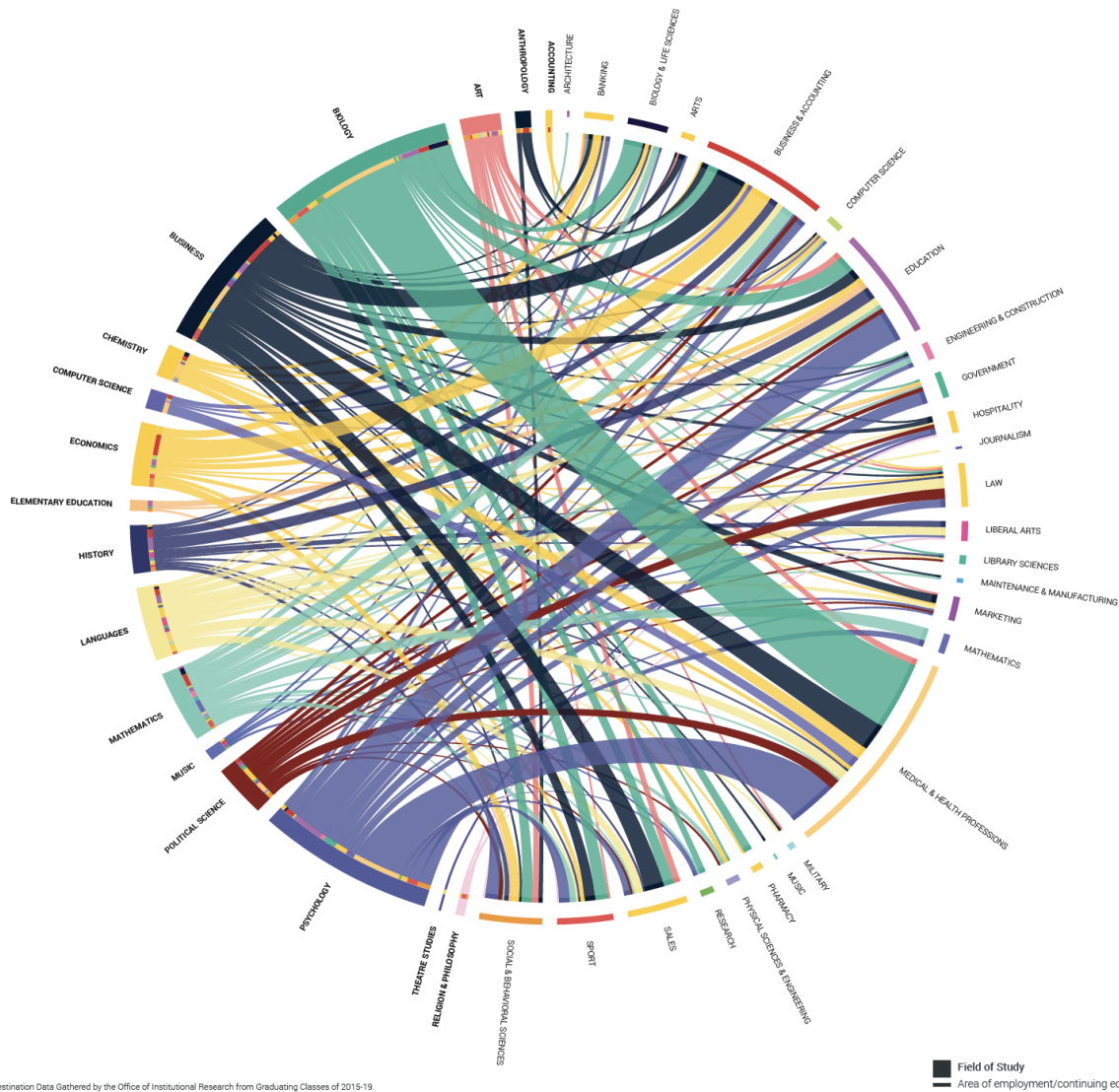
Pre-professional programs are offered in fourteen different fields, ranging from medical sciences to outdoor leadership. Lyon prides itself on a reputation for academic rigor[3], and the college encourages students to pursue internship and collaborative research possibilities with faculty in light with professional goals.

While Lyon is more expensive than many of the other colleges in the region, it is rare for a Lyon student to pay the full cost of attendance. A hallmark of a Lyon education is a generous commitment to student financial aid, with significant scholarship support provided to 99 percent of the student body (Lyon Institutional Profile, n.d.). In 2017-18, for example, while undergraduate tuition was set at $27,340, the average net price after financial aid was $23,066 (NCES, 2020, representing a 65 percent tuition discount. Tuition discounting has been largely equitably distributed across income quintiles (NCES, 2018), though the most recent reported year of data shows a significant decline in allocated aid for the neediest families. While not publicly available yet, the projected tuition rate for 2020-2021 will now be $28,550.

This commitment to aid is particularly noteworthy given the school's relatively modest endowment among its peer and aspirant schools, with $45M in endowment as of the end of fiscal year 2015 (NCES, 2018). However, the endowment size is still significantly higher than the median endowment of baccalaureate colleges, according to the Carnegie Classification grouping (Data USA, n.d.). Nevertheless, Lyon's financial aid program poses a mission-critical challenge which President King has sought to address, namely, a discount rate that the college

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[3] We did not find a consistent definition of academic rigor at Lyon. The term is used by different stakeholders interchangeably to describe students' higher order thinking, reflective and analytical ability, demanding workload, or number of hours spent studying per week. Braxton and Francis (2018) define rigor as cognitive challenge as indexed in course examination questions. In our usage of the term in this project, we understand "rigor" to describe instructional or educational experiences that are academically, intellectually, and personally challenging.

can't afford. While tuition discounting can help to attract prospective students, it also carries substantial financial risks as the college forfeits a significant stream of potential annual revenue.

This challenge is compounded by the reality that Lyon is tuition dependent, with a little over 40 percent of core revenues coming from tuition dollars (IPEDS, 2017). Since the arrival of President King in 2017, the discount rate has reportedly declined from above 95 percent to 80 percent, though the current rates are still financially unsustainable. In large part, this discounting appears to be tied to the school's overall enrollment challenges, with Lyon competing for an increasingly small slice of market share in an ever more competitive higher education environment.

Data and Methods

As a priority is to expand Lyon's understanding of the factors influencing persistence challenges and not to duplicate existing efforts, our first work was to assess the extant quantitative data for key learnings, any notable gaps, and questions or concerns related to the research methods employed. We first used public data sources (e.g., IPEDS, NCES) to ascertain the extent of the publicly reported data on Lyon, particularly around enrollment, retention and graduation rates.

After gaining a better grasp of the publicly available data, we then compared it to data provided to us through our contacts in Lyon's Office of Institutional Research. Establishing trust with Institutional Research staff, understanding data and analyses already collected, and familiarizing ourselves with analyses already completed by the college allowed us to build upon a rich store of quantitative data and clarify the focus of our research questions for our qualitative research.

Quantitative Data and Sample

After reviewing the reports and data sets received from Lyon, the majority of the data was either statistical analyses reported in aggregate (thus, not accessible for analyzing the individual unit data) or externally-facing proprietary data (e.g., Ruffalo College Student Inventory) that was not meaningfully reported for further analysis. Such measures can be a limited and general indicator of institutional health, but offer little ability to diagnose the specific challenges for student persistence nor to help inform possible interventions. Our team has instead focused our quantitative analysis on the attrition data provided by the Lyon Office

of Institutional Research. The unit of analysis for the quantitative data was the individual

student; and the sample is the population of students who voluntarily completed the survey

prior to their departure from Lyon.

A college-designed survey tool ("departure survey") collected information on students

who departed Lyon, including self-reported reasons for exiting as well as student background

and academic progress characteristics. Student background characteristics included gender,

race/ethnicity, Pell status eligibility, home state and athletic group engagement (including their

affiliated sports time). Academic progress characteristics included entrance term (semester and

year), exit term (semester and year), first major declared and second major declared. We note,

in exploring these tools, Braxton, Brier, and Hossler's (1988) caution that because post-hoc

attrition data should be used cautiously. Such "autopsy studies" usually examine entry traits of

students and the reasons they report for withdrawing, but lack the logic of comparison

between students who persist and those who withdraw. We recognize the limitation inherent

in utilizing such studies to account for the reasons why some students persist, and others do

not.

The departure survey sample provided by Lyon included a population of 1050 responses

from students who departed Lyon between Fall 2006 to Spring 2019. All students departing

Lyon were invited to complete the survey; however, not all students completed this tool.

Accordingly, the response numbers do not reflect the entire population of students who

departed Lyon between Fall 2006 and Spring 2019; instead, the data only provides responses

for those students who completed the survey. In order to prepare the data for analysis, each

variable was reviewed to determine if any missing values were present. Missing or invalid data

were found in a number of variables, and those cases were removed from the dataset. A summary of the variables and the number of removed cases is found in Table 2.

The departure survey collected information on the demographic background of survey participants. The survey captured a departing student's entering and exiting terms. Responses on gender, race/ethnicity, home state and Pell eligibility were recorded. Academically, students also self-reported reasons for their departure. Responses on major(s) declared, entrance term and exit term were also captured.

To analyze the attrition data, we employed a purposive sampling strategy, which is a nonprobability sampling method that allowed for the selection and review of all students who completed the departure survey. In terms of demographic backgrounds, the gender distribution of the survey respondents was 48% female and 52% male. The racial breakdown of the respondents unveiled that 76% of respondents were white, 7% were unknown/preferred not to answer, 6% were Black, 5% were Hispanic, 2% were Asian and 2% were American Indian/Alaskan. Of note, Lyon coded non-resident aliens as a part of race/ethnicity, and 3% of respondents fell into this category. Analyzing the top states of origin of departing students, 61% of respondents were from the state of Arkansas, 9% from Texas and 3% from Missouri, with 12% not reporting. 54% of survey respondents reported being Pell eligible.

Academically, an analysis of the departing students showcased that 74% of respondents had not declared a major prior to departing from Lyon. Among upperclass students who had declared a major, 4% of students were Psychology majors, 4% were BSBI majors, 3% were English majors, 3% were BAMG majors and 2% were History majors. An analysis of exit terms unveils that the majority of students departed at the end of the spring term as opposed to the

fall term. Of the responses, Springs 2010, 2011, 2012, 2013 and 2015 had the highest

percentage of departures.

Of significance, 91% of the respondents reported "other" as the reason for departure.

Given the lack of substantive insight provided by that category, we find the departure survey to

reinforce the need for qualitative data to elucidate more concrete reasons for departure. Of

those who reported concrete reasons, 3% listed "academics", 2% disclosed "leave of absence"

and 1% listed medical issues. The small percentage of these responses reinforces again the

limitations of an autopsy study and its inability to provide constructive insight to the college as

the survey is currently operated.

Quantitative Methods

To analyze the student departure data and complete the quantitative analysis, the data

was imported in Stata MP 16. Some variables were modified and/or created. The variables Exit

Reason, Ethnic Group, Pell Eligibility, and Sports Code were recoded for analysis. For Exit

Reason, the range of alphanumeric labels were recoded into categorical descriptors as listed

within the codebook (e.g., "F" became "Financial"). For Ethnic Group, the numerical values

were recorded into categorical descriptors as listed within the codebook (e.g., "1" became

"Asian"). For Pell Eligibility, all responses were reported as Yes or NULL; accordingly, NULL was

recorded to No for ease of analysis. For Sports Code, all responses were reported as sports

team or NULL; accordingly, NULL was recorded to No for ease of analysis.

Several new variables were created for either ease or greater depth of analysis. To test

for differences based on student athletic team affiliation, a new variable of Athlete was

created; students who were listed with a sports team were coded as Yes, and students who

were listed as NULL were coded as No. To ascertain differences based on semesters completed prior to departure from Lyon, a new variable, Semesters Completed, was created by calculating the number of semesters completed between the Entrance Term and Exit Term variables for each student.

To analyze the data, we first examined the descriptive statistics on key student variables to ascertain a robust understanding of the characteristics of the students in the sample. Three of the variables we analyzed - race/ethnicity, gender, and Pell eligibility, which serves as a proxy for family socioeconomic status - represent student entry characteristics demonstrated by Braxton et al. (2014) to shape the student's initial commitment to the goal of attaining a degree and the student's initial commitment to the institution. A final characteristic that we explored is whether the student enrolled as an athlete, a characteristic that we hypothesize helps to provide the early connections with peers and social network that support student integration (Attanasi, 1989; Chamberlain, 2005) and shape the perception of athletes that the possibility of communal potential exists for them. Here we also recall Astin's (1984) theory that student co-curricular engagement influences desirable outcomes for institutions such as academic achievement and student persistence.

We explored the characteristics of the students in the sample by examining potential relationships between variables by conducting Pearson's correlation coefficient tests on each variable. We also conducted t-tests to examine differences between different student demographics and persistence indicators, such as semesters completed and career GPA. Specifically, we explored differences between students based on gender, Pell eligibility and student athlete status. We then employed Analysis of Variance (ANOVA) tests to compare

differences between three or more groups of students, such as race/ethnicity, on persistence indicators.

Qualitative Data and Sample

Two primary factors influence our decision to focus on qualitative methodologies for this project. A small population size (n<700) carries challenges related to potential bias, decreased statistical power, and limited generalizability. Moreover, given the college's self-identified research deficits, a qualitative focus would allow our team to supplement Lyon's learning in this area and delve deeper into the student experience to better understand the breadth of the persistence problem.

By necessity, we conducted a convenience sample, with prospective interviewees from each target population recruited on a volunteer basis via email. Interviews took place beginning in November 2019 and ending in January 2020. For students, a small incentive of a $5 Starbucks, Amazon or Walmart gift card was offered to encourage students to participate. Each interview was audio-recorded, and notes were taken during the interview. All interviews were conducted at on-campus locations at Lyon, including public gathering spots or faculty/staff offices, or virtually by Zoom. A copy of the interview protocol is provided in Appendix C.

Our interview protocol was developed using the theoretical framework outlined in the literature review. Specifically, questions were designed to probe the following topics related to RQ1 and RQ2, which included: students' entry characteristics, students' initial commitment to the institution, students' initial commitment to the goal of graduation, institutional commitment to student welfare, communal potential, institutional integrity, proactive social adjustment and psychosocial engagement, academic preparation, students' demographic

background, social capital, ability to pay, campus context, campus resources and student involvement. We formulated questions based on the literature review as well as based on Lyon's institutional context. We then grouped these questions into categories on student demographic information, academic preparation, social capital, social integration, commitment to academic goals, college costs/financial aid and campus resources.

We began our qualitative assessment by interviewing faculty, administrators, and staff. Recognizing the varied and layered roles that faculty, staff, and administrators play in such a small institution, and to build a holistic picture of factors influencing student persistence at Lyon, we interviewed 11 Lyon administrators who play an integral role in retention efforts. These individuals included administrators and staff in admissions, financial aid, student services, academic advising, and student life.

In seeking to schedule student interviews, we first contacted students who were recommended to us by faculty or staff (see Limitations, below.) We utilized snowball sampling to reach students referred to us by other students. Finally, we reached out via email to Lyon faculty who teach across a range of disciplines (e.g. English, Computer Science, Social Sciences) to ask them to share our interview request with students enrolled in their courses. This strategy yielded 75 students whom we contacted to request interviews. Our intent here was to begin with an initial pool and bring in new participants until we perceived that a representative sample began to produce diminishing returns (Marshall, Cardon, Poddar, & Fontenot, 2013). However, despite multiple follow-up communications with these students to add additional interviews, we encountered persistent challenges with increasing the interview pool.

Accounting for a half dozen no-shows or failed attempts to reschedule, we ultimately completed full interviews with 16 students.

Qualitative inquiry does not set definitive guidelines about sample size. However, the sampling fraction here does not allow us to generalize the interview findings in an empirical sense (see Limitations, below). We focus, rather, on overarching themes that together form a mosaic of the retention issues at Lyon. Based on self-reported demographics on class year, gender, race and major, we were able to compare aspects of our sample to the entire Lyon population to ascertain if it was a representative sample. Two students were first-years, one student was a sophomore, seven were juniors and six were seniors. Given our interest in investigating departure rates after the first-year to sophomore transition, the overrepresentation of upperclassmen in our sample, as compared to the overall population of Lyon, appropriately suited the context of our study. 50% of our sample were women, 43.75% were men, 6.25% were genderqueer, with women slightly overrepresented in comparison to the overall population (43.66%). In regard to race, our sample was not representative of the population. Within our sample, 62.25% were white, 25% were black, 6.25% were Asian/Pacific Islander and 6.25% were Hispanic. In comparison to the total student population at Lyon, 55.50% were white, 20.18% were unknown, 9.33% were black, 6.27% were Hispanic, 4.59% were Asian/Pacific Islander, 2.75% were American Indian and 1.38% were non-resident alien. Accordingly, our sample was not representative of the undergraduate population of Lyon, with significantly more upperclassmen, as well as white and black students, present in our group. While this overrepresentation is a significant limitation in some ways, it also reflects Lyon's stated desire for our team to focus qualitative efforts on upperclass students, about whom Lyon

administrators indicated they have the least information about the reasons for departure. It also reflects our desire to better understand the relationship between student persistence and the experience of student-athletes, a population hypothesized by some in the institution to be more likely to depart, and which disproportionately includes Black students.

