# Patterns of Student Departure at a Private Liberal Arts HBCU

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# Executive Summary

Lane College is one of 107 historically black colleges and universities (HBCUs) in the United States. Of the 56 private and 51 public institutions that serve about 228,000 students (United States Department of Labor, n.d.), Lane is a small, private, liberal arts college nestled in West Tennessee in the city of Jackson, a midpoint between Memphis and Nashville.

This study is motivated by the question of why Lane College has seen a decreasing trend in retention and graduation rates over the past three years. In this study, existing institutional data from Lane College is analyzed. Data included 2,177 undergraduate students over the span of 4.5 years. Additionally, in order to learn how Lane compares to its peers, a peer group was defined, and data was collected from the National Center for Education Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS) and then compared.

Specifically, the following study questions were asked:

1. To what extent do student background characteristics and student choices, such as choice of major, influence student departure at Lane College?
    a. What patterns are identified in the departure behaviors particular and unique to the students of Lane College?
    b. What are the characteristics of students who depart Lane College at the highest rates, and when does the departure occur most frequently?
2. How is a peer comparison group best created and how do peer comparisons help in retention analysis?
    a. How do the departure patterns and characteristics of students who depart Lane College compare with those of other Historically Black Colleges and Universities?

Several key findings led to three recommendations. First, patterns of departure showed that the following characteristics were often found in departing groups: being male, class attendance rate **(**the number of times a student attended enrolled class meetings verses the total number of enrolled class meetings to attend) under 90%, being an in-state (Tennessee) resident, living off-campus, in first two semesters of college, and in second year in college in the majors of English, Mass Communications, Computer Science and Mathematics.

Based on findings of this study and current literature already cited in this report, the following recommendations are respectfully shared with Lane College:

**Recommendation #1: Continue targeting students at risk for departure by using specific data of student characteristics and choices.** The early alert system that Lane has recently rolled out can help identify students at risk of departing. Institutions can use their own longitudinal data around student departure to build the early alert system, to track specific characteristics or choices that have arisen in the data indicating a student is more likely to depart. Characteristics or choices noted by this study, if not already included, to include in an early alert system:

- Students who fail to attend 90% or more of their classes.
- Students in first and second semester of all Majors.
- Students in third and fourth semester of the following Majors: English, Mass Communications, Computer Science and Mathematics
- Female and Male students living off-campus
- Female and Male students from Tennessee
- Students who start as first-time full-time freshman in Spring semesters

In addition to working with students who are still enrolled, it is important to track students who depart, and target departed students for re-entry.

**Recommendation #2: Define a peer comparison group specifically for retention and completion improvement goals, and conduct case study on a successful peer.** While this study defined a smaller peer group for its analysis, it is recommended that Lane College use statistical methodologies in conjunction with other political and field knowledge to define a peer group that could be used specifically in efforts to increase retention and completion. One might use this study to conclude, for example, that students that depart Lane College are typically males from in-state (Tennessee) who live off-campus, have low attendance rates, and are in the majors of Business or Interdisciplinary Studies. This is just an example, but could be used to locate peer institutions with similar characteristics of departing students. A smaller comparison group may lead to identifying partner institutions that could share specific strategies that work. Several institutions use cluster analysis, a system of organizing members into groups that share common characteristics or properties to a high degree of association (Luna, 2018; McLaughlin et al., 2011).

Of the six peer institutions defined by this study, the one with the highest first year, first time freshman retention rate is Talladega College (70%). The institution of the six with the highest 6-year graduation rate is Philander Smith College (41%). It is recommended that Lane College conduct a case study and document review to determine causes of success at Philander Smith College because of its somewhat similar student population demographics, and location. There are clear differences, such as Philander Smith's 66% female student body, but a more in-depth study would reveal success factors for particular defined student groups.

**Recommendation #3: Build a more encompassing and cohesive data collection system.** Data used for this study provided an opportunity to gain some insight into the students at Lane College, and additionally, to determine other ways to improve the data collection system by

noting data needs throughout the analysis. Two ways in which the data collection system at Lane may be improved are collecting more data points and connecting systems across campus.

***More data points***

Anecdotal conversations with agents of Lane College make it clear that data collection for the purposes of improving student retention is being refined. In order to collect more information about students' academic and social choices, experiences and perspectives, more data is needed. For instance, including student engagement data is key to predictive analytic initiatives (Burke, Parnell, Wesaw, & Kruger, 2017). Student affairs offices are usually the ones on the implementation side of intervention strategies for at-risk students, but the data collected by this area, engagement data, are usually not included in predictive analytics. Baker et al. (2018) is very clear that HBCUs offer a "distinctive, supportive environment" that leads to student persistence. Capturing data related to this, which may include data points related to student engagement, mentoring relationships, and the approach to student conduct/care at Lane.