Qualitative Methods

We utilized the classic tools of qualitative research, including interviews, document analysis, and observations. There were a number of clear strengths around utilizing a qualitative approach for our inquiry. Qualitative research helped to unravel complex phenomena situated in specific contexts. Similarly, qualitative methods better captured detailed descriptions of participants' feelings, thoughts, opinions, and experiences and allows for deeper interpretation around embedded meanings. Utilizing qualitative methods allowed our team to unearth complex details about human behavior and emotion and provide information about student needs, desires, or routines that could be helpful in navigating the complexity of the retention problem at Lyon.

Interviews. Based on initial conversations with our point of contact and certain key informants (including the Director of Institutional Research and the Dean of First-Year Studies), we built interview protocols to use for semi-structured interviews with students, staff, faculty, and administrators. An essential interview population for this study was students who matched the profile of students who have previously departed the institution. Because we also sought to better understand the factors leading to student persistence, we also interviewed students who match the profile of those most likely to persist at Lyon, as well as those who may have a mixture of both risk and success indicators in their student profile.

This method effectively allowed us to discern rich and detailed information about our particular research question. We sought examples and narratives to illustrate the experiences of these college students, which is best elucidated through one-on-one interviews (Rubin & Rubin, 2012). By posing open-ended questions through our interview protocols, the participants were able to provide nuanced elaborations on the topics of interest. We were also better able to capture body language, emotions and behaviors, which would be indiscernible through other techniques. Through these interviews, we were able to directly collect anecdotes and facts from individuals that addressed our research question.

For each interview, we initially began with note-taking and collecting digital recordings during each interview. The software that was used for recording the interview, Otter, provided an instant transcription of each conversation, which was useful in future analyses. Each interview lasted approximately 45 minutes, and between each interview, we began looking for trends that might inform subsequent interviews. Throughout the interviewing process, these real-time analyses allowed us to refine our probes through these field-based findings and to organize our data to enable ease in future analyses.

Our next step was to listen to our recorded interviews. Each interviewer listened to their own interviews. We listened to each interview three times, each time for a different purpose. The purpose of the first listen was to familiarize ourselves with the interview. We then listened again to identify common themes under each section of our conceptual framework. We paid particular attention to concepts that directly related to our research questions, including "goals, values, perceptions, or attitudes or represent strategies that frame action" (Rubin & Rubin, 2012). We endeavored to postulate how certain concepts might pair together and examined

our formulation in light of the overall arc of the interviews (Rubin & Rubin, 2012). The third and final review of the interview was used to pull out salient quotes.

Within that framework, the themes and quotes from each interview were then organized into a matrix. We employed a concept-clustered matrix to summarize each interview and display patterns and relationships that emerged from our data (C. Smrekar, personal communications, November 2018). After a matrix was developed for each interview, we discussed common themes across all matrices and documented which quotes were most aligned with our conceptual framework and supported the identified themes. The overarching themes and key quotes from the individual matrices were then combined into a master matrix. This process was repeated for student, staff and administration interviews. The themes found within the master matrix ultimately informed our findings.

In reporting our findings from interviews, and in light of the small size and close nature of Lyon's campus community, we have chosen to anonymize the data by changing identifying information about our subjects. This includes changing the gender or creating a composite demographic for some interviewees, though we have preserved markers which locate students, faculty, or staff within their respective roles in the campus community.

Documents. Next, we conducted documentary analyses as one of our research techniques. Examining information from the college's website, which includes data on enrollment, school demographics, academic engagement and campus life, exposed key content regarding the academic and social life on campus. To ascertain details about the academic components of Lyon, we reviewed the college catalog to review the curriculum and major and minor offerings. To gain a sense of the social context, we also reviewed the campus calendar, as

well as other marketing efforts through social media and through flyers in main campus buildings. Other documents for analysis included the mission statement of the college and the physical layout plans of the campus. We captured evidence of these documents either in written or pictorial form for review and analysis.

Engaging with written, printed or visual forms of evidence provided a snapshot of both the issues and the environment, as well as historical perspectives (Rubin & Rubin, 2012). The documents collected through our project offered a snapshot of various moments in Lyon's history. However, given that many documents can be incomplete or fragmented, context was critical for interpreting these artifacts. Thus, by leveraging documents in combination with in-depth interviews allowed us to better understand the lens of our research inquiry.

Observations. Finally, we engaged in observations for the qualitative research portion of the project. During our November 2019 visit, we recorded observations at the main dining facilities on campus, as well as the campus library and student services locations, such as the MAC. By visiting each location multiple times at varying times of the day, we captured how and in what ways students engage with each one another. We ascertained who was and was not present at the locations. To capture these moments, we recorded observations in two manners. First, for visual depictions, we took photos on our smartphone devices of various environments (both on- and off-campus). Second, each team member also recorded written notes via Google Documents. A template of noting the environment and any relevant observations (e.g., demographics of who was present, elements of the environment, etc) in narrative form was followed for each observation.

By engaging in observations, we were able to familiarize ourselves with the environment (Rubin & Rubin, 2012). Observations allowed us to see how campus life comes together and engages with each other in communal areas. This method also enabled us to have context to the key issues that have bearing on our research question.

Conducting fieldwork and employing a rich combination of interviews, observations, and document reviews provided a window into, as Patton (2002) described, the points of view of other people without predetermining the categories and limiting or leading responses. As well, disciplined qualitative inquiry is uniquely suited to the descriptive study of education, specifically, the subjective experiences of students' college and career aspirations and their development (Schulman, 1981).

Limitations of Quantitative and Qualitative Designs

A number of limitations in this study design must first be highlighted. As previously discussed, the sample population and small response size presents threats to internal and external validity (Goldring, 2018; Sandelowski, 1995). A small population size (n<700) carries additional challenges related to potential bias and decreased statistical power, and limited generalizability. With an even smaller sample of student interviews, our study's findings are even further curtailed by its generalizability to the population. It may be that a higher response rate might have been achieved at a different point in the academic year or with alternate strategies for participation. However, the demographic constraints associated with a convenience sample suggests that even statistically significant findings may not be applicable beyond the immediate population.

We acknowledge several threats to internal validity with the quantitative data set. Maturation and history may bias respondents' recollections on their reasons for departing Lyon. Further, the voluntary nature of the survey means that respondent demographics are not necessarily representative of the total population of those students who departed Lyon. Among our interview sample are students who were referred to us by faculty and staff. These recommendations meant that students were not randomly selected, and may reflect referrer bias toward students who could provide insight to our research questions.

In terms of reliability, we thoughtfully and intentionally crafted our research design to protect against threats to external and internal reliability. Generally, it is harder to standardize data collection procedures and ensure instrumental fidelity when engaging in qualitative research. One significant limitation to our study, however, was that the research team comprised of three members who all worked in higher education. Given that our role was to be researchers rather than professionals within this realm, our researcher influence may have impacted the narratives or answers shared by the respondents, especially around sensitive topics, despite constantly checking-in on personal biases as well as ensuring fidelity to our protocol.

Another major limitation of our study that influenced external reliability is time since this project was conducted within the frame of two academic semesters. Recognize that data mining efforts may be time-consuming and time-constrained, our research relied on in-person interviews with subjects alongside other document and observational research strategies over a span of only a few months. Due to this constraint, we consciously limited our conversations to a small sample of respondents and capped these interviews to a span of 45 minutes. We were

also unable to conduct follow-up interviews with any individuals to further clarify or delve into any information shared. The timing of our visits to campus as well as conducting virtual interviews may have elicited some bias in student response (e.g. asking students about academic satisfaction close to final exam week.) In addition, to identify individuals to interview in such a limited time, we had to rely on key informants, such as academic advisors, to find these participants. As such, interviewees were not selected randomly, which leaves the study open to bias and sampling error. While our methodology was built to address other threats, we acknowledge that time, bias and sampling error may have influenced our resulting findings.

Quantitative Data: Departure Survey Findings

As previously noted, quantitative analyses were completed using data provided by Lyon College on student characteristics, timing of departure, and academic record. All statistical analyses were conducted in Stata MP 16 for Windows. A p-value of 0.05 was used as a cutoff for all statistical tests of significance. While detailed results for each test bearing statistically significant results are reported in Tables 1-18 in Appendix B, we briefly summarize below the key findings that have bearing on our research questions.

Findings	Relevant Table(s)	Research Questions Addressed
1. Student-athletes differ significantly in number of semesters completed from non-student athletes.	3, 16, 17	RQ1: Academic and Social Factors RQ 2: Student Attributes
2. Pell eligible students differ significantly in number of semesters completed and career GPA from non-Pell eligible students.	5, 15	RQ1: Academic Factors RQ 2: Student Attributes
3. Male students differ significantly in number of semesters completed and career GPA from female students.	4, 14	RQ2: Student Attributes
4. There is a statistically significant relationship between ethnicity and career GPA.	13, 18	RQ1: Academic and Social Factors RQ 2: Student Attributes

Finding 1: Student-athletes differ significantly in number of semesters completed from non-student athletes.

Our analysis of students' athlete status, semesters completed, and career GPA indicated that on average, student athletes who depart are likely to do so earlier in their college experience than non-athletes who depart (Table 3). Whereas non-athletes, on average, completed 1.8 semesters (SD=1.9), athletes completed 1.4 semesters (SD=1.5) at the time of departure (Table 3). Notably, we were unable to establish a statistically significant relationship between students' athletic status and career GPA at the time of departure. Additionally, post hoc analyses using the Scheffé method of determining group mean differences following statistically significant main effects revealed that neither career GPA nor semesters completed showed statistically significant differences among sports teams at Lyon. This finding is notable as our early conversations with campus leaders revealed a perception that football players are more likely to depart. While it may be that the departure data is too incomplete or the N is too small to form an accurate picture, this finding suggests the importance of a closer examination of student athlete outcomes across all sports teams.

Finding 2: Pell eligible students differ significantly in number of semesters completed and career GPA from non-Pell eligible students.

Statistically significant differences were found between a student's Pell eligibility and semesters completed (t=-3.177, p=0.002) as well as career GPA (t=3.753, p=0.000) (Table 5). Notably, the relationship between Pell eligibility and semesters completed is positive; whereas non-Pell eligible students completed, on average, 1.4 semesters (SD=1.6) prior to departure, Pell eligible students completed 1.8 (SD=1.9) (Table 5). Chi square tests for independence in

contingency tables were also used to assess statistically significant differences between student's Pell eligibility and the following variables: athletic status, gender, home state, ethnicity, first major declared, second major declared, exit reason, entrance term and exit term. Statistically significant relationships found between a student's Pell eligibility and the following variables: athletic status, ethnicity, first major declared, second major declared, entrance term and exit term (Table 15).

Finding 3: Male students differ significantly in number of semesters completed and career GPA from female students.

Statistically significant differences were found between a student's gender and semesters completed (t=2.311, p=0.021) as well as career GPA (t=4.955, p=0.000) (Table 4). On average, female students appear more likely to retain for a longer period prior to departure, completing an average of 1.8 semesters (SD=1.9) compared to 1.5 semesters (SD=1.7) for male students. Female students who departed reported an average career GPA of 2.2 (SD=1) compared to an average career GPA of 1.9 (SD=1) among male students who departed. Chi square tests for independence in contingency tables were also used to assess statistically significant differences between student's gender and the following variables: athletic status, Pell eligibility, ethnicity, first major declared, second major declared, exit reason, entrance term and exit term. Statistically significant relationships were found between gender and all variables except for Pell eligibility and exit reason (Table 14).

Finding 4: There is a relationship between ethnicity and career GPA.

ANOVA tests were leveraged to ascertain whether a relationship existed between a student's ethnicity and semesters completed as well as career GPA. The ANOVA test showed

that the effect of ethnicity was significant on career GPA (F=2.47; p=0.022) (Table 18). Post hoc

analyses using the Scheffé post hoc method for mean comparisons however, revealed that

career GPA did not show statistically significant differences between any of the racial groups.

There were no statistically significant effects between student's ethnicity and semesters

completed. Because the population of certain racial/ethnic demographics was so small in

relation to the overall population, exploring individual racial or ethnic groups made establishing

a statistically significant relationship among groups difficult (Goldring, 2018). Because we were

unable to discern differences using Scheffé post hoc method of mean comparisons, we were

unable to assess the nature of the relationship between specific racial/ethnic populations and

career GPA. However, since race emerged as a significant factor (see above that the ANOVA test

showed that the effect of ethnicity was statistically significant on career GPA) impacting

students' experience at Lyon, our qualitative interviews gained greater importance to

understand the academic factors associated with persistence at Lyon, particularly for students

of color. Chi square tests for independence in contingency tables were also used to assess

statistically significant differences between student's ethnicity and the following variables:

athletic status, Pell eligibility, gender, first major declared, second major declared, exit reason,

entrance term and exit term. Statistically significant relationships were found between a

student's ethnicity and all variables except for the first major declared, exit reason and exit

term (Table 13).

In summary, these quantitative findings serve the aims of our research questions in

several ways. First, the findings begin to map the statistical significance of variables related to

the theoretical models undergirding our study. Specifically, they elucidate the academic factors

dimension of Research Question #1 and the student attributes dimension of Research Question

#2. They also signal areas needing deeper qualitative exploration to better understand the

student persistence puzzle at Lyon. This signaling enabled our team to listen more carefully in

interviews to gauge the substantive significance of the relationships described above and to

make better recommendations to the college for addressing persistence factors related to

athletics, financial aid, and specific demographic groups.

Qualitative Data: Interview and Observational Findings

RQ #1: To what extent do academic, social, and environmental factors influence student persistence and retention at Lyon?

Academic Factors

FINDING. Lyon students report mixed experiences on how well high school prepared them for college.

Assessing the readiness of high school students to be successful in college, Conley (2005) helpfully differentiates between college-eligibility and college-readiness. Admissions measures of college readiness focus almost exclusively on academic preparation as defined by grades and test scores. Yet many more factors are at play in assessing the cognitive capacities, problem solving competencies, and developmental experiences that enable students to persist in college.

A majority of the students interviewed for this study indicated that it had been easy to be academically successful in high school with minimal studying or test preparation. Of those who enrolled in AP or IB coursework in high school, about half indicated that they felt well prepared for the rigor of a Lyon education, while the other half found that even their "advanced" high school coursework was still insufficiently preparatory. As one student reported, "It definitely took me some time, like in my freshman year, to kind of figure out how [academic success] would look like, and how I should apply those foundations of, like, motivation into time management and... well-structured study habits. That took me a little while to, you know, adapt to." Time management skills and study habits were among those

academic factors that were weakest among even academically high-performing high school graduates enrolled at Lyon.

In addition to basic academic coursework preparation, students also reported adjustment challenges related to study habits and the autonomy that comes with college academics. "I wasn't really familiar with the concept of like self-scheduled exams," one student who had attended public high school told us. "Or, like, the honor system that we had, and it's easy for people to tell you about it till you get here and like until your kind of held to that standard on your own and holding yourself to that kind of self-scheduled exams. That was kind of different for me to move into." Another student recalled his surprise when a faculty member dismissed class early.

> Coming from high school when I'm sitting in a class about 45 minutes and the bell rings and doing that for four years. And then freshman year of college, I go to my [class], and I mean, literally we had an assignment would spend about 15 minutes on the assignment, turn it in, and he's like, you guys are free to go.

Students generally reported that while Lyon felt a bit like high school in size, they needed time to adjust to college culture and self-regulated academic work.

Among students who did not enroll in advanced coursework in high school, academic challenges at Lyon were more pronounced. In interviews, students reported feeling academically discouraged and unsure whether they could be successful at Lyon, while staff members expressed concern that underprepared students would not make it to graduation. A staff member who regularly works with academically vulnerable students remarked to us, "If

you're not a strong student, if you're not an even a mediocre student, you're not going to last! You can't pass the exams."

Writing and studying skills, in particular, emerged as a concern from admissions and student services staff working with first-year students. "We see students that have great test scores that still aren't prepared for the writing," one staff member reported. "They may be just fine to go to a regional, state school or something else. They're just not prepared for our curriculum because...the expectation isn't there in the high school writing." As one student who serves as a supplemental instructor (SI) told us, "Lyon is very academically challenging. And I think when people come to Lyon, they still have their, like, delusion that they can, like, not study and pass all their tests. And it doesn't work like that…. Lyon pushes that they're academically challenging all the time." These findings suggest that Lyon's efforts to strengthen pre-enrollment and first-year academic support services may help to solidify students' essential tools and better position them to succeed.

As Lyon's shift to professional first-year advisors attests, the school continues to seek ways to provide academic scaffolding and encouragement for students who may find themselves falling behind. A staff member told us,

> I think a lot of students get discouraged because I know that some faculty still hold that level of, 'You will need this level and if you don't then you don't really belong here.' Or, 'You're not really cut out for college' when we're doing them a disservice and not providing some sort of remedial [classes.]....I think it's good to have a higher standard but I think we have to provide the tools for those kids to get there.

Another staff colleague added, "I think students leave, too, because they're not really prepared for college, and sometimes that bridge, it's just too much. They can't bridge."

The lack of remediation coursework is a source of mixed feelings among support staff. "We don't have developmental classes here," one staff member told us. "So, if you don't have the passion and the intensity to actually go and do that extra, you probably won't make it here." This points to the critical coupling between academic ability and goal commitment needed for student success.

Especially significant here is an understanding that while academic skills are the typical prerequisite to college eligibility, they are heavily mediated by students' family background, community expectations, and life experiences (Bowen et al., 2005). According to Gamoran (2001), family background accounts for nearly the entire equity gap in college entry and graduation between black and white students. As evidenced in recent fall to spring retention data at Lyon, the full-time degree seeking retention rate for white students is 93%, while the full-time degree seeking retention rate for black students is 78.7%. Students from underrepresented populations tend to have limited access to quality advanced academic high school courses and limited college counseling support (Venezia et al, 2005).

Notably, students who received college guidance from a trusted mentor or friend about what to expect in college appeared more likely to be prepared for a rigorous academic environment. As one student reported to us,

> What I expected was a really hard experience, a lot harder than high school. That's what I expected….All I heard was that Lyon is supposed to be known for being a more rigorous school. Yeah, so I figured it'd be a lot more hard. And you know, when I got

there....I really tried hard. I was going, you know, as hard as I could, but then I started realizing, Oh, this isn't that hard. You just have to apply yourself. So when I got there it was a lot easier than expected.

This narration supports Bowen et al.'s (2005) finding that students' life experiences, including access to those who have successfully navigated college, have a cumulative impact that can build bridges - or in some cases, barriers - to postsecondary options. And there is evidence to support Lyon's growing effort to offer high-touch, bridge-building support for students in lieu of remediation. As one student support staff member told us, Lyon "gets these really low income first generation kids that were coming from educational systems that were not good. And then they get here, and we nurture them and challenge them and help them along to the point that, you know, now they're going to grad school." As one student told us after a positive interaction with staff in his first year,

When I was in high school, I wasn't one of the greatest students. I mainly focused on what my sport was and then from there, whatever happens, happens. Once I got into college, that's kind of where things took a big turn. I wanted to be an average student to way-above-average. I was almost a 4.0 my freshman year of college.

FINDING. Lyon's unique value proposition in the region is most clearly evidenced through its high-touch faculty.

Students at Lyon are overwhelmingly positive about their experiences with faculty. More than any other factor, an engaged faculty was identified as a key component in student's positive academic experiences at Lyon and their sense of commitment to the institution. The stories below reveal just a few illustrative anecdotes from our conversations with students:

So I took a final and I did not feel good about it. And I went and talked to the professor who's also my advisor. And we sat and talked for an hour. And she just talked to me and explained like, all this different stuff. And then she let me redo part of my final. So because we went through what it was and she was like, Okay, so what do you do here? And I explained it to her. [I knew] it was just the thought of the final actually in front of me that messed me up….So she let me redo that which is super, super awesome. Just, like, the support, and something that I'll always brag about Lyon in the community. Just how supportive everybody is, and everybody wants you to succeed here.

Another student recalled a similar time in which a professor demonstrated he "wants us all to succeed" by flexing academic expectations to help support student learning and reduce anxiety:

One of my chemistry professors...he really goes over the top to try to have, like, the students just feel comfortable….He understands that there's things in life that we go through, so he kind of...pushes deadlines. He makes it clear that he's always available. He gives us his cell phone number to communicate in case we're stuck on a problem, like in the middle of the night and we're studying. Yeah, he's very welcoming, very warm in that way that he wants us all to succeed. So I like that.

These stories reinforce the sense that faculty prioritize student learning even when it means modifying classroom expectations and deadlines. Students feel known individually and that faculty are interested in their lives beyond what happens in the classroom.

Other Lyon students described conversations with Lyon faculty which set them on new post-graduation trajectories and helped to hone their professional skills:

So I made an appointment to go talk to [this new professor], and she immediately

hopped on my train, like 'Oh! You want to go grad school? Let's do it. Let's get you there. Let's start you on research; let's do this.' I was like, 'Bless your sweet soul.' And she's like, 'Here's some research opportunities that you can have. Here's some scholarship you can apply for. Let's do this.'

Comments like these reflect positive student reception of faculty making the extra effort to support student interests beyond the classroom. In addition to positive interactions with faculty around research collaboration, students also reported that their experiences respectfully disagreeing with faculty helped them to mature and prepare for the workplace. "Being able to respectfully disagree with a professor, you know, was training. And that kind of opportunity, I think it gives you that ability to go into an interview, a job application, or something like that." More often than not, these interactions were described in terms more closely resembling peers or equals than as authority figures.

Faculty enthusiasm for student-led research and exploration was particularly evident in our conversations with seniors preparing post-college graduate study and career plans:

As an art student for my senior year, I have to put on a senior exhibition. And my senior project was going to be over fractals and how fractals are the bridge between art and the sciences….So I started doing a lot of research into fractals and a lot of research into science and mathematics. And I'm not good at math and not too great at science. But for the most part, I could understand the material and I was eating it pretty easily. But I was coming up with a lot of questions. And so I went to talk to one of the psychology professors about it and she was delighted….We had a whole hour-long conversation about my ideas and how they pertain to the things that I've researched and then the

things that she's encountered, and her experiences in psychology that relate to the

subject. And then she emailed me resources later, to help me further delve into my

research. She's not even, like, my professor or anything. I've never had one of her

classes or anything either. So it was just really pleasant.

Almost every student we interviewed had at least one story similar to this one, suggesting that

while not every Lyon faculty member behaves in a similar manner, those who do make an

indelible impact on students. As one student helpfully summarized for us, "Going to such a

small school, these professors and even just some of the staff, they get really involved

and...invested into you as a person….They actually care about us being successful as students

and growing as people." These findings also suggest that faculty search and promotion

processes at Lyon might do well to consider explicitly interpersonal skills and experience

supporting student research in their deliberations.

FINDING. Lyon's early alert system and shift to professional advising is viewed positively by

students; however, advising and academic support structures weaken for upper-class

students.

In an effort to strengthen early retention, in Spring 2019, Lyon shifted from a faculty

advising model to professional advisors for first-year students. While it's not yet clear that this

shift is paying dividends to Lyon's retention rate[4], it is garnering students' notice and

appreciation.

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[4] Full-Time Degree-Seeking student retention is projected to drop by two points in AY19-20 from the prior year. However, it may be too early to predict the longer term impact of professional advising.

The hiring of personnel to supervise and implement Jenzabar's early alert system for students further evidenced Lyon's commitment to providing robust support structures for students at risk of departure. Currently, Lyon utilizes a system of early alerts (consisting of grades, attendance, midterm review, and anecdotes from faculty and staff) in order to identify students at risk for departure. Similarly, Lyon staff closely track the progress of students who have historically been at a higher risk for departure (i.e. first generation students or student athletes). It became evident very early in our conversations that these positions were heavily weight-bearing for student support. A number of students we interviewed, and especially athletes and students of color, referenced their first-year advisors, as well as Fiona Brantley and Lai-Monté Hunter, as people they trusted on campus.

Student support personnel articulated a desire to reach students who need help the most, often those who are least likely to seek it out. As one staff member told us, "The students who will avail themselves of the 'before' things [early intervention resources] are the better students, not the ones who truly need it. And so for us to talk about what's really been effective; it's been the intervention after, not before." One strategy that appears to have helped reduce self-selection challenges is working collaboratively with the provost's office to mandate certain programming and to create expectations for students on academic probation. The goal is to change patterns and increase student self-efficacy in the skills and behaviors supporting persistence. "It's helping students now understand that if you're on probation, thinking you do the same things you did all along, that won't be the case," said one staff member.

Early intervention helps to ensure that students at risk of departure are not able to "hide" when they're experiencing difficulty. "When they're really in trouble," the support services team underscored to us, "hiding is the last thing you want them to do. So now you can honestly say [to them], 'So what are we going to do?' Because...everybody can't possibly be doing great." Having clearer information about students who are missing classes, not turning in assignments, or otherwise not meeting early metrics of academic performance enables faculty and staff using the Jenzabar system to "reach out and say, 'Come talk to me.' Or I can reach out to say, 'Do you know this [campus resource or policy] is an option?'" Effective use of the early alert system reinforces that students at Lyon are known individually and that campus leadership is committed to their success.

The transition from faculty to professional advisors appears to have also been received warmly by students and staff. One staff member helpfully summarized the biggest shift in the new model in stating, "They're paid to know the entire catalog backwards and forwards, to check in on you all the time whether you like it or not." Professional advisors were adroit at connecting students with other resources on campus, including the well-liked and centrally located Morrow Academic Center (MAC), Supplemental Instruction, and other support staff, including coaches.

However positive the early alert system and professional advising has been for entering students, it does not yet carry over to the experiences of returning students. As one support staff member quipped, "Sophomore year, it's going to be like: Cold turkey, my first year advisor is gone." Upperclassmen at Lyon continue to experience significant disorientation and frustration around advising. Several students reported feeling as though they had to navigate

their own path through academic requirements. "There's not clear organization for, you know, your path," one student told us,

> Like, for me, I want to know what's next. For me. And every semester has been very challenging to be able to understand 'okay, this is how long I have to be at Lyon.' And I kind of have to get through a lot of challenging things. I have to come up with my own way to kind of know how I can get through Lyon, and...they don't really help in that way.

We noted a lack of clarity particularly related to the recommended sequencing of classes and projecting when specific courses would be offered.

> I think the most difficult part of being a Lyon student is...how do I put this?....You go to a small school and it's great and everything, but then, like, you are trying to plan out your course schedule and everything like that, but they barely offer the courses. They only offer everything one time. So if you can't take it then you just can't take it.

A classmate we interviewed at a separate time echoed this experience:

> When I came into Lyon, I kind of expected it to be very organiz[ed], like as far as my advisor would be able to help me organize my classes....My first semester was perfect. Some of the core classes that I needed just from the school are requirements for any degree. So it was fine, but then after that, since not a lot of science courses are available every semester so that teachers don't teach it every semester, I had to basically organize it myself, and my advisor tried to help me, but it actually pushed me back longer than I needed to be at Lyon.

She continued, "I know Lyon is very good academically but if there was just more structure ...if the advisors were more knowledgeable about the whole curriculum of Lyon and how it should

work, and it shouldn't be this lenient to where professors should pick and choose what they want to, you know, teach." There is, of course, implicit in this statement significant misunderstanding about academic planning in liberal arts institutions, and the tension schools experience between offering set courses each term and giving faculty academic freedom to shape course design and content. Nevertheless, this student's reflections mirror concerns that the college lacks sufficient clarity in course planning and availability.

The combination of weaker advising for upperclass students and the attendant difficulties of projecting course offerings hampers student progress and, in some cases, also carries financial repercussions. Nowhere was this finding more evident than with transfer students, who are a strong potential enrollment trajectory but bypass the early alert and advising structures by virtue of their transfer status.

> [My sister and I] both had experiences where we got pushed back, just due to the fact that we were advised wrong.,. And knowing that we're transfer students, yeah, we have so much, like, classes that we need to take in order to finish our degree. And they make it hard on being able to transfer credits to Lyon. So when I first started, I had to retake a math class when I didn't need to retake it.

Another transfer student felt even more strongly about the challenges for that population at Lyon. "A lot of people don't know about Lyon as far as like, what goes on the inside, as far as the students, how they're struggling. And just transferring there, I almost want to tell people, do not transfer there because they keep you longer than you need to and it's just so expensive." Addressing the credit mapping and advising structures for transfer and upper-class

students at Lyon appears to be one area that could yield fruit both for students' individual experiences of satisfaction and for the public narrative they share with others.

Finally, while first-year advisors at Lyon are generally highly regarded, the pre-professional advisors received substantially less positive reviews from students. The primary concern among students was the pre-professional advisors were primarily knowledgeable about their own area of interest and expertise, thus making it more difficult for students still in discernment to explore or understand expectations across other disciplines. One student shared their frustration with the pre-professional advising process:

> There's just one advisor [in my field] - she's a pre-professional advisor - and it's just the fact that she's very negative. You know, if you do bad on a class she's like, Oh, you shouldn't be thinking about medical school, you shouldn't be thinking about dental school. They're very pushy, and makes you, you know, feel kind of overwhelmed and kind of bummed out about it. Like, the classes are hard as it is, and I just feel like a lot of professors...don't really care. Especially in the sciences, you know, if you're not understanding a concept, well, you know, that's your fault. "You're not doing what you're supposed to do" kind of attitude, but in reality, we seek help for that reason. We're stuck on something.

Quotes like these, while perhaps more isolated experiences, point to an opportunity for Lyon to think about extending the web of resources that have been constructed for first-year students to assist transfer and upper-level students already in declared majors.

Social Factors

FINDING: Lyon's small size and distinctive setting pose unique opportunities and challenges for student' communal potential

At the bottom of a brightly-colored webpage (Lyon College Stories, n.d.) featuring dynamic stories of Lyon students and alumni at home and abroad, a descriptive tagline reads: "Lyon is more than a college. It's a community distinguished by its academic curriculum, unique honor and social systems, and award-winning professors." As already discussed, Lyon's academic environment and engaged faculty are largely recognized by students as significant and positive impacts on their Lyon experience. But what of Lyon's social environment? What kind of "community" and communal traditions are present here?

Our interviews revealed that Lyon's small campus population and small-town location has both positive and negative impacts on students' communal potential , a factor that contributes to social integration and, ultimately, subsequent institutional commitment in Braxton et al.'s (2014) revised theory of student persistence. This particular construct refers to the extent to which a student perceives that a subgroup of students exists within the various communities of their college or university that hold values, beliefs, and goals similar to their own (Braxton and Hirschy, 2004; Braxton, Hirschy, and McClendon, 2004). Braxton et al., (2014) note that an anticipation of community membership connotes communal potential (p. 88). The more a student perceives the potential for community on campus, the greater their level of social integration.

Lyon's campus community is close-knit and offers abundant opportunities for students to know each of their classmates by name. "You can pretty much know everybody," one student told us. "It's smaller than my high school." More than 40 college-sponsored student

organizations provide avenues for involvement, and many students also participate in recreational sports or Greek life on campus. While several of the students we interviewed described Lyon as "smaller than my high school," most of them found it manageable to adapt to the campus social scene. "I was kind of used to the bigger social scene so that was kind of different, but I was cool with it," one student told us. Another leveraged the smaller size of the student body to stretch his social skills: "I don't feel like I have a specific, like, just one friend group. I try and...keep friends with all the Greek life. I try to keep friends with all the other students who aren't participating in Greek life. I just try and talk to everybody at least a little bit. Like someone there to like, listen and be with them." In this sense, the small size of the student body and the emphasis on residential education creates a bond among students and between students and the larger campus community.

Of course, such close social quarters also have disadvantages:

Everyone knows everyone...that's a good thing but obviously with, you know, the number of us living in a small space, you know, if one person gets into an argument with another person then you know pretty much the entire campus knows about it. So it's definitely a weird dynamic for me, having to actually think about that sort of thing because...that's definitely not how it was when I was in high school.

We talked with several students who felt that the loss of anonymity that comes with a very small campus was a mixed bag, offering opportunities to know each other well, but providing few social alternatives when relationships became fractured or strained.

Students, faculty, and staff also expressed concerns about the lack of vibrancy on campus, particularly coupled with the limited social options in the larger community of Batesville. As one staff member put it,

One of the reasons [Lyon] lacks vibrancy is because we aren't even filled our capacity. There's not enough students to have a vibrant campus. And that's probably due to our geographical location...mixed in with our admission standards. When you factor in where we're at and the admission standards we're trying to recruit students at, there's just not enough of those kids in this geographic location. So, when I look at things globally that's the first thing I see is a campus that severely lacks vibrancy.

Another interviewee put it more bluntly: "The kids are bored here, flat out." We discuss this challenge in greater detail under Environmental Factors and Study Question 2 findings, below.

We heard frequent reports that students struggle to find adequate channels to integrate socially, especially across affinity and demographic lines. One might expect friend groups in college to become more diverse than in high school, but the reverse seems true at Lyon. Students frequently reported having more diverse (e.g. interests, background) friend groups in high school and much narrower alignment with similar interests in college. The majority of students we interviewed indicated that most of their friends are in the same major or on the same sports team, a finding that indicates the affinity model is effective, if somewhat limiting for students' social integration across various segments of the campus population.

Yet we simultaneously heard that it's not a lack of opportunity, but students being enticed by what is being offered. "Most of the kids," one student told us, "all they do is go to class. That's what they do. They sit around and complain that there's nothing to do on campus.

The ones that get really involved around campus, they tend to stick. So, when my regular friends leave - when I say regular meaning kids that don't play a sport, that aren't involved in any clubs, things like that - when the kids that aren't involved leave, that's where my mind sees it. They're just not involved. So maybe they aren't happy here." This finding suggests both that students need to be more proactive in taking advantage of the extracurricular activities available on campus, and that some modification or expansion of options might help "bind" a wider range of students to the institution.