The study by Burke, Parnell, Wesaw, & Kruger (2017) focused on the success of some institutions using card swipe technology to collect information regarding student touch points on campus. Although the hardware is expensive, campuses that use this claim it is more accurate and consistent than other collection methods, and allows for a clean connection between student affairs and academic affairs data (Burke et al., 2017).

The area of Learning Analytics, which is the, "measurement, collection, analysis and reporting of data about learners and their contexts, for purposes of understanding and optimizing learning and the environments in which it occurs (Siemans & Long, 2011, p.34 in West et al., 2016). As West et al. (2016) point out, student retention, success and engagement correspond

with learning analytics. Collecting this data would be extremely helpful in identifying how students are experiencing expectations, support, feedback and engagement in the classroom.

Additional data elements that are also important to analyze are those related to student engagement are participation in Greek life and participation in the work force.

***Connecting data systems***

With an institutional commitment by many departments to increase undergraduate retention at Lane College, a plan that garners strong partnerships between campus functions, with particular focus on information technology and institutional research, is achievable. High levels of coordination between the units that collect and analyze student data, with individual capacity across those units to interpret data/results will lead to more agents of the institution using the data to inform decisions related to interventions for student success. The early alert system Lane College identifies at-risk students, and if this could be connected to student engagement, behavioral and learning analytic data, the more able administrators would be to assess each student's need for support.

This study contributes to Lane College's efforts to improve its student retention rate. By analyzing institutional data, reviewing current literature related to key data elements and HBCUs, and identifying a peer comparison group focused on retention, the three recommendations are offered.

# Introduction

Institutions of higher education in the United States work tirelessly to address student retention issues and low completion rates, and according to a new report by the National Student Clearinghouse (Shapiro, Ryu, Huie, Liu & Zheng, 2019), rates of completion have increased. Since 2009, the national overall completion rate has been increasing. Of the 2.3 million students who entered an institute of higher education as first time freshman in the fall of 2013, almost 60% of them have completed in 6 years, although not necessarily from the school at which they began. However, national data never paints a clear picture of the plethora of institutions around the country that serve millions of students. Not all have successful results.

Historically black colleges and universities (HBCUs) are known for their nurturing and family-like environment, and Lane College is no different. HBCUs like Lane historically played an important role in access to higher education for African-American students. Lane College, for example, located in Jackson, Tennessee was initially created in 1882 as a high school for the purpose of educating newly freed slaves after the American Civil War (Martinez, 2011).

Themes from literature on HBCUs include an acknowledgement of an abundance of social capital, stemming from networks of supportive relationships built on campus, which directly impacted persistence and retention (Palmer & Gasman, 2008). However, recent literature has uncovered a gender disparity among African-American men and women in their success to degree at HBCUs (Lundy-Wagner & Gasman, 2008).

Over the past 4.5 years, more than 1, 200 full-time students enrolled at Lane College and left without a degree. Key stakeholders of Lane College are working to increase retention and graduation rates and their efforts play a key role in the future of the student body, made up of

approximately 1,400 current undergraduate full and part-time students. As a result, Lane College is expanding its use of data to improve student performance.

This study answers two overarching questions focused on using data to find out more about students who depart Lane College before earning a degree, and the role data plays in leading to solutions to retention.

1. To what extent do student background characteristics and student choices, such as choice of major, influence student departure at Lane College?
    a. What patterns are identified in the departure behaviors particular and unique to the students of Lane College?
    b. What are the characteristics of students who depart Lane College at the highest rates, and when does the departure occur most frequently?
2. How is a peer comparison group best created and how do peer comparisons help in retention analysis?
    a. How do the departure patterns and characteristics of students who depart Lane College compare with those of other Historically Black Colleges and Universities (HBCUs)?

The following section focuses on key and current literature related to how and why specific data elements can be used to identify characteristics of students who depart, and how peer group comparisons can be most useful. Next sections include a contextual analysis, or a detailed view of Lane College's specific institutional context. Then, data used for this study as well as the quantitative method of analysis will be described. Following an explanation of data and methods, results are presented and then a discussion of those results. The three final sections

will include study limitations and nudges for future research, the study conclusion and recommendations for Lane College.