Braxton et al., (2014) indicate that student perceptions about their communal potential stem from experiences with student peers in residence halls, in classrooms, and across student peer groups. We found that, at Lyon particularly, the classroom certainly serves as a site for developing students' communal potential. However, less attention is paid to intentional community building in residential or co-curricular settings. While Lyon's population is roughly 89 percent residential, residence halls did not emerge in our inquiry as a site of community-building or shared identity among students. Berger (1997) indicated that three aspects of community often found in residence halls--identity, solidarity, and interaction-- can have a positive effect on students' social integration. The concepts of identity, solidarity, and interaction as dimensions of students' sense of community in residence halls provide housing and residence life professionals with a set of empirically grounded factors for use in their efforts to increase persistence at their college or university (Erb, Sinclair, and Braxton, 2015). Berger (1997) defines identity as the degree to which students view themselves as members of a community in their residence. Similarly, interaction entails the frequency and intensity of face-to-face interactions among students of a residence hall (Berger, 1997). Finally, solidarity

pertains to the degree to which students in a residence hall share similar beliefs and goals (Berger, 1997). These definitions give professionals a more nuanced conceptualization of the three dimensions, which, in turn, assures fidelity of implementation around policies and practices meant to increase a sense of community in residence halls (Erb, Sinclair, and Braxton, 2015). Best practices around capacity-building in these three areas include creating hall symbols or facilitating hall competitions (identity), developing signature or traditional events (interaction), and utilizing student governance structures and living learning communities (solidarity). Given the large percentage of students who live on-campus, Lyon may find success in locating the residence halls as a site of identity and pride for students.

On our research team's visit to campus in fall 2019, we asked Lyon students and administrators about the traditions or social events that bind the campus community together. Greek life emerged as a unifying factor for those students who participate, but for those who do not, it can feel like being on the outside of a particular community. Intramurals and student organizations, likewise, offer opportunities for students who choose to engage. Yet relatively few social traditions emerged as unifying factors across the campus and student body. More than one staff member referenced Brenda's desserts or the annual Arkansas Heritage Festival, yet we did not get the sense that the communal identity of the student body centered around certain traditions and practices in ways that were efficacious for building campus community at other small, liberal arts colleges such as Agnes Scott College in Decatur, Georgia.

Colleges can underwrite social traditions into campus-wide activities, such as co-curricular or residential experiences, as a means of promoting communalism and bolstering social integration. Specifically, the concept of anticipatory socialization--the process by which

non-members seek to emulate the attitudes, values, or behaviors of the group to which they seek membership-- is a strategy for social integration that has proven successful among groups of first-year students during orientation (Pascarella, Terenzini, and Wofle, 1986). Such programs and activities enable students to learn the behaviors, values, and attitudes needed to establish membership in the campus community. Many institutions offer signature or tradition events, which serve as conduits for interaction, on a regular basis (Erb, Sinclair, and Braxton, 2015). While annual events provide students opportunities to gather under the pretense of participating in a regular activity, monthly events can encourage more regular interaction than annual events. By standardizing when these events occur, institutions can create a pace and time that students can rely on for interaction with the rest of their community (Erb, Sinclair, and Braxton 2015). Erb, Sinclair and Braxton (2015) note that efforts to increase the frequency of interaction among residents will likely foster communal potential, in that these initiatives would allow students to feel that they recognize and know most of the other residents and that as a hall, the residents generally get along with one another. Through an intentional effort to create, define, and institutionalize community-wide traditions- both in the residence halls and beyond- Lyon can reinforce students' anticipatory socialization, which supports increased communal potential and persistence.

FINDING: Lyon has not yet adequately contended with the changing racial demographics of the student population.

One of the challenges to forming a cohesive campus social environment is Lyon's rapidly changing student population. The growth of athletics at Lyon in recent years, paired with targeted recruitment efforts that look beyond Lyon's traditionally regional prospective student

pool, has substantially changed the demographic make-up of the student body, increasing the percentage of under-represented minorities on campus to 14.62% from 33.86% between 2008 and 2018. "Lyon is changing," we heard from several internal stakeholders. "It is changing in terms of how it looks. It's changing in terms of what it does. And it's changing in terms of how it does what it does." Another staff member reminded us that previously, most of the Lyon community pulled regionally from Arkansas, and the student body had a great deal more geographic, racial, and socioeconomic cohesion. Now, because of efforts to boost enrollment, recruitment strategy includes aggressive outreach to large, urban areas in neighboring states.[5]

In this midst of a diversifying student demographic, Lyon has struggled to balance traditions that help to anchor, define, and shape the student community with a social culture that absorbs and adapts to the gifts and interests of its current population. "Lyon is changing," we heard from one minority administrator,

> So more and more there are more people that look like me. There are more people of color. Not always reflected in the faculty, because faculty change takes a longer period of time. So what happens is, sometimes there may be cultural things. Sometimes they might not even be a cultural thing, but if you can't establish identity with somebody....We're very aware that that is a dynamic that needs to be massaged and not pretend that there are not differences. I think part of that is getting them to be part of the Lyon culture. And that's something that is always changing.

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[5] As more than one administrator told us, "There are more high school seniors in Dallas than in the whole state of Texas."

One might expect friend groups in college to become more diverse than in high school, but the reverse seems true at Lyon. Students frequently reported having more diverse friend groups in high school (in terms of both demographic background and interests) than in college. In part, this seems like an extension of spending time with students in the same classes or major, as well as the nature of affinity binding, in which students coalesce around shared interest or activity. Yet our interviews also revealed that despite surface-level changes to expand sports teams, broaden affinity options, and diversify personnel, Lyon's deeper campus culture has yet to wrestle socially with what it means to have a more diverse student body.

What does it mean, for example, to be a school with a proud, Scottish Presbyterian heritage in a largely rural, white area of the state? For students of color to feel welcomed and fully engaged on campus, what deeper shifts in identity and practice need to be internalized? An example here is the Scottish Heritage Festival and Scots-related events held on Lyon's campus. While these cultural events may be a draw for some, it's not difficult to imagine how moving to a largely white, rural area of the state to become a "Scot" may create anxiety among non-white students. One support staff member captured what she hears from students of color this way: "Yes, I'm going to do everything right. [But] when are you going to understand that this is who I am? This is where I'm from? This is what we do, and how does that fit into wanting to be Scottish and listening to the bagpipes and all that stuff?" Another observed, "The college wasn't ready for what they requested. When we had football that number [of students of color] really started to increase. I don't think they were aware of just where...those students of color come from culturally." Comments like these reinforce a deeper question that we heard among the students of color we interviewed: Will Lyon truly be a place of welcome?

Addressing the implications of a more racially diverse student body has classroom and communal elements. Research has consistently shown that students' racial and ethnic background has been shown to produce educational bias in the form of low classroom expectations (Ferguson, 2008; Ladd, 2008). While at Lyon, we did not find overtly racialized classroom dynamics; however, we did discover that "athlete" was used as a proxy term for how students, faculty, and staff talk about race around campus. Our interviews revealed that the growth of athletics, which has correlated with the growing racial diversity of the student body, has surfaced stereotypes and behaviors that negatively impact students' self-efficacy, or the belief that individuals possess the ability to engage in actions necessary to achieve a specific outcome (Bandura, 1986, 1997), and their social integration. Students with higher levels of self-efficacy are confident in their ability to survive and adjust to the social communities of their university, which accentuates their ability to positively socially integrate. "I don't like to say it," one student said,

> because like, I'm not particularly an athlete, and I don't want to just say because like, not all athletes are like this. But like, a lot of them slack off and a lot of them cheat on things. So they don't want to stay. But also like, because of where Lyon is, they're not going to go anywhere further in athletics, usually just because of how small the program they're in is. I feel like a lot of people, and just specifically athletes, don't want to stay for that reason.

Another upper-class student (and student-athlete) reported her perceptions this way: "Our freshman football players...come in thinking they're just gonna play sports and they're gonna, you know, miss class all the time and still make good grades." At a school where the highest

percentage of students of color on campus are football players, it is not difficult to see how race

and academic perceptions might become conflated through such narratives.

Braxton et al. (2014) asserts that when students hold negative perceptions of prejudice

and racial discrimination at their college, these can also negatively impact their perceptions

around institutional integrity and commitment of the institution to student welfare (p. 51). In

order to mitigate these potentially negative impacts, Braxton et al (2014) suggest providing

sensitivity training for all faculty and communicating campus norms and policies regarding

racial discrimination in orientation programs for new faculty (p. 51). These actions around

creating embedded institutional norms and policies help reinforce an institution's commitment

to the welfare of its students by stressing the importance of treating students equitably and

with respect as individuals (Braxton et al., 2014, p. 51).

As Lyon continues its efforts to expand and diversify the campus community, careful

attention to both the underlying culture and the evolution of attitudes and perceptions around

race and belonging among its faculty, staff, and students will be essential. As one administrator

put it, "Some of our professors are realizing that you can't just teach a course the same way

used to teach it, that our student body is drastically different than it was 10 years ago, good

and bad…" And while we address some of the environmental challenges facing students of

color in greater detail below, there are signs that students notice and appreciate the changing

make-up of the student body. As one Black student told us,

> We do take notice that we're in a predominantly white institut[ion]. We noticed that
>
> there's not that many of us here, but I've also been here three years. Some of the kids
>
> are like, where's all the Black people? When I first got here that were even less than

there are now, so we're growing, we're getting more diverse than what we used to be.

And throughout the years, you know, we love being able to see that diversity.

FINDING: Lyon's generous financial aid policy is critical to student recruitment and student success; however, ability to pay remains an obstacle for student social integration.

Braxton et al.'s (2014) revised theory of student persistence found that ability to pay did not stand up to testing as an antecedent of social integration, but did function as a source of influence on psychosocial engagement. Where ability to pay reduces barriers to student participation, their greater psychosocial integration contributes to their positive social integration. As previously noted, Lyon has made substantial investments in supporting students' ability to pay. Money came up as a significant issue in virtually every interview we conducted, and appeared to be a significant factor in application and enrollment decisions, students' choice of major and career path, and participation in affinity groups and student life. We explore each of these financial influences in turn below.

Lyon's financial aid policy clearly impacts students' choice to enroll. A few student responses in this category were stark and blunt: "For me, it was money. It was just the best package for me money-wise." Finances were also often couched in terms of current and future debt. "Why I ultimately chose here? I mean, a big aspect was the scholarship opportunities that they gave me. So just financially, being able to graduate...without any debt, which that was like, one of my big goals. And here's, like, one of the only schools that allowed me to do that. So that was a big factor." The majority of students we interviewed, however, were far more nuanced, indicating that ability to pay was one of several factors influencing application and enrollment decisions. As one student told us, "I had a list of stuff that I wanted [in applying to college]. I

wanted to be able to afford college. I wanted to be able to get to grad school. And I wanted to

be able to study abroad. And basically, I knew Lyon had the first two, which is why I applied."

Cost was often listed as the first among other factors, such as Lyon's unique value

proposition, influencing college choice.

I originally was going to not come to Lyon because I was like, I've gone there for forever.

I've lived in that area, I don't want to go here. And then my only two schools that I was

interested in were Lyon and Hendrix. I chose Lyon because it was cheaper than Hendrix.

And I did like the campus. I already knew some of this staff. So I felt comfortable and I

made sure I wanted to live on campus either way I went. And so I chose it for many

reasons, as well as I saw it being small enough to where I could actually, like, improve on

myself academically.

Athletes, in particular, saw their scholarship as one of the factors that enabled not only

matriculation, but their ability to persist at Lyon. We heard several student-athletes report their

view that their athletic scholarship was what "paid enough of my school for me to be able to

afford it." These student perceptions suggest that in addition to helping Lyon recruit favorably

against less costly competitor institutions, its generous financial aid policy may positively

impact student retention.

In addition to influencing enrollment decisions, financial factors emerged as an influence

on students' choice of degree program, major, and future career trajectory. When asked the

extent to which finances played a role in her choice of degree track, one student responded,

"Big...extremely big, actually. If finances were not a factor, I would have done the whole

Bachelor of Arts instead of the B.S." Another student shared about his choice of major, "I'm not

going to lie, [earning potential] does have some impact, but it doesn't mean everything. I still want to enjoy whatever I pick. But I mean, I still gotta make money eventually at some point. It might some[what] affect degree but not everything." We noted with interest that students in majors with lower future earning potential shared a particular cognizance of the financial implications of their choice:

> I know a bunch of people in my major like my art major that do have to pay a lot for college and so they don't have like, like a whole lot of money for supplies and things like that and so they're like paying like all this money to go to this private liberal arts college and it major in art, and then, so it does, it has affected a lot of people in my major, I would say.

Family expectations and ability to pay constitute the other major financial factors influencing students' choice of major and academic trajectory at Lyon. A refrain from students was that "my parents want me to be successful," including first-generation students whose families sent them to college with expectations to improve the family's economic well-being. One first-generation student, whose parents urged her to take coursework closer to home at lower cost, told us, "I will not be at Lyon to take two classes that I need for my major due to finances. So I actually had to petition to ask to take my last two classes in my hometown...at a community college, so I can transfer them at Lyon before May, and I can graduate." The expectations of a particular major or career path, whether to improve one's socioeconomic status or to satisfy graduation requirements, risks misalignment between students' abilities and the institution's academic expectations in ways that we believe may impact students' academic progress and ability to persist.

Finally, ability to pay was a significant influence on students' choice of affinity groups and participation in campus activities and organizations. "I really have to work and stuff to pay for school," one upperclass student told us, "so I really can't do a bunch of things that are available at Lyon." The timing of student activities in the evenings and on weekends, while sensible from the perspective of not conflicting with class schedules, means that students with limited means often have to choose between campus activity participation and working to support the cost of enrollment. "A lot of the activities like games and everything are in the night at like, 5 or 6pm," we heard from one student. "And after the last lab - lab goes until four - I really have to work and stuff to pay for school, so I really can't do a bunch of things that are available at Lyon."

In assessing the effects of ability to pay in college, Cabrera, Stampen, and Hansen (1990) expanded on Tinto's well-tested student integration model by testing the moderating effects of ability to pay on a students' goal commitment and institutional commitment. Unsurprisingly, they found that students satisfied with the cost of attendance were less likely to withdraw than dissatisfied students. But how do students assess their satisfaction with the cost of attendance? We found that students' motivation in attending - whether for academic, social, or athletic reasons - and the degree to which the institution meets those expectations, may significantly influence their subsequent institutional commitment. As one student support staff member helpfully summarized to us,

> Lyon is not cheap. It is absolutely not cheap. I think Lyon has also taken a path where, you know, I think about 70% [of] the students are athletes. Not all athletes come here because "I'm going to graduate." Some of them come here because "I just still want to

play….I come here, I have a partial scholarship….” So I think some leave because of finances, it is not cheap. Especially if you're far away from home.

Environmental Factors

FINDING: Students experience misalignment between the school's narration of the campus town environment and their actual experience, which has an adverse effect on student perceptions of institutional integrity.

Our conversations with students and staff surfaced concerns that the picture Lyon presents for recruitment purposes differs from stakeholders' experiences of the college. This misalignment includes factors related to Lyon's academic environment as well as the broader campus and town-gown climate. We address each in turn below.

The fulfillment of academic expectations for college has a positive influence on student perceptions around the institutional integrity of their school (Braxton et al., 2014). These expectations develop out of the images, language, and interactions that students develop as prospects and applicants. In Academic Factors (above), we identified that students who do well in high school do not necessarily do well academically at Lyon. This finding was not surprising given that students found it relatively easy to achieve high grades in high school with minimal effort, and Lyon prides itself on an academically challenging environment.

Lyon also "sells" the academic rigor of the institution in ways that translate to career
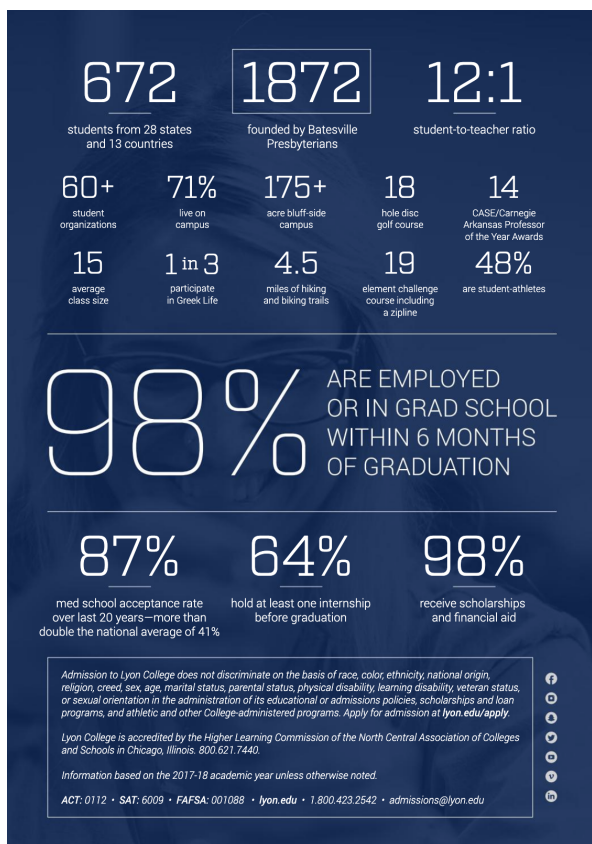
outcomes. One statistic that we frequently found advertised in recruitment materials, posters, and digital media (Why Lyon, n.d.; cf. inset from admissions brochure, at left) are the high rates of admission to graduate and professional schools. Pre-Med students, in particular, reported that Lyon's 87 percent admission rate to medical school was explicitly discussed with them during the admissions process. Those conversations clearly paid off: as previously indicated, at least two of the students

we interviewed named medical school acceptance rates as a primary factor they chose to

enroll.