# Review of Literature

The purpose of this review of literature is to provide a framework for viewing the data to be reviewed. It also provides a foundation for segments of the report; specifically those related to the importance of data use, and peer comparison groups. This review also builds a foundation for the recommendations that follow.

**Using Data to Improve Retention**

Exploring student characteristics and student choices using data elements is a key action that most institutions of higher education have adopted. Immediate goals for many of these institutions include increasing the number of students graduating in 5 or 6 years, but using data effectively with the specific purpose of increasing retention and graduation rates could even lead to an increase of 4 year graduates, saving money for students and increasing institution efficiency (Schmarzo, 2017). Shifting money to support an existing student is less expensive than enrolling a new student. In addition to the big-picture goal for institutions of increasing student success, mediations that take place when data is used more effectively and efficiently will touch students individually. Students who need immediate interventions or moderate interventions can be identified and offered supports.

Predictive analytics is a practice used first in business intelligence, and more recently by higher education institutions. This process of discovering, analyzing and interpreting patterns from large amounts of data was already being used in admissions for a variety of purposes, and now is being used to improve retention (Burke, Parnell, Wesaw, & Kruger, 2017). Successful institutions have used data analytics in conjunction with interpretation of data in light of informing decision-making related to student retention efforts. Depending on how the process is used, products could be a new way for students to see data on their own learning, with more

detailed report cards by skill; well-timed interventions based on student activity in academic setting or on campus; and more proactive planning focused on student needs in classrooms and on campus, and resources available (Bengfort, 2017).

The Burke et al. (2017) study revealed four common elements included in predictive analytic efforts:

1. Strong senior-level leadership of cross-functional team approach
2. An institution-wide strategy for collecting, connecting and accessing data from multiple systems
3. Assessment of real-time response mechanisms
4. Ongoing communication and training

A recommended structure for a data analytics project includes four working areas: Information Technology, Institutional Research, Student Affairs and Academic Affairs Enrollment Management. Each of the latter is responsible for collection, analysis, and reporting student data, academic, engagement and pre-enrollment respectively. Information technology is responsible for maintenance of the data collection tools and data warehouse. Senior leadership makes data a high priority and sets expectations for data-informed decisions (Burke et al., 2017).

As institutions reflect on their level of readiness to embark in predictive data analytics, many determine that additional staff roles are necessary in order to lead efforts in student success, or retention and graduation increase. Additional reviews of data elements collected in order to determine what is missing are important. Data for predicative analysis focused on improving retention should encompass five broad areas: pre-enrollment, academic, motivation and self-efficacy, use of support services, and student engagement (Burke et al., 2017). In addition to including data elements from the study of Braxton, Doyle, Hartley, Hirschy, Jones, &

McLendon (2014) which examined six antecedents to social integration: ability to pay, institutional commitment to the welfare of its students, institutional integrity, communal potential, proactive social adjustment, and psychosocial engagement, also to be considered is a point from the study conducted by Baker, Arroyo, Braxton, Gasman & Francis (2018), specifically around HBCU student persistence. The point that Baker et al. (2018) found was that the presence of a "special relational culture within HBCUs, which, despite perceived institutional shortcomings, serves to attract and retain students" (p.17), in addition to concluding that this social integration leads to student persistence. According to Baker et al. (2018), it is key for an HBCU to collect and analyze data elements measuring student social integration in order to improve student retention.

In addition to utilizing institutional student data to improve retention and completion, it is also important to look externally to fellow like institutions, for comparison, as well as for camaraderie in what works well.

**Identifying and Using Peer Institution Comparisons**

There are a variety of reasons that higher education institution's define and use comparison data from peer groups. Most often in the past, institutions use this data in order to evaluate their own student outcomes in relation to similar institutions.

*Nearest Neighbor Methodology*

In order to benchmark performance, institutions of higher education should identify a set of peer institutions that are most similar to it. The peer group should be created with a foundation of similar key characteristics. Generally, higher education institutions "are given little direction on how to from their comparison groups" (Hinrichs, 2019). Some colleges use peers, some use institutions they aspire to be like, and others use institutions to which they would

compare favorably, or a combination of the three (Hinrichs, 2019). Upon reviewing some institutional data reports, and in an effort to assist Lane College with one clear method with which to move forward in this work, the Nearest Neighbor method was reviewed.