Yet students also felt that such advertising wasn't telling the whole picture. "I feel like

the longer that I'm here," one student with aspirations to attend medical school told us,

> the more that I realize that their pre-med acceptance rate is false. It's not true. So they
>
> have this sign everywhere that says...the acceptance rate of students right out of
>
> college. And then also, at bottom, what's the acceptance rate to med school. And that's
>
> 86%, which they say is twice the rate of the national average. And this is a lie.

The student went on to report, whether accurately or not, his understanding of Lyon's cited

statistic:

So the way that Lyon is, most of their students come from really close by. I learned that there are four congressional districts in Arkansas. And then the only MD [Medical] School, which is in Little Rock, will take an even number of residents from each congressional district. So Lyon is in the least competitive district. And therefore, literally almost every single past pre-med student has gone to that school.

The perception held by this student was that Lyon manipulated its unique situation in Arkansas to its advantage, but was not communicating the full picture to students who might have aspirations of attending medical school outside the state (King, 2019). A more accurate description might include both overall medical school acceptance rates, and a list of the medical schools to which Lyon graduates have been admitted in recent years.

For this student, the transparency question around medical school has left a negative impact on his institutional commitment. "The hardest thing for me to accept is the fact that….I'm still faced with uncertainty that there's not that cushion, you know? There's no certainty that I would get into med school." Subsequent institutional commitment-- and ultimately social integration-- is influenced by the extent to which students believe their college delivers on the promises made during the recruitment or admissions process. Lack of transparency around data or overselling certain aspects of the college experience can negatively impact a student's perception about the integrity of their institution and their subsequent social integration and ability to persist (Braxton et al., 2014).

While admissions materials and recruitment efforts should rightly highlight school strengths and seek to distinguish Lyon in a competitive market, we heard more than one student or administrator indicate a bifurcation in students' experiences of the campus and

community environment. On the one hand, students who chose Lyon specifically for its small town setting had positive associations with the campus. "I picked Lyon just because of how small it is and it felt like it felt almost like home, like it felt very refreshing to see that there's a lot of nature in Lyon so, like, I can [take] breaks just being outside and just, you know, mental breaks versus being in a big city," one student told us. Yet other students, and especially those recruited for athletics, "feel like they've been sold a lemon when they get to campus." Student-athletes, in particular, struggled to reconcile their decision to choose Lyon over larger urban areas with limited social options off-campus. "The town's awful," one athlete told us. "There's nothing to do. For a [student-athlete], you can't go to the bars because of the coach's rules. If you get caught drinking, you're in trouble." With bars as one of the few evening social options outside of an aging movie theater, it's understandable why students sometimes look for unconventional ways to entertain themselves. One senior administrator told us that he observed a group of football players being followed in the local Walmart, as if under suspicion that they were there to cause trouble. "They're not going to do anything," he told the clerks. "These are great guys."

These accounts indicate that students wrestle with a shortage of viable off-campus activities, and that the Batesville community may have work to do to help encourage economic development that will entice student business. "The biggest reality shock that I had when I got there," one student relayed, "was really just about the community around Lyon. I did not really realize, like, how small of a town Batesville is until I got there." Another interviewee put it more strongly:

To bring in students... it's like, we have a bunch of [kids from the West Coast.] They get here. They're like, what the hell is this place? They think it's a prison. For a college person, you want to go to school and you want to have fun, you want to enjoy it while you're young. There's nothing to do. To go get alcohol, you have to drive 40 minutes one-way, because it's a dry county. If you get in trouble for partying, you have to go to a Social Council, which is only run by students. And if somebody on the Council doesn't like you, your ass is grass. Nobody wants to be a part of that when they're in college. Nobody wants to sit there and do the same thing every single day playing video games. I mean, once your college career is done, you don't want to stay in that town. Because there's nothing to do while you're young.

To the extent that Lyon's town partnerships can continue to help encourage healthy social opportunities for students and attract new business to town, it will strengthen students' perceptions of the Batesville community and perhaps even fortify their institutional commitment through increased institutional integrity. As expressed above, students form the images of various colleges through information gathering activities used during the college choice process. As such, the accuracy of images developed through information-gathering activities depends on the consistency and truthfulness in the depiction of the academic and social life of students at a given school (Helland, Stallings, and Braxton, 2001). Students come to particular institutions with expectations developed during the time of image-formation in the recruitment process. If their expectations are fulfilled, then first-year students will view their college or university as exhibiting institutional integrity, and the more a student perceives that their academic and social expectations are fulfilled, the more positive the student's perception

of their college's institutional integrity (Braxton et al., 2014). In the meantime, Lyon would do well to be cautious in how it narrates the campus and town climate in its recruitment and advertising in order to promote institutional integrity by more successfully delivering on the promises made to students during the recruitment process.

FINDING: Students struggle to find sufficient mental health resources on campus.

Mental health is a growing and pressing concern on college campuses around the nation. In recent years, institutions of higher education have invested millions of dollars in support services, wellness centers, and mental health resources for students (College Student Mental Health, 2019; Staglin, 2019) to address what seems to be rising rates of depression, anxiety, and suicidal ideation among college students. Lyon provides a full-time counselor to serve its student body, as well as a self-evaluator tool, serviced through ULifeline, designed to screen "for thirteen of the most common mental health conditions that college students face. This screening does not provide a diagnosis, but identifies problems that could be impacting thoughts, feelings and behaviors. The screening process also provides information on these conditions and how to reach out for help" (ULifeline, n.d.) It also offers the ability for some students to have pets and therapy animals on campus, a resource that was positively received by the students we interviewed.

Lyon's small size and fiscal constraints make it difficult to expand its mental health footprint on campus, though other personnel - student services staff, faculty members, professional advisors, and a full-time chaplain - also provide support for students. Nevertheless, we heard multiple students report concerning workarounds to address mental health concerns on campus.

The first area in which mental health emerged as an under-resourced area for students related to the stress and anxiety that comes with high expectations in a rigorous academic environment. Students related stories of friends and classmates who felt the impact of those stressors. "One trend that I have noticed throughout my college career," one upperclass student shared,

> is that there is an increasing number of students that have depression or anxiety or both...compiling that on top of school stresses them even more and there's a lot of students that have either just left Lyon altogether because of it or have been institutionalized and are seeking counseling or other forms of therapy.

A support staff member shared that students who seek counseling on campus are "definitely stressing out about getting the top internship or making sure that they have the right grades to get into grad school." These comments reflect some of the pressures that come with high expectations for academic achievement and a highly competitive landscape for employment and graduate study.

Of particular concern to this study were the number of students who reported failed attempts to secure a counseling session. One student, whose interview suggested to us that counseling support might be especially helpful, told us, "I know there's..counselors...because I tried to reach out not too long ago. But they're pretty bad at answering back right away and scheduling because it's really booked. So I really don't have anything unless I talk to my sister. And that's it." Other students relayed that limited availability for counseling sessions led them to turn to alternative sources of support.

> Diane is our counselor, but she is typically pretty booked all the time. So I actually go to

[redacted name of faculty member.]....He had a degree in psychology and he was going to be a psychologist. And then he, like, got halfway through school....he was like, I don't like this at all. And so he went back to [another discipline], but he retained all of this knowledge from psychology. And so he's very helpful to talk to and he gives me a lot of great advice.

While it is encouraging that Lyon faculty are willing to be supportive and offer guidance, it is worrisome, and a potential liability to the college, that Lyon students are seeking mental health support from those not hired and licensed to provide it. It also indicates a culture in which students have found problematic workarounds for too-lean formal structures on campus.

Summary of Research Question 1 Findings:

ACADEMIC

- Lyon students report mixed experiences on how well high school prepared them for college.

- Lyon's unique value proposition in the region is most clearly evidenced through its high-touch faculty.

- Lyon's early alert system and shift to professional advising is viewed positively by students; however, advising and academic support structures weaken for upper-class students.

SOCIAL

- Lyon's small size and distinctive setting pose unique opportunities and challenges for student' communal potential

- Lyon has not yet adequately contended with the changing racial demographics of the student population.

- Lyon's generous financial aid policy is critical to student recruitment and student success; however, ability to pay remains an obstacle for student social integration.

ENVIRONMENTAL

- Students experience misalignment between the school's narration of the campus town environment and their actual experience of it.

- Students struggle to find sufficient mental health resources on campus.

RQ #2: What are the student and institutional attributes that help to promote student success?

FINDING: Meaningful engagement with faculty is a predictor for student persistence.

As we note above, the significance of interpersonal relationships between students and professors emerged as a powerful theme in our inquiry. While the amount of interaction between students and faculty members is a commonly reported measure of student engagement (Kuh & Hu, 2001; Pascarella, 2001; Kezar, 1999), our team was surprised about the extent to which students cited relationships with faculty as crucial to their success at Lyon. As Braxton et al., (2014) found, "good teaching" and faculty interest in students positively influence student's perceptions about how committed an institution is to its students' welfare. Per Braxton et al. (2014), positive perceptions of the institution's commitment to student welfare wield a positive influence on students' subsequent institutional commitment. Student interviewees were quick to point out experiences in which faculty members' engagement or investment in their success bolstered their feelings of belonging and commitment to Lyon. One

student recalled a time in which such investment led to additional opportunities for summer research:

> I was really interested in [one course I took]. I asked a lot of questions and did a lot of things. And like, you know, I would go to [the professor's] office hours and things like that. And I can definitely say that [my professor] took a genuine interest in me. And then, like, she was talking to me about these research experiences and all the things like that. And it was coming around time to apply for these and she was convinced that I was going to get in. She just, like, really believed in me. And she's like, I really thought you were going to get in, but if not I wanted to ask you to join my research team and stay here in Batesville with me over the summer.

Two key aspects of institutional commitment to student's welfare are 1) the concern for the growth and development of students, and 2) the high value the institution places on its students (Braxton, Hirschy, & McClendon, 2004). Faculty members who demonstrate a genuine interest in students contribute immensely to the formation of student perceptions around the degree to which their college embodies a concern for their growth and development. Our team consistently saw this affirmed in conversations with Lyon students. Nearly all student interviewees were able to articulate an example-- and in many cases, multiple examples-- of a time in which a faculty member showed genuine concern for their success or overall well-being.

One student recalled a specific faculty relationship that was a determining factor in his decision to remain at Lyon instead of transferring.

> Honestly, coming in. I wasn't really sure how long I would stay here, or if
> I would transfer or anything like that. But then, like, with the

connections and...really just getting to know professors, that's pretty

much why I stayed was for professors themselves. One of the best

examples of that is [when I was a] freshman, one of our professors put

up an ad and you know, it said like, 'I'm starting a new research project.'

And I was interested in it. So I contacted him. And I've been doing

research with him since freshman year.

While many students expressed appreciation for their faculty members' interest in their

professional and academic pursuits, others spoke at length about out-of-classroom

interpersonal relationships with faculty as an important part of their Lyon experience. One

student noted: "almost all of the faculty here, like I know all of them like by name. They could

call my name and things like that, but they're also all really, like, helpful. If I needed anything I

know that I could ask faculty [from] whatever discipline." This particular student's experience

punctuates the culture around faculty engagement and interpersonal connection at Lyon.

Moreover, strong faculty engagement, partnered with intentional cohesion between

academic, athletic, and student life personnel proved to be a beneficial component in the

picture of overall student success. Braxton et al. (2014) found that organizational behavior has

a notable impact on students' perceptions of fairness and justice within their institutions.

Greater cohesion and synergy between faculty, administrators, and coaches creates consistency

among policies, ideologies, and processes, and, in turn, positively influences students' beliefs

that their institutions are fair and equitable places. In turn, fairness has a positive influence on

student perceptions of the commitment of the institution to student welfare (Braxton et al.,

2014).

One staff member we interviewed spoke eloquently about communicating the need for this cohesion to a hesitant faculty assembly.

I shared about the blind men and elephants. And essentially, if you know

the story of the blind men and the elephant, all these blind men have in

the stand they find this elephant and you're touching him. One says 'it's a

snake.' One says 'oh no it's a big wall.' And so part of the goal was to talk

to faculty, and to get faculty to understand that if you don't help me I'll

think an elephant is a snake: a terrible mistake to make.

Strong engagement between student life and faculty members helps these groups to "see the elephant" and better respond to and address the academic, interpersonal, and social challenges that students face during their time at Lyon. As explicated above, these findings suggest that Lyon would benefit from incentivizing and rewarding faculty engagement with students, as it is a determining factor in their ability to integrate and persist. When students see faculty (and in many cases staff) as champions for their success, they are more likely to engage in socially meaningful activities and more likely to remain enrolled. A third-year student summed it up expertly, sharing: "These professors and even some of the staff, they get really involved and … invested in you as a person beyond just, 'you're some kid going to my school.' They actually care about us being successful as students and growing as people."

FINDING. Lyon's academic rigor is simultaneously a source of pride and struggle for students and those who support them.

Lyon's academic reputation and rigorous classroom expectations emerged as a theme in almost every interview across campus constituencies. Students, staff, faculty, administrators,

and coaches all report that at Lyon, the narrative is that a student's identity as a scholar comes

first. Though students' reasons for choosing Lyon - including affinity groups, athletics, and the

arts - varied widely, academic rigor is highly valued on campus. As one coach told us, the

message is clear: they, like staff and faculty, are "here to help [students] get a degree,"

suggesting that staff highly value students, an indication of Lyon's commitment to the welfare

of its students (Braxton et al., 2014).

Lyon's academic rigor is a key enrollment factor for students, and especially for those

interested in the Honors Program and applying to medical school. As one student shared,

Originally when I was thinking about going, the biggest thing that drew me into Lyon

was their academic rigor….It kind of produced really solid results in terms of acceptance

rates in med school, which is the track I want to go on….That's what drew me in. And

then I was offered an opportunity to be part of their first-year Honors students and

that's definitely what sealed the deal for me.

Another student echoed this decision, citing statistics she had heard about admission to

graduate programs: "I did pick Lyon also because of their academic strengths. They had a 98

percent [acceptance] rate for medical school and any professional school. So I kind of thought

that was a really good thing as well." These quotes indicate that students perceive Lyon to have

a high level of academic rigor; moreover, students foresee Lyon's academic strength will aid

their post-graduation career plans, suggesting that they anticipate successful completion of

college. Such perceptions support Braxton and Francis's (2018) finding that academic rigor in

courses has a positive indirect influence on persistence in both residential and commuter

colleges and universities.

Yet with high academic expectations also comes anxiety and frustration for students and for those who teach and lead them. As one student told us,

At least from my experience, if you're a Lyon student you're expected to do well, which is I think it's a good thing, but also the hardest thing: to do your work on time, for it to be well written, for it to be - maybe not correct, but at least you're supposed to have your full effort and to be on time. You're supposed to be close to a model student. That might be the hardest expectation.

Another student added, "I think it's the combination of the pressure to maintain a certain GPA and the required attendance policy together that really puts stress on students and kind of drives them away." Students feeling the strain of academic expectations are well aware that there are other available options. If Lyon is too difficult, they might look to transfer elsewhere. As one academic support personnel described it to us, students will just say, "This is kicking my butt. I can go down the road at home and I won't have to deal with all of this." Other students reported that faculty don't seem to communicate with one another around workloads and timing of assignments, compounding the academic pressure students experience. "It was just really challenging," one academically high-performing student told us. "I feel like all my classes were just back and forth. Professors don't really care that you have three other labs, and they just add on work. Like a lot more work." While students value Lyon's strong academic reputation, they also experience the negative effects of such high expectations within and beyond the classroom.

Even as Lyon wrestles with how to support those who struggle with its academic rigor, it must simultaneously provide sufficient challenge for those who excel. "I'm feeling like we do a poor job of retaining really rock star academic students," one administrator told us.

[I mean] those people that are really a profile positive. Our average is maybe a 24-25 ACT and about a 3.5 GPA. So those kids that are 28 or probably, you know, 32, but maybe even 28 to 32 plus. I feel like we don't always do a great job with *those* super high achieving students.

Other top academic students come to Lyon and discover that it is not as challenging as they were led to believe. Several high-performing students reported that classes "were easier than [they] thought they'd be" and used the time as an opportunity to get more involved in campus activities.

Among faculty, staff, and students with long-standing ties to Lyon (as children or family members of alumni), we observed that Lyon's changing student demographics correlate - whether unfairly or not - to changing perceptions of the college's academic standards. We discuss this finding and its relation to student demographics in greater detail below. But the perception that the Lyon "standard" might be changing has triggered a variety of responses from Lyon's constituencies, including (1) advocating for rigorously maintaining a perceived standard; (2) acknowledging that such a standard does not exist (or is a moving target), or (3) openly changing the standard, all in support of who Lyon seeks to become.