The goal of the Nearest Neighbor method (McLaughlin, Howard & McLaughlin, 2011) is to benchmark the performance of one institution against a group of institutions, in order to make judgments about the institution, and inform institutional planning and decision making (Trainer, 2008 in McLaughlin et al., 2011). The Nearest Neighbor method has seven steps to be followed in order to create a peer group that is well defined and meaningful to the work at hand. The first step is to clarify the purpose of the peer group. Creating a comparison group for accountability purposes may conclude with a group different from one created for the purpose of a project to increase retention, for example.

The U.S. Department of Education allows for institutions to select their peer group, and currently, Lane College uses a custom peer comparison group of 30 institutions for its annual IPEDS Data Feedback Report. Although a group of 30 may seem broad, an over-inclusive peer group works well to allow adequate size to compare results of something like the National Survey of Student Engagement (NSSE) survey. In addition, a report by Peter Hinrichs (2019) suggests that for the IPEDS reporting, the majority of institutions "do not appear to be listing institutions that are equal peers," and in fact list institutions that in general are "more selective, larger and have better resources. In order for this study to be more specific and utilized in a specifically for increasing retention, a smaller peer group will be defined. For this report's study question 2, the researcher defined the new peer group for the purpose of defining a small group of like institutions with which Lane could build a working relationship to work together on the goal of student retention.

# Contextual Analysis

At a time when many institutions of higher education are having trouble keeping a float financially, due to the competition for students, and increase in demand to impress for recruiting, Lane College has fared well over the past few years. From 2010 to 2014, enrollment was decreasing, but in 2015, enrollment began to increase. The next step for Lane, which they have already begun, is a focus on retention and completion. Students are enrolling in Lane College, but the majority of students who have chosen to enter college at Lane do not stay long enough to earn a degree, and in fact, about half have left by the end of their first year on campus. Like other open access institutions, this college also has a low graduation rate, most recently 14% graduated in 4 years, and 24% in 6 years.

Other HBCUs with similar characteristics are also faced with the same issues. Lane is unique in that it has more men than women, and research concludes that in the past 20 years, African-American men on HBCU campuses have had less success, losing the higher success rates that were captured on HBCU campuses in the 1980's and 1990's. Lane's peer comparison institution group shows an average of 58% female students (Lane College, 2018) and researchers note that the enrollment of African-American women is increasing, while the enrollment of African-American men is declining in HBCUs (Palmer, Wood & Arroyo, 2015). Additionally, a 2004 study at 12 HBCUs by Harper, Carini, Bridges & Hayek, showed that as African-American females became more engaged on HBCU campuses, African-American males were becoming less engaged.

Ninety-three percent of the Lane College student body population identifies as African-American. Moreover, 92% of the student body is under the age of 25, 71% live on the campus of

Lane, and 54% identify as male. Over 96% of students at Lane receive federal aid with an average award of $7,300. Of interest is the slight majority of males over females at Lane.

In regard to the data available to conduct an in-depth analysis of students at Lane College, an administrator noted two areas in which improvement may be needed. The first area was that data on campus was very much in silos. Many departments were making solid efforts to collect and review data for their own work, but there was no connected system where others could also share in the data. Secondly, there was a hypothesis that the success rate of the student body was impacted by elements of trauma that students were facing. In terms of data, the college was at the beginning stages of capturing this data. In Fall 2019, Lane College began implementing two key strategies in its work to increase student retention. The first was a program for all first year students called the Lane Institute, and the second was a data collection tool, a survey sent out to students monthly that asked them questions with the purpose of identifying students in need of supports.

As this study moved forward, key data elements and key student characteristics were identified to assist Lane in its already well-laid plans to increase student success.

Lane College has defined its peer group in IPEDS to include 30 institutions. A norm group of this size is advantageous in that many other data sets, such as National Survey of Student Engagement (NSSE), may contain only some of the peers, so beginning with a large group allows for sufficiency in comparing various data sets. However, in order to work together with peers to solve this retention issue, a smaller group will be defined here.

# Data and Methods

A combination of quantitative data analysis and review of literature was used to answer the two study questions. Below, data and methods are described first for question 1, and then for question 2.

**Study Question 1**

*To what extent do student background characteristics and student choices, such as choice of major, influence student departure at Lane College? What patterns are identified in the departure behaviors particular and unique to the students of Lane College? What are the characteristics of students who depart Lane College at the highest rates, and when does the departure occur most frequently?*

**Data**

The Lane College Office of Institutional Research (OIR) provided student level data by email to the researcher. The data file shared was one with student names removed. The data provided included a number of student background characteristics (i.e. race, gender, citizenship status, HS GPA, parent zip code), major, credits attempted and earned by semester, GPA data, degree received, on campus housing indicator. The data included full time first-year students enrolled as such in their first semester, and data was provided for the following semesters: Spring 2015, Fall 2015, Spring 2016, Fall 2016, Spring 2017, Fall 2017, Spring 2018, Fall 2018, Spring 2019, and Fall 2019. After the initial enrollment semester, students are tracked longitudinally across semesters. Institutional data prior to Fall 2015 was noted as incomplete by the Lane College OIR, and thus it was determined that the data provided was the best available. There were 2,175 student records included in the file for the ten semesters noted above.

*Analytical Variables*

Table 1 shows analytical variables in the categories of *Student Background Characteristics*, such as gender, state of residency, high school GPA and age at entry; and *Student Choice* fields, including attendance, attempted course hours, on/off campus living, declared major, enrolled in Spring 2020, and degree earned. This data and other fields, were included in the data file from Lane College Office of Institutional Research. The variables identified for analysis were chosen in order to identify patterns in the departure behaviors particular and unique to the students of Lane College.

Table 1
*Analytical Variables*

| **Student Background Characteristics** | **Student Choices** |
|---|---|
| Gender | Attendance |
| State of Residency | Attempted Course Hours |
| Age at Entry | On/Off Campus Living |
| HS GPA | Major |

Based on the data file that was shared, it was noted that some variables had some missing data, and during analysis, it was determined that the analysis should be noted as incomplete. For example, the researcher probed if there was a difference in average high school GPA between those who departed and those who did not. However, high school GPA was collected in semesters Spring 2015, Fall 2015, Spring 2016, Spring 2017, and Fall 2019 for some students, and not all students. High school GPA for students entering in Fall 2016 and Fall 2018 is not included. Because only 814 of the 2,177 (37%) of the student records had high school GPA data, this variable was not used for analysis.

If a student lived on campus for any semester, the student is included as living on campus. Conversely, students who never lived on campus are included as living off campus. Another note regarding this variable, the data file indicates, based on missing data, that this data

element began to be collected in the fall of 2017. This variable will be used in this analysis for any student with this indicator.

***Student Outcomes: Departure and Degree Completion Data***

The researcher used two metrics to determine successful continuation or completion. The first metric was degree earned, and the second was continued enrollment. Next, a variable was defined for this analysis in order to identify students who depart Lane College. The departed students were defined in two ways using the data file. First departed students were identified as departed by a field called Not Enrolled Spring 2020, and secondly, more information about when students departed could be attained by other fields labeled by semester, and showing Hours Attempted. If this field was blank, indicating the student was no longer attempting hours, the researcher concluded that the student stopped out, and the student was then included in the "departing" category. These variables were used in conjunction with the analytical variables to determine which students departed Lane College at the highest rates, and the semester in which departure occurs most frequently

Table 2
*Student Outcome Variables*

| **Student Success Indicators** | **Student Departure Indicators** |
|---|---|
| Enrolled in Spring 2020 | Not Enrolled Spring 2020 |
| Degree Earned | Semester Hours Attempted |

Because some comparison analysis has been completed by and is available from Lane College in its Lane College Characteristics Fact Book, 2018-19, this researcher chose to not duplicate data analysis even though the shared data file included other information. The focus of this report is to compare variables not included in the Fact Book. For example, the Fact Book includes detailed analysis of annual retention rate, first time freshman retention rate over time, retention rate of males verses females by cohort year, of fall to spring retention rate by student

year of study, and of spring to fall retention rate by student year of study. The Fact Book data will be incorporated into this study as part of the contextual analysis.

As this report continues, students who are no longer enrolled at Lane College will be considered *departed*.

**Methods**

The shared excel data file was downloaded and re-organized on the researcher's personal laptop by Cohort Year. The data was then sorted and re-sorted several times, and reviewed for patterns in student departure and student success using filters and pivot tables.

The researcher will use one cohort as the basis for the first part of analysis. The Fall 2015 cohort data will be used because it is the only data sub-set that includes 4 years of data, and thus time to earn a degree is possible, which allows for some analysis around characteristics of students who earn a degree. The remaining data of students beginning at Lane in semesters Spring 2016 through Fall 2019 will be used, in addition to the Fall 2015 data, specifically for comparative departure analysis. The reason for going beyond the Fall 2015 cohort data is to include more data, more students, and more semesters in which to identify patterns of departure.