FINDING: Lyon's affinity-based model is a double-edged sword with both positive and negative impacts on student institutional commitment and persistence.

Lyon's new model of attracting students sits at the nexus of community engagement, recruitment, and retention work. The model, known as affinity recruitment, aims to help students better integrate by creating meaningful academic and co-curricular connections before they even arrive on campus. By matching prospective and incoming students with affinity groups (academic affinities based on intended major or disciplinary area of interest and co-curricular affinities based on athletic, artistic, or social proclivities), administrators at Lyon believe they are improving student's chances of successfully integrating and persisting to graduation. While Lyon has experienced some very tangible 'wins' associated with the onset of affinity recruitment and mentoring, our team found the affinity-based model to be a double-edged sword with both positive and challenging impacts on student's institutional commitment and their persistence.

Our team unearthed three consequential findings around affinity and its role in the student persistence puzzle at Lyon: 1) Student athletes experience particular challenges in their initial commitment to the goal of graduation; 2) students' primary attachment is to their affinity and not necessarily to Lyon; and 3) academic rigor at Lyon competes with the affinity model. Taken together, these three findings illustrate some of the challenging and unintended impacts of the affinity model, namely for student athletes, who comprise a large portion of the population at Lyon. Though affinity was initially conceptualized as a way to increase communal potential--or the extent to which student's perceive that a subgroup of peers exists that share values, beliefs, and goals similar to their own-- among students, its unintended consequences merit deeper exploration.

FINDING: Student athletes experience particular challenges in their initial commitment to the goal of graduation.

Student athletes make-up roughly 60% of the student population at Lyon. The precipitous rise in the percentage of student-athletes on campus is attributable to Lyon's aggressive efforts to expand intercollegiate athletics on campus, particularly through the addition of a football team. In conversations with several key administrators, we learned that the increased attention around athletics was first conceptualized at Lyon as a way for the school to bolster enrollment through the development of new recruitment channels and opportunities for students hoping to compete, increase Lyon's national and regional visibility, and promote school allegiance and spirit. In the program's inaugural year on campus in 2015, it appears evident that the expansion of athletics has helped to forestall deeper enrollment declines. As previously discussed, another perhaps unintended but positive consequence of premiering football was its role in increasing the enrollment of historically underrepresented minorities-- primarily Black students.

Yet its impact on raising the institutional profile and students' allegiance to the school is still under question. Given our analysis of the community's use of 'athlete' as a proxy for historically underrepresented minorities, it is particularly important for administrators at Lyon to determine the ways in which student athletes (and, overwhelmingly, students of color) commit to both the institution and the ultimate goal of graduation. Our team found that poor initial commitment from student-athletes to the goal of graduation limits their successful academic and social integration.

Student-athletes report a number of challenges at Lyon. While the affinity model may help student-athletes initially feel very connected and experience high levels of communal potential, many athletes we interviewed expressed frustration at the combined challenges of Lyon's academics, social scene, cost, and the demands of their sport. One student-athlete put it this way:

> You just want to be an athlete, do your thing and then just, like, head out. Yeah, it's nice to be able to like play college sports and, like, get our degree. But when we show up to campus, and there's three essays a week, and that's just for one class alone? You have, like, 100 words you will find you have to define. You have to read 300 pages in a book every, like, month for different classes. You just get so far behind because you're spending four hours on a field after class plus an hour in the weight room.

Another interviewee echoed this sentiment:

> So if you're a high school kid, and your [friends at other schools] are having fun on a weekend, and you're at Lyon College and you're sitting in your dorm room and you're playing Madden, you know, how are you gonna feel? So when you throw that in coupled with the high price and a high academics and oh, by the way, you came here to play football or your sport and now you won't play it, because you weren't quite ready yet, well then, that's what happens around here.

It's clear that the demands facing student-athletes create unique pressures on that population. As we heard from one senior administrator, "we get a lot of athletes every year, and they just don't want to play anymore….And that's fair….The school's definitely difficult, and the academics are challenging." For those recruited on the basis of affinity, not academics, ensuring

that student-athletes have robust academic and psychological support may help to address the next challenge we address related to affinity binding below.

FINDING: Students' primary affinity is generally not towards Lyon, but toward their sports team, major, or social organizations.

As powerful as the affinity model can be, its downside is that the affinity may not transfer to the institution. As President King rightly observed, "if your interest in being here never changes from being [just one thing], that anything that gets in the way of you're moving down that goal...is going to be a reason for you not to be here. So that's the trick." Our interviews revealed that students' attachments are often to the affinity more than the institution. There are some students, one staff member shared,

> who will tell me up front, I'm only here because I can play what I love just a little bit longer. And what happens when you don't play? And what happens when you get hurt, which happens. And then we get "athlete no longer on team." And then we get "withdrawing," whether it's medical or whatever reason. That's always going to show up in the first year. Because that's when they encounter each other and the reality of Lyon.

When students choose Lyon for a singular affinity, it affects their initial commitment to the institution. The ability to excel in their sport or activity can lead students toward greater subsequent commitment to the college. But for those who do not, a singular affinity provides an easy opportunity for separation. As one interviewee told us, if [the affinity] "wasn't cutting it for them...just to come to school was too much money."

To help strengthen institutional engagement and broaden social integration, many campus stakeholders are actively working to bind students to more than one affinity. Can

athletes participate in a second sport during the off-season? Are student organization participants also interested in working as supplemental instructors (SI)? It is still too early to tell if this "double-binding" will strengthen institutional commitment. Other faculty and staff are actively working to underscore the importance of getting the degree, not just the student's experience of success in the area of their affinity. "Get a degree while you're at it," a support services staff member advises students who say they chose Lyon for a particular affinity. But the challenge of convincing students the investment and expense is worth it - with or without the affinity attached - remains a challenge.

FINDING: Lyon's academic rigor competes with the affinity model.

We previously discussed the sentiment on campus that academics come first at Lyon. Yet the intentional recruitment of students along lines of affinity has created competition for students' time and energy. A recurring theme in our interviews - among faculty, staff, and students alike - was frustration around class attendance policies. Students, and particularly athletes, find Lyon's attendance policies too punitive. "It's the hardest thing about being a Lyon student" one student shared. "We cannot miss more than four weeks of a class," another echoed, "which sounds like a lot. But if you have a class that's only meeting Tuesday, Thursday...it's not as many as you would think it would be. It's very easy to meet that deadline. And when you meet that deadline, they drop you from the course." On the other hand, faculty argue they need the attendance policies to ensure a minimum level of course engagement. When students invest too much in their affinity at the expense of academics, an academic advisor opined, "they're always playing catch-up. And eventually that catches up with them."

While faculty and administrators may rightly be frustrated when they perceive students (and sometimes coaches) do not place classroom expectations first for students, they are not always considering the degree to which robust co-curricular involvement can help strengthen students' commitment to Lyon and their likelihood of persisting to graduation. Such social interaction, whether on the baseball field or in a campus ministry, is glue for those who have it; for those who do not, it can be the tipping point toward departure. And students' perceptions of campus support for their affinity have implications for future recruitment. As at least two interviewees succinctly summarized to us, "If you're recruiting on the basis of affinity [e.g. athletics] you can't then penalize students on the basis of affinity." As Lyon refines its affinity-based recruitment model, the interplay between "scholar first" and affinity-centered will demand carefully balancing the academic outcomes and co-curricular experiences that together promote student success.

FINDING: Strengthening communal potential may help to retain Lyon students at risk for departure.

Communal potential, or the perceived shared set of values, goals, and beliefs, wields statistically significant positive influence on the psychosocial engagement of first-year students in residential colleges and universities (Braxton et al., 2014). We have previously discussed ability to pay and proactive social adjustment, factors that influence student perceptions of the communal potential of their college of choice. First-year orientation and a sense of community within the residential college experience are two additional factors posited by Braxton et al. (2014) to contribute to communal potential. Pre-enrollment and Orientation activities help both to strengthen students' initial institutional commitment and may also affect the degree to

which students perceive similarities and a sense of connection to other students.

The revised theory of student persistence found that the more students perceived first-year orientation programs as adequate preparation for success in their institution's social environment, the greater their perceived level of communal potential. Conversely, when students have negative perceptions of their social experience (such as prejudice or racial discrimination) it weakens communal potential and students' sense of institutional commitment. Therefore, Orientation is an opportunity to help connect students to one another and for Lyon to demonstrate the kind of community it wants to be.

We found that students' desire to stay at Lyon stems, in part, from their ability to adapt to Lyon's campus life and culture. "I mentor [a younger student]," one Honors College student told us,

> and I'll help out with other mentors and their mentees if I just happen to be close with them or something like that. And this one girl really sticks out to me....She is, like, super on the fence about coming back next year. And her biggest reasoning is, it's just not the college experience that I want. But she really enjoys Lyon academically. So I feel like it's a big battle between if I'm willing to give up this picture of what I want for Lyon's academics. And I feel like Lyon's academics is really their selling point.

Another student put it this way:

> Most of the kids that [leave Lyon]...they're just students, all they do is go to class. That's what they do. They sit around and complain that there's nothing to do on campus. The ones that get really involved around campus, they tend to stick. So, when my regular friends leave - when I say regular meaning kids that don't play a sport, that aren't

involved in any clubs, things like that - when, when the kids that aren't involved leave, that's where my mind sees it. They're just not involved. So maybe they aren't happy here.

By contrast, students with robust curricular and/or co-curricular involvement are more committed to Lyon and to graduating. Students who were highly involved on campus through more than one activity, whether through Greek life, or student government, athletics, or student organizations, spent more time on campus, engaged more often with peers, and reported more positive feelings about their Lyon experience, regardless of whether or not they were a residential or commuter student. "The basketball team doesn't just say, like, 'Okay, see you later,' and cut you," we heard in one interview.

They're still very engaged with one another on and off the basketball team....I really don't know what they do to build that relationship as a team, but whatever they do, it's working. Yeah, they're staying connected. Yeah, being able to integrate into our community in a way that keeps them connected.

Commentary from interviewed students indirectly punctuates the lofty role psychosocial engagement and communal potential play in piecing together the student departure puzzle. At Lyon, students who find subgroups of like-minded individuals present on campus and who engage in meaningful co-curricular activities are, overall, more socially integrated and more likely to persist (Braxton et al., 2014). In this way, Lyon's athletics and co-curricular programs can help to present opportunities for engagement and model the behaviors that help students to identify with and attach importance to their community at Lyon (Berger, 1997).

Summary of Findings for Research Question #2:

- Meaningful engagement with faculty is a predictor for student persistence.

- Lyon's academic rigor is simultaneously a source of pride and struggle for students and those who support them.

- Lyon's affinity-based model is a double-edged sword with both positive and negative impacts on student institutional commitment and persistence.

- Strengthening communal potential may help to retain Lyon students at risk for departure.

Discussion

Research Question I focused our attention on the academic, social, and environmental factors that help to support student success at Lyon. Through our interviews and observations, we examined the degree to which Lyon current academic programs and support services, student life and engagement opportunities, and campus and town climate are working in support of, or against Lyon's aims to increase enrollment and student persistence to graduation.

Our findings suggest that Lyon's engaged faculty and commitment to student learning are highly motivating factors for the students who experience it first-hand. Students who were "not sure how long [they] would stay here, or if [they] would transfer" chose to remain because they enjoyed getting to know the professors, and the sense of academic commitment they experienced through those connections. Having the support of professors also emerged as an influential factor for social integration, though students still largely cited "having the support of my friends" as the most significant factor influencing their ability to succeed at Lyon. As one student told us,

> the people that I was friends with in high school...were all 100 times smarter than me, and it absolutely pushed me to do better in my academics because I wanted to be more like them. And then, you know, coming to school here, I see the exact same thing. The people I'm friends with are so successful academically, and it just pushes me to do better and better so that I can you know keep up with them, honestly.

We were particularly touched to see the way the campus community helps to form and transform students' sense of themselves and how they fit into the campus fabric. As one student told us,

> In high school, I was a real shy kid, so if you weren't my teammate or you didn't sit in the desk right next to me, I probably didn't talk to you. In college, I talk to everybody, so I've really broken out of that shell. When I see kids that remind me of what I was like in high school, I talk to them, I force them to talk to me. Now if they don't want to keep the conversation going, then alright, fair enough, but I talk to everybody.

A classmate who is actively engaged on campus echoed this sentiment, indicating that she's

> really tried to affect the campus in a positive way, and not just make this experience about me, right? Because I could have come here and I could have done all my homework and made straight A's and, you know, been the perfect academic student, but that's not what I wanted to get out of it. I wanted to make sure that I can make the college the best that I could, in my limited time here, to make it better for students coming in.

Sentiments like these shine a light on the virtuous cycle of positive social integration and institutional commitment that strengthens students' own experiences and creates a higher likelihood of student success for those who follow them.

In its best version, the small feel of Lyon's campus fosters a close-knit sense of community. A student can "walk across campus and see and know most of the people I see….It's a very tight knit community. Everybody knows everybody" But the close quarters can also cause challenges. Another student echoed the same theme in a different key: "Everyone

knows everyone….If one person gets into an argument with another person then, you know, pretty much the entire campus knows about it. So it's definitely a weird dynamic for me having to actually think about that sort of thing." As Lyon considers the interplay between academic, social, and environmental factors influencing the student experience, we hope these findings can be used to better understand how Lyon might continue to strengthen support for students and address obstacles hindering student success.

Research Question II draws on Braxton et al.'s (2014) revised theory of student persistence to examine the student and institutional attributes that help to promote student success. As mentioned in the literature review, Braxton et al.'s (2014) revised theory punctuates the extent to which institutional commitment and resulting social integration are influential in a student's ability to persist.

We spoke at length in the discussion on Research Question I about the ways in which student-faculty engagement motivates students. Unsurprisingly, our qualitative findings related to Research Question II indicate that meaningful engagement with faculty is, in fact, a predictor for student persistence at Lyon. In our inquiry, faculty who are involved with students' lives in and outside of the classroom served as a proxy indicator for institutional commitment to student welfare, one of the key propositions in Braxton et al.'s (2014) revised model. An administrator we spoke with consistently emphasized the extremely supportive student-faculty relationships at Lyon. "Many of the professors - more here than any place I've ever worked - actually do things to accommodate the students." This high-level support from faculty is directly associated with several of the six factors in Braxton et al.'s (2014) model that support social integration-- namely, commitment to student welfare, communal potential, and

institutional integrity. We found that classrooms at Lyon are one key site where students begin to develop their perceptions around community membership, the extent to which the college cares about their well-being, and the institution's ability to deliver on its promises.

Affinity recruitment is one tool that Lyon has deployed to help students more adequately socially integrate. Lyon's affinity model has clear parallels to Braxton et al.'s (2014) descriptions of proactive social adjustment and psychosocial engagement-- two factors that support student's holistic social integration. While Braxton et al. (2014) failed to find empirical support for the influence of proactive social adjustment on social integration, they did find that it positively affects the communal potential of students, which in turn, positively affects students' psychosocial engagement. Our findings indicate that while Lyon's use of an affinity model has positively impacted students' ability to find co-curricular or social connection even before they arrive to campus, the increased efforts around developing athletic programs, recruiting student athletes, and binding students to particular affinities may undermine Lyon's desire to breed initial and long-term institutional commitment among its student population. One staff member spoke eloquently about some challenges with the affinity model:

> [Affinity] is good in some ways, and it is also a challenge in some ways. Obviously admissions is very focused on how we *get* the students here. And that's our job - we need to get our processes to figure out how we *keep* those students here...,.That said, one of the things that happens, I think unintentionally, that goes along with affinity recruiting, is you recruit somebody who, let's say, is a football player, right? They see themselves as a football player who plays at Lyon College. Versus, I am a Lyon College student who happens to play football.

As this staff member noted, the affinity model has very clear benefits and challenges. We were thrilled to hear from faculty, staff, and administrators about the numerous ways in which affinity helped to diversify the campus community and strengthen student recruitment at Lyon. However, it was clear that for many students who conceptualize their communal potential at Lyon around one very specific affinity, there exists a strong relationship between student and group and a much more fragile relationship between student and Lyon. Many students reported feeling strong ties to their athletic group, club, or academics. Much fewer students reported feeling strong ties to Lyon broadly.

When asked about campus traditions, experiences, or community events that bound them to Lyon specifically, students, faculty, and staff were at a loss to describe any kind of overarching or uniting experience that signaled anticipation around communal membership before matriculation or concretized community membership once on-campus. This issue holds particular weight for those working in retention and student success initiatives as well as university advancement. Our findings around Research Question II indicate positive returns around Lyon's investment in recruiting and retaining dedicated, world-class faculty members. However, these findings also suggest that Lyon could benefit from a deeper exploration of how to create shared experiences for community members that punctuate the college's commitment to student welfare by first binding them to the Lyon community and treating their co-curricular affinity secondarily. While affinity can help create a group for specific students, it does not necessarily create a campus-wide culture for Lyon College. Affinity can be an important tool; however, intentional mechanisms for integration are needed in order to

compensate for the loss of a broad unifying sense of Lyon and the affinity groups that create fragmentation.