Descriptive statistics were used to summarize the sample and measures, determining the features of the Fall 2015 data sub-set. Table 3 shows a list of outcomes by Major for this sub-set of students. This analysis allowed determination of the number of students enrolling and departing before the next semester, and then the number of students who returned after being away. This analysis was further evaluated by student incoming characteristics, such as gender and state of residence, as well as by student choices such as attendance, major, and in- or out-of-state residency.

Table 3
*Data Outcomes by Major for Fall 2015 Cohort*

| **Outcomes** |
|---|
| 4 year graduation rate |
| Percentage of students that earned a degree and lived on campus |
| Percentage of students that earned a degree, lived on campus and were female |
| Percentage of students that earned a degree, lived on campus, and were male |
| Percentage of students that earned a degree and lived off campus |
| Percentage of students that departed and lived off campus |
| Percentage of students that departed, lived off campus and were female |
| Percentage of students that departed, lived off campus and were male |
| Departure rates by semester, for semesters 1-8 |
| Percentage of students enrolled in semester 9 |

Descriptive statistics were also used to compare departed students characteristics and choices in various cohorts. All comparisons were of fall cohorts, except one that compared student departure rates of fall and the following spring cohort to determine if there was a trend of departure for students who began as freshman in the fall verses those who began as freshman in the spring semester. Table 4 lists data measures used to compare departed students characteristics and choices in various cohorts.

Table 4
*Departed Student Data Measures, by Cohort Year*

| **Departed Student Data Measures** |
|---|
| ***Gender, On/Off Campus*** |
| Departed, Female |
| Departed, Female, lived on campus |
| Departed, Female, lived off campus |
| Departed, Male |
| Departed, Male, lived on campus |
| Departed, Male, lived off campus |
| ***State of Residence, On/Off Campus*** |
| Departed and from TN Total |
| Departed, from TN and lived on campus |
| Departed, from TN and lived off campus |
| Departed and from Out of State Total |
| Departed, from Out of State and lived on campus |
| Departed, from Out of State and lived off campus |
| Departed and lived on campus, Total |
| Departed and lived off campus, Total |

In addition, means comparisons were used to press further on student attendance and departure in comparing different student outcomes across cohorts. Mean and median were calculated for overall attendance rates, for attendance rates of graduates/enrolled and for attendance rates of departed students.

**Study Question 2**

*How is a peer comparison group best created and how do peer comparisons help in retention analysis? How do the departure patterns and characteristics of students who depart Lane College compare with those of other Historically Black Colleges and Universities (HBCUs)?*

**Data**

In order to compare institutions, data from the National Center for Education Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS) was accessed. An available tool to compare institutions was used to create a downloadable Excel spreadsheet. The initial list of thirty peer institutions (see Table 5) was created by Lane College in its annual 2018 IPEDS Data Feedback Report. Data elements gathered using this tool included, for the year 2018, enrollment, retention rates, graduation rates, transfer out rates, Pell eligible rate, and faculty-student ratio. Other data was also manually gathered using the NCES College Navigator tool, and added to the comparison data file that included 2018 data of percent of Undergraduate Admitted (in other words, the acceptance rate, which is the number of students admitted verses the number of students who applied), percent of Undergraduates Attending Fulltime, percent of Undergraduates Who Are In State Residents, Institutional Religious Affiliation, Public or Private Status, and Undergraduate Distance Learning availability.

Table 5
*Lane College Custom Comparison List, IPEDS 2018 Data Feedback Report*

| **Peers Chosen by Lane College** | **State** |
|---|---|
| Albany State University | GA |
| Benedict College | SC |
| Bethune-Cookman University | FL |
| Claflin University | SC |
| Dillard University | SC |
| Edward Waters College | FL |
| Elizabeth City State University | NC |
| Fisk University | TN |
| Florida Memorial University | FL |
| Grambling State University | LA |
| Huston-Tillotson University | TX |
| Livingstone College | NC |
| Miles College | AL |
| Mississippi Valley State University | MS |
| Paine College | GA |
| Paul Quinn College | TX |
| Philander Smith College | AR |
| Rust College | MS |
| Saint Augustine's University | NC |
| Shaw University | NC |
| Spelman College | GA |
| Stillman College | AL |
| Talladega College | AL |
| Texas College | TX |
| Texas Southern University | TX |
| Tougaloo College | MS |
| University of Maryland Eastern Shore | MD |
| Virginia Union University | VA |
| Voorhees College | SC |
| Wiley College | TX |

From the data available from IPEDS, the following points of comparison were gathered for each institution. See Table 6 below.

Table 6
*IPEDS Fall 2018 Data