Each of the factors related to the research questions above weave together to form the fabric of students' experience at Lyon, and each thread that breaks or strains impacts the others. As one administrator who tries to offer wide-ranging student support said to us, "It's whack-a-mole. You try to save one thing and something else rears its ugly head." Our conversations with Lyon students paint a picture of a school that is working through deep questions of identity and its future. A refrain that echoed throughout our conversations with students, faculty, and staff asked, "Who is the school that we are versus who the faculty believe we are?" Lyon College has a proud history as an academically rigorous, learner-focused liberal arts college. In a season of shifting enrollments toward heavily dominant majors in the physical and social sciences, is Lyon still truly a liberal arts college?

"Who is the school that we are versus who the faculty believe we are?"

We argue that the answer is yes, in large part because Lyon is still structured to require students to pursue the broad disciplinary exploration that is characteristic of a liberal arts college. As one student reflected with gratitude, "I do enjoy that they make us take a broad set of classes as a requirement because there's, you know, a lot of questions of, Hey, I don't know if I really want this to be my major. And so getting to dip our foot into all of the different fields was really nice." President King's ongoing commitment to the school's core identity as a liberal arts college is evident to us, as well. As he wisely shared in our interview:

You'll get the detractors [about a liberal arts education] but do you really want a high

school teacher who has no exposure to the liberal arts? I don't. Do you really want a

business leader who's had no exposure to liberal education? No. Because, I mean, moral

hazard doesn't mean anything if you have no morals.

As Lyon seeks to differentiate itself from the hundreds of liberal arts colleges in the United

States, it is wise to identify what claims can be made that guide its responses and choices in the

marketplace.

Yet key stakeholders acknowledged the tension between remaining true to Lyon's

historical identity and adapting to provide the majors and career pathways that will recruit and

retain the range of students needed to keep the college's doors open. With the state of

Arkansas unable to produce the number of high school graduates needed to fill the seats in its

colleges and universities, Lyon is looking not only to attract students who might traditionally

have pursued a small-town, liberal arts college experience but to entice those who otherwise

might not. The addition of an Exercise Science major is just such a move in that direction. Some

members of the faculty and staff think it could expand further. "We don't have Criminal Justice.

We don't have Communications. We aren't going to get big-time Education majors due to our

cost. There's programs that we don't have....They aren't all going to be doctors and lawyers, is

what I'm trying to say."

These decisions about how Lyon will market itself to prospective students must

necessarily also take a variety of other factors, including the influence of its competitor

institutions and the financial variables facing its students, into continued consideration. As

many of our conversation partners acknowledged, most of the time is not competing against

other selective, liberal arts colleges. Rather, its students choose Lyon over Arkansas' public colleges and universities, often at significant - if more perceived than actual - financial cost. "I mean, we've all got high sticker prices…," a senior administrator told us. "So, you know, that sticker price again, scares people off. But that's why the scholarships are on there and that's why, even the scholarships may...still leaves them their net cost, which is still shocking to many of them." For Arkansas residents concerned about their academic performance, the risks of dropping below a 2.5 GPA equates to losing the Arkansas Challenge (lottery) scholarship.

> You have to maintain a 2.5 GPA at the end of the year to retain that scholarship. And so for Arkansas residents that's important. And if you look at our average GPA of our freshman class it's right around 2.5, which means half of our students who come in, suddenly if they're Arkansas residents, don't qualify for that anymore, and they talk to their friends and….Gee, you know, go to [Arkansas State University] because then you won't lose your scholarship.

Some students who are particularly at risk academically may find themselves better off financially if they leave Lyon sooner, yet the college is de-incentivized to urge students toward options that reduce student debt.

Recommendations

As Braxton et al. (2014) have observed, the challenges around college student persistence requires institutional action that employs multiple levers of action. The range of policy changes and practices suggested below include recommendations that may have both direct and indirect influence on improving Lyon's graduation rates.

RQ 1: To what extent do academic, social, and environmental factors influence student persistence and retention at Lyon College?

Recommendation 1: Address the student-identified issues impacting students' level of engagement on campus.

Students are savvy consumers. We experienced Lyon students to be quite perceptive about the strengths and challenges of the campus climate. When we asked if students wanted to know more about the research we were conducting, one student replied, "When your retention rates, you know, aren't great - and I don't even know where Lyon's is right now - but you can't hide it. When you only have 700 students to begin with, if you lose 150, I mean, that's a pretty huge percentage, percentage wise. Yeah. A huge impact on campus." We also experienced students as willing collaborators, ready to partner with the administration to strengthen opportunities to deepen student engagement on campus. The rapid demographic transitions at Lyon suggest that this may be a moment to undertake a campus climate survey, in which students can share their detailed perceptions and also imagine ways to be part of the solution.

Faculty efforts to encourage more than one affinity among students also has potential to positively impact all students, not only the athletes for whom the danger of a single-sport affinity is already known to senior administration. Braxton et al,'s (2014) recommendations for residential colleges undergird our own recommendations for Lyon. The authors note the critical importance of institutions in fully recognizing the role of faculty members in student persistence (Braxton et al., 2014). We spoke earlier about the ways in which faculty members can directly and indirectly influence student perceptions of institutional commitment to their welfare and to institutional integrity. As such, our research team supports Braxton et al's (2014) assertion, and we recommend that administrators more explicitly support faculty/student connection by developing responsive policies in faculty selection processes, new faculty orientation, and the faculty reward system that support student persistence at Lyon. These policies can include developing indices to gauge the extent to which faculty candidates place a high value on students and respect them as individuals, discussing the pedagogical role of faculty in carrying out institutional commitment to students during faculty orientation, and rewarding those faculty members who make choices in their teaching that contribute to student growth and development (Braxton et al., 2014, p. 44-45).

We also encourage faculty to model the behaviors they wish to see in students. Students take note when faculty attend special lectures and events on campus. They notice with appreciation when faculty make the effort to be better connected. Such efforts signal the college's investment in students and help to solidify students' social integration and subsequent institutional commitment.

Recommendation 2: Sell the Lyon story clearly and accurately.

Lyon's online and print marketing materials should accurately reflect the rigorous academic program as well as (a) student perceptions of the academic program, (b) faculty expectations of student academic performance, (c) institutional expectations around academics and extracurricular activities, such as athletics, and (d) student outcomes (Braxton et al., 2014). We recall here the interviewees who shared that they "did pick Lyon ...because of their academic strengths. They had a 98 percent rate for medical school and any professional school. So I kind of thought that was a really good thing as well." Such comments indicate that students have absorbed sometimes inaccurate depictions or carry unrealistic expectations for post-graduation outcomes. As Lyon seeks to showcase its strengths, we recommend the college also consider the potential impact on students' subsequent institutional commitment when and if their experience does not conform to their expectations.

Substantial investments in Lyon's web platform have created an engaging, visually-dynamic site that tells a compelling story of Lyon's unique value proposition. Those responsible are to be commended for helping to distinguish Lyon in the marketplace and telling the story of its students and graduates. We encourage the college to continue to develop graphics and key indicators that distinguish Lyon's particular value as a private, high-performing liberal arts college, such as comparing average net cost alongside post-graduation placement outcomes in comparison to key competitors. We also recommend featuring stories that share how the growth of athletics is changing the culture of the campus, or stories that showcase new or emerging college traditions appropriate to Lyon's more diverse campus body. In their test of the revised theory of student departure, Braxton et al. (2014) found that students who enroll

with a positive affinity for the college of matriculation are more likely to stay enrolled. A student's initial institutional commitment positively affects their persistence, but also has a pervasive impact on their subsequent commitment to the institution at the end of the first year (Braxton et al., 2014, p. 48). Moreover, Braxton et al. (2014) asserts that a student who has a strong commitment to the institution upon enrolling is more likely to perceive that the college or university is committed to the welfare of its students and that the institution acts with integrity. Such strategies around intentional marketing and storytelling can highlight Lyon's strengths and help to foster an authentically diverse campus climate, while ensuring that the college recruits students who will see themselves as valued members of the campus community.

Recommendation 3: Review and refine peer and aspirant pool.

Our qualitative analysis revealed inconsistency in how Lyon's faculty and staff read the higher education marketplace in which they compete for students. Some consider highly selective, regional liberal arts colleges, such as Hendrix College and Rhodes College, as Lyon's benchmarking peers for enrollment and brand reputation. Others cite the state's public institutions as the primary competitors for recruitment, naming primarily public two- and four-year colleges within a 150 mile radius of Batesville. Senior administrators and admissions officers name a mixture of two, making it difficult to assess appropriate and consistent benchmarks.

Defining Lyon's peer and aspirant pool is further complicated by what standard is being compared. When the measures compare institutional attributes - size of student body, level of faculty engagement, fields of study - Lyon does well to consider similarly situated small

colleges. But when the measures compare student attributes - geographic context, ability to pay, high school, and other schools to which they have also applied - Arkansas' public colleges and universities become much more salient. As one administrator shared, for example, "we have a very large number of first generation students….So by comparing ourselves to, let's say, Rhodes, we're probably not doing ourselves any favors in regard to our demographic inputs." More appropriate benchmarks would include institutions with similar numbers of first generation students, or the institutions to which Lyon students are transferring when they attrite.

The more clarity Lyon has about the kind of institution it wishes to be, and the type of student it seeks to recruit, the easier it will be to establish a well-defined peer and aspirant pool within its "market niche." Currently, for example, enrollment challenges are leading Lyon to expand its traditional "liberal arts" offerings into new majors that better fit prospective student interests and regional demand. We could imagine such a path leading Lyon further into health science specialties, such as adding a Bachelor of Science in Nursing program or establishing 3-2 arrangements with other schools of nursing, that would align with professional growth projections and industry needs for the state (Zippia, 2019). Such a move might position Lyon to more aggressively compete against regional, public institutions but would come at significant cost materially and to its liberal arts identity. Yet with demographic research predicting a drop-off of 18-25 year olds around 2025 (WICHE, 2017), and an already insufficient number of graduates in the state of Arkansas to fill the seats in its institutions of higher education, such decisions may be required.

Research Question #2: What are the student and institutional attributes that help to promote student success?

Recommendation 1: Recruit and enroll students who are likely to persist.

In the past five years, Lyon has witnessed five enrollment management directors move through its doors. The high level of turnover has left significant challenges for current Executive VP Matt Crisman, who has sought to stabilize over-leveraged financial aid dollars, reimagine Lyon's recruitment strategy, and rebrand the college. Under his leadership, Lyon has implemented a new strategic enrollment management (SEM) system, which seeks to target (1) prospective students and applicants who are most likely to enroll, (2) populations they wish to increase on campus, and (3) students who are likely to enroll despite lower than average financial aid awards. It is too early to know whether these data and matrices will be sufficient to bolster Lyon's enrollments and curb student departure. Careful ongoing analysis of recruitment pipelines, messaging to prospective students, and refinements to the predictive model over the next several years will help reinforce an optimized enrollment management strategy.

We reiterate that strong initial commitment to the institution has been demonstrated to positively impact subsequent institutional commitment at the end of the first year (Braxton et al., 2014). This includes targeted recruitment of students who are likely to have more than one affinity to campus, as opposed to those who enroll primarily for a single sport or activity. Our findings show that students who have multiple affinities on campus are less likely to be bored or dissatisfied with their Lyon experience. This process may require decoupling the current recruitment incentives for coaches. If coaches' annual performance is measured, in part, on their ability to bring in students, it discourages them from working with prospective student-

athletes to identify whether there are also other points of "fit" with the college beyond athletics. As one Lyon administrator who is *not* affiliated with athletics put it, "If a coach has a gut feeling [that] this might not be the best thing for this student, or this might not be the best thing for Lyon, I think they still bring them in...If it were just pressure, then the impact...is more emotional, but it's tied to their money and their continuity at Lyon." Coaches must be part of a broader recruitment strategy based on institutional fit across a variety of measures.

We are mindful, finally, that focusing recruitment on students who are likely to persist can have unfortunate consequences when it reinforces homogeneous student populations and restricts diversity. Lyon's most historically "successful" population of students - white, middle- and upper-middle class - is neither sustainable nor desirable for Lyon's overall institutional health. At the same time, over-recruiting populations with lower likelihood of persistence (such as intentionally recruiting more football players than will have opportunity to play) sets the stage for attrition. As it seeks to balance its recruitment strategy, we affirm Lyon's efforts to reinforce pre-enrollment institutional commitment through frequent communication with newly admitted students, opportunities to visit campus and participate in campus events, and early engagement with faculty and alumni (Braxton et al., 2014, p. 48).

Recommendation 2: Create and sustain thick and coherent advising webs across years.

Because Lyon is more selective than its competitor institutions, the pressure on the college to retain students is even greater. Continued investment in early intervention efforts will be essential to success. Our team affirms Braxton et al.'s (2014) recommendation for the enactment of the strategic retention initiative (Brier, 1999; Brier, Hirschy, and Braxton, 2008) as a way to both create an early alert and to communicate to students the high value the

institution places on their growth and development. This initiative includes maintaining direct, one-on-one contact with first-year students periodically at critical junctures during the fall and spring terms in order to appropriately connect struggling students with institutional resources when necessary. Lyon College has begun to see some anecdotal success with the addition of professional first-year advisors. Quality advising structures supplement classroom instruction and support the academic and social needs of students that are clearly paying dividends. Coupling risk-predictive advising as explained above by Braxton et al (2014) (e.g. early alert systems) with holistic monitoring and support for upper-class students is needed to increase graduation rates and yield the most impact from its strategic advising investments.

As noted previously, a lack of clarity and consistency between students, first year advisors, and pre-professional/upperclass student advisors is a source of confusion and frustration for all involved. We heard from more than one student who believed they were studying Physical Education at Lyon despite its absence on the list of majors. Misinformation, as well as inaccurate or incomplete guidance from faculty advisors, can have costly implications for students who must retake courses or who discover that courses they'd taken prior to Lyon will not apply. Faculty must see themselves as integral to student retention. We encourage Lyon to consider aligning faculty rewards and incentives to encourage positive behaviors for strong advising, as well as expanding the professional advising program to include upperclass students. Develop bridges between advisors across disciplines so that students who change course mid-degree (such as those who decide to drop out of the Pre-Med program) have scaffolding to support the transition to another field.

Moreover, in planning and course development, faculty and department chairs must be

proactive in ensuring that courses are appropriately sequenced and available in the timing students need them. If Exercise Science is increasingly in demand, are sufficient seats available in those courses to accommodate the growing number of students? Data-informed planning will help to ensure that course enrollment follows virtuous cycles in which students report positive experiences to the classes behind them, as well as encouraging efficient, fiscally-wise course trajectories for students.

Recommendation 3: Strengthen pathways for Student Transfers to Lyon.

Our research found that the experience of transfer students at Lyon is qualitatively different than that of traditionally enrolled students. In part, this may be because the broad safety nets that are put in place for true freshmen, including professional advising, have a meaningful impact on 1st-to-2nd year retention but are less efficacious in serving the needs of the transfer population (Jenkins & Fink, 2015). As we found in our interviews, "students spend valuable time and money on courses only to find out credits do not fully transfer, resulting in their having to retake course work. The lack of a coherent, navigable, and transparent transfer process both increases the cost and time needed to earn a degree and diminishes the likelihood of completion" (USDE College Completion Toolkit, 2011).

Two in three postsecondary education students attend two or more institutions of higher education before obtaining a baccalaureate degree. One in five attends three or more institutions (USDE College Completion Toolkit, 2011). While the transfer student population at Lyon may be relatively small, mapping transfer credits from other institutions is a source of frustration and appears to weaken students' institutional commitment. One transfer student relayed their interpretation of Lyon's transfer policy in this way:

Unless it's going to be like your basic like college algebra, biology, chemistry, it's not going to [transfer] because we're a liberal arts school. It doesn't transfer stuff in, and it doesn't transfer stuff out. We'll get we'll get guys who come in with like 70 credits as a [Junior College] transfer, and they're down to like 33 [credits].

A Lyon staff member who works with transfer students admitted that it's an area for growth. "We're not the college who has traditionally done the transfer everything very well," they told us. "When I first started working with advising several years ago, it was clear that the transfers kind of got the short shrift because all of our efforts were focused on first years. And transfers you're like, Hey, good to see you. Good luck with that."

In strengthening the experience of transfer students at Lyon, a primary goal is to ensure that transfer pathways are well-mapped and easy to understand. This includes formalizing advising pathways for students transferring credit to Lyon after departing other institutions, as well as currently enrolled students bringing in credits earned simultaneously (e.g. over a summer) elsewhere. Consider articulation agreements with regional institutions, such as UACCB, that mark clear frameworks for students who might wish to cross-enroll or transfer to a four-year institution.

Recommendation 4: Carefully track outcomes through self-reported data and exit interviews.

Under the current Institutional Research office, Lyon has made substantial progress in gathering and tracking data on its students and programs. Andrew English's office is to be commended on the scope and extent of its analysis operating with a very lean staff. Acknowledging the limitations of our "autopsy" study in not being able to talk with students who elected not to remain at Lyon, we recommend a longitudinal, mixed methods study to

track one or more cohorts of students throughout their time at Lyon, including the post-Lyon pathways chosen by students who attrite.

Braxton et al. (2014) characterize Institutional Research Offices as a critical component of enrollment management. As such, they recommend the execution of such analytical studies as assessments of the campus environment focused on student perceptions of institutional integrity, commitment of the institution to student welfare, and prejudice and racial discrimination (Braxton et al., 2014). They highlight the importance of these foci of assessment as critical to the complete campus-level understanding of student persistence in residential colleges and universities. We also recommend that Lyon's Institutional Research team review and revise its current tracking of student departure and exit coding. While Lyon's current protocol includes opportunities for the college to track specific reasons for student departure (even if incomplete or one of a constellation of factors), it's seldom used. Recognizing that some students leave without notice, we were nevertheless chagrined to discover how much missing data undermined the ability to understand how students narrate their decision to withdraw. Adding pre-departure indicator questions to advising sessions, much as a counselor might inquire about suicidal ideation or behavioral indicators as part of a regular protocol, might flag early at-risk signals that don't show up in academic performance alone. Mandating exit interviews to complete the student withdrawal process can also provide more accurate data and should include questions aimed at student integration factors named in the persistence theory literature. An annual review of National Student Clearinghouse data can complement exit data to determine if students who depart are transferring to other institutions or "cooling out" of higher education altogether.

Conclusion

The goal of this project was to assist Lyon in better understanding the reasons why some students depart, and others persist. In so doing, we have sought to capture the stories behind the variables, the qualitative dimensions that elucidate the numbers the college already knows. We examined existing data to see how it fit - or did not fit - with what we heard from faculty, students, and staff in our interviews. Putting these findings into conversation with the relevant research and theory allows us to make recommendations that we hope will shape policies and practices with high likelihood of encouraging student persistence.

Lyon College seeks to be an institution that fosters the critical, creative thought and ethical, spiritual growth that will prepare students for fulfilling personal and professional lives committed to lifelong learning and service. Like many small, liberal arts institutions, Lyon is working to stay relevant and solvent in a highly competitive enrollment landscape while remaining true to its mission. The invitation to participate in this research project, and the openness of the Lyon community in sharing its successes and failures with our team, is an indication of Lyon's commitment to actively support student success. It is our hope that this contribution toward that larger project will provide Lyon additional tools as it lives into the next chapter of its storied history.

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Appendix A

Tables

Table 1. *Retention and Graduation Rates for Entering Fall Cohorts between 2004 and 2018*

Entrance Term	1st to 2nd Year Retention Rate	2nd to 3rd Year Retention Rate	1st to 3rd Year Persistence Rate	3rd to 4th Year Retention Rate	1st to 4th Year Persistence Rate	4 Year Graduation Rate	6 Year Graduation Rate
Fall 2004	75.18	64.15	48.23	91.18	43.97	45.39	52.48
Fall 2005	70.27	89.74	63.06	91.43	57.66	40.54	46.85
Fall 2006	64.06	87.80	56.25	91.67	51.56	43.75	50.00
Fall 2007	69.72	82.83	57.75	87.80	50.70	43.66	50.70
Fall 2008	62.39	86.76	54.13	89.83	48.62	43.12	47.71
Fall 2009	64.65	71.22	46.05	88.89	40.93	34.88	38.14
Fall 2010	60.10	72.13	43.35	90.91	39.41	30.54	38.92
Fall 2011	72.61	79.82	57.96	90.11	52.23	48.41	50.32
Fall 2012	69.81	84.68	59.12	88.30	52.20	45.28	49.69
Fall 2013	74.14	80.62	59.77	95.19	56.90	48.28	57.47
Fall 2014	64.29	75.93	48.81	91.87	44.84	36.90	
Fall 2015	65.88	75.54	49.76	85.71	42.65	36.02	
Fall 2016	61.50	73.98	45.50	84.62	38.50		
Fall 2017	71.05	85.19	60.53				
Fall 2018	67.91						

Table 2. *Missing Data Removed from Sample*

Variable	N	# Missing Values	Revised N	% Deleted Cases
Entrance Year	1050	3	1047	0.00%
Exit Reason	1050	13	1037	0.01%
Exit Date	1050	7	1043	0.01%
Total Cases	1050	23	1027	0.02%

Table 3. *Summary of t-Tests Comparing Athletes versus Non-Athletes on Semesters Completed and Career GPA*

	Athletes		Non-Athletes			
Variable	M	SD	M	SD	t	p
Semesters Completed	1.378	1.460	1.769	1.915	3.403	*0.001
Career GPA	2.017	0.932	2.066	1.063	0.730	0.4660

Note. *p<0.05

Table 4. *Summary of t-Tests Comparing Gender on Semesters Completed and Career GPA*

	Female		Male			
Variable	M	SD	M	SD	t	p
Semesters Completed	1.760	1.879	1.505	1.660	2.311	*0.021
Career GPA	2.209	1.000	1.898	1.013	4.955	*0.000

Note. *p<0.05

Table 5. *Summary of t-Tests Comparing Pell Eligibility on Semesters Completed and Career GPA*

	No		Yes			
Variable	M	SD	M	SD	t	p
Semesters Completed	1.437	1.623	1.788	1.877	-3.177	*0.002
Career GPA	2.178	1.026	1.940	0.999	3.753	*0.000

Note. *p<0.05

Table 6. *Correlations Between Measures*

Measure	Semesters Completed
Career GPA	0.2774

Note. *p<0.05

Table 7. *Crosstabulation of Entrance Term by Other Factors Influencing Departure*

Variable	χ2	df	p
Athlete Status	126.22	22	*0.00
Sports Team Affiliation	701.63	242	*0.00
Pell	38.94	22	*0.01
Gender	44.36	22	*0.00
State	1000.00	704	*0.00
Ethnic Group	220.22	132	*0.00
First Major	1100.00	594	*0.00
Second Major	351.18	374	0.80
Exit Reason	1000.00	330	*0.00
Exit Term	4900.00	484	*0.00

Note. *p<0.05

Table 8. *Crosstabulation of Exit Term by Other Factors Influencing Departure*

Variable	χ2	df	p
Athlete Status	91.55	22	*0.00
Sports Team Affiliation	655.59	242	*0.00
Pell	26.32	22.00	0.238
Gender	46.12	22	*0.00
State	1000.00	704	*0.00
Ethnic Group	148.40	132	0.16
First Major	664.15	594	*0.02
Second Major	502.74	374	*0.00
Exit Reason	1900.00	330	*0.00
Entrance Term	4900.00	484	*0.00

Note. *p<0.05

Table 9. *Crosstabulation of Exit Reason by Other Factors Influencing Departure*

Variable	χ2	df	p
Athlete Status	26.17	15	*0.04
Sports Team Affiliation	499.78	165	*0.00
Pell	16.38	15.00	0.36
Gender	15.74	15	0.40
State	1000.00	480	*0.00
Ethnic Group	73.63	90	0.90
First Major	493.64	405	*0.00
Second Major	270.66	255	0.24
Exit Term	1900.00	330	*0.00
Entrance Term	1000.00	330	*0.00

Note. *p<0.05

Table 10. *Crosstabulation of First Major by Other Factors Influencing Departure*

Variable	χ2	df	p
Athlete Status	58.70	27	*0.00
Sports Team Affiliation	289.15	297	0.62
Pell	45.55	27.00	*0.01
Gender	73.89	27	*0.00
State	590.47	864	1.00
Ethnic Group	142.38	162	0.86
Second Major	2200.00	459	*0.00
Exit Reason	493.64	405	*0.00
Exit Term	664.15	594	*0.02
Entrance Term	1100.00	594	*0.00

Note. *p<0.05

Table 11. *Crosstabulation of Second Major by Other Factors Influencing Departure*

Variable	χ2	df	p
Athlete Status	18.95	17	0.33
Sports Team Affiliation	603.76	187	*0.00
Pell	16.5428	17.00	0.49
Gender	28.04	17	*0.04
State	316.35	544	1.00
Ethnic Group	130.53	102	*0.03
First Major	2200.00	459	*0.00
Exit Reason	270.66	255	0.24
Exit Term	502.74	374	*0.00
Entrance Term	351.18	374	0.80

Note. *p<0.05

Table 12. *Crosstabulation of State by Other Factors Influencing Departure*

Variable	χ2	df	p
Athlete Status	343.42	32	*0.00
Sports Team Affiliation	1200.00	352	*0.00
Pell	207.248	32.00	*0.00
Gender	45.93	32	0.05
Ethnic Group	611.08	192	*0.00
First Major	590.47	864	1.00
Second Major	316.35	544	1.00
Exit Reason	1000.00	480	*0.00
Exit Term	1000.00	704	*0.00
Entrance Term	1000.00	704	*0.00

Note. *p<0.05

Table 13. *Crosstabulation of Race by Other Factors Influencing Departure*

Variable	χ2	df	p
Athlete Status	75.53	6	*0.00
Sports Team Affiliation	286.49	66	*0.00
Pell	54.4815	6.00	*0.00
Gender	19.29	6	*0.00
First Major	142.38	162	0.86
Second Major	130.53	102	*0.03
Exit Reason	73.63	90	0.90
Exit Term	148.40	132	0.16
Entrance Term	220.22	132	*0.00

Note. *p<0.05

Table 14. *Crosstabulation of Gender by Other Factors Influencing Departure*

Variable	χ2	df	p
Athlete Status	45.21	1	*0.00
Sports Team Affiliation	211.06	11	*0.00
Pell	3.308	1.00	0.07
Ethnic Group	19.29	6	*0.00
First Major	73.88	27	*0.00
Second Major	28.04	17	*0.04
Exit Reason	15.73	15	0.40
Exit Term	46.11	22	*0.00
Entrance Term	44.36	22	*0.00

Note. *p<0.05

Table 15. *Crosstabulation of Pell Eligibility by Other Factors Influencing Departure*

Variable	$\chi 2$	df	p
Athlete Status	4.38	1	*0.04
Sports Team Affiliation	21.27	11	*0.03
Ethnic Group	54.4815	6.00	*0.00
State	207.25	32	*0.00
Gender	3.31	1	0.07
First Major	45.55	27	*0.01
Second Major	16.54	17	0.49
Exit Reason	16.38	15	0.36
Exit Term	26.32	22	0.24
Entrance Term	38.94	22	*0.01

Note. *p<0.05

Table 16. *Crosstabulation of Sports Team Affiliation by Other Factors Influencing Departure*

Variable	$\chi 2$	df	p
Pell	21.27	11	*0.03
Ethnic Group	286.494	66.00	*0.00
State	1200.00	352	*0.00
Gender	211.06	11	*0.00
First Major	289.15	297	0.62
Second Major	603.76	187	*0.00
Exit Reason	499.77	165	*0.00
Exit Term	655.58	242	*0.00
Entrance Term	701.63	242	*0.00

Note. *p<0.05

Table 17. *Crosstabulation of Athletic Status by Other Factors Influencing Departure*

Variable	χ2	df	p
Pell	4.38	1	*0.04
Gender	45.21	1.00	*0.00
State	343.43	32	*0.00
Ethnic Group	75.53	6	*0.00
First Major	18.94	17	0.33
Second Major	26.17	15	*0.04
Exit Reason	26.17	15	*0.04
Exit Term	91.56	22	*0.00
Entrance Term	126.22	22	*0.00

Note. *p<0.05

Table 18. *Summary of One-Way ANOVA of Career GPA and Semesters Completed*

Variable	Career GPA		Semesters Completed	
	F	p-value	F	p-value
Entrance Term	2.11	*0.002	9.62	*0.000
Exit Term	4.59	*0.000	6.15	*0.000
Exit Reason	2.62	*0.001	1.05	0.404
First Major	1.93	*0.003	12.42	*0.000
Second Major	0.98	0.479	2.52	*0.001
State	1.44	0.054	0.98	0.503
Ethnic Group	2.47	*0.022	0.55	0.769
Sports Code	4.31	*0.000	3.39	*0.000

Note. *p<0.05

Appendix B

Interview Protocol

My name is _____, and I am a Vanderbilt graduate student. We are very grateful that you are taking the time to talk with us today so that we can learn from you about your school experience and plans after high school. We would like to record our conversation today to make sure we capture all of our learning. Would that be okay?

We have planned this interview to last no longer than 45 minutes. If at any time you feel uncomfortable and wish not to answer the question or to end the interview, you have the right to not respond or end the interview. Before we begin, do you have any questions?

Student Protocol	
Lens	**Questions**

Icebreakers
 	
Setting trust, authenticity and comfort
	• What year are you?
	• Where did you live before you came to Lyon?
	• Are you a residential or commuter student?
	   ○ If you are residential, which residence hall do you live in?
	   ○ If you are a commuter, how do you get here (e.g. method of transportation?), and how far is it from campus?

Academic Preparation Courses/rigor Teacher/counselor Test preparation	• Reflecting back to before you started college, what did you expect of going to college? What did you find when you got on campus? • Are your classes what you thought they would be? Did anything surprise you? • How well did high school prepare you to be academically successful at Lyon? Looking back, do you think you were prepared for college, for the academic side? Social side? • Did you take any honors classes, AP/IB courses or dual enrollment in high school? How much time did you spend on work/homework each week when you were a high school junior and senior, typically? • Why did you choose to come to Lyon College?
Persistence and Departure Social integration Commitment to academic goals	• Do you feel connected to campus? • What does your social life on campus look like? ○ Do you find things to do on campus, in your free time? Like what? What kinds of events do you typically like to attend? • How does your friend group in college compare to your friend group in high school?

Access to supportive services	• What clubs or organizations are you involved with on campus?
	  ○ When did you join them?
	  ○ How did you think these clubs or organizations influence your college experience?
	• What is your major?
	  ○ Is your major what you thought it would be?
	• Do you enjoy your classes?
	• What is the most difficult aspect about going here/being a student at Lyon? Most surprising?
	• Have faculty ever shown a genuine interest in you and your learning? Can you tell me about that experience?
	• Are you aware of the academic support services available on campus?
	  ○ Can you share an example of a time or two when you used one of these services?
	  ○ Was it helpful?
	• How will your experiences at Lyon prepare you for life after Lyon?
	• How do you pay for Lyon?
	• Do you work while enrolled in school? Full-time or part-time?
	• To what extent do finances impact:
	  ○ Your major choice?
	  ○ Your current academic experience?
	  ○ Your engagement in campus activities?
	• What keeps you going when school gets hard?
	• Where might you go on campus for support?
	  ○ Have you used any of these resources?
	  ○ Can you describe a couple of these experiences?

Closing Remarks	• Explain why we gather demographic data (to ensure interview sample reflects the range of students at Lyon)
	  ○ Class Year
	  ○ Gender identification?
	  ○ Race/Ethnicity
	  ○ Major, if declared
	• Where would you like us to send your $5 gift card? (preference for type? Amazon, WalMart, Starbucks)

Staff Protocol	
Bins/Buckets	**Questions**
Icebreakers Setting trust, authenticity and comfort	• How long have you worked at Lyon? • Why did you choose to work at Lyon? • How does your role interface with students?
Academic Preparation Courses/rigor Teacher/counselor Test preparation	All Staff • How would you compare the level of academic rigor at Lyon to other schools? • Do you feel that students arrive to Lyon from high school academically prepared for the rigor they will encounter? • What challenges do students share upon their arrival to campus? During their time in college? • What differences do you notice between different populations of students in how they navigate college? Academic Advising • Do you notice a difference in the persistence of students who took any honors or AP/IB courses or dual enrollment in high school and those that did not? • Do you notice differences in students' expectations of the level of support professors should provide? Admissions • Do you notice differences in preparation between students who are from schools with dedicated college counselors and those who are not? If so, in what ways?" • How do you measure academic preparation/readiness for applicants? Financial Aid • What is the process for applying for financial aid at Lyon? • What challenges or obstacles do you encounter in working with students around the financial aid process? • What are factors result in students' losing their merit based aid?
Persistence and Departure Social integration	All • When students depart before graduation, what are the central reasons for leaving Lyon, in your opinion? What keeps students here, in general, until graduation?

Commitment to academic goals Access to supportive services	- How would you characterize student engagement on campus? - Describe the profile of a student that is successful here. - What does your department do to help students feel comfortable being a student at Lyon? - How do students get involved with social clubs on campus? - How do you see students engaging with academic support services on campus? Do you notice differences in how students leverage these resources? - How does Lyon prepare students for post graduation? - What do students share about how and in what ways that finances impact their Lyon experience? - Do students know when and how to leverage your office when they are struggling? Student Affairs - In what ways and when do students start participating in on campus clubs or organizations? - How did you think these clubs or organizations enhance or detract from your college experience? - What do students share about how and in what ways that finances impact their ability to socially engage on campus? Academic Advising - What are the most popular majors? - What are the reasons choose majors? - How often do students change their majors? - Do they provide reasons why? - Do you notice differences in students and how they pursue rigorous curriculum? - What do students share about how and in what ways that finances impact their academic planning and choices? Housing - What do students share about how and in what ways that finances impact their housing choices? Financial Aid - What do students share about how and in what ways that finances impact their social involvement on campus? Internship and Career Development - What do students share about how and in what ways that finances impact their internship choices and career plans? Other - In what other ways, if any, do you see finances affecting the student experience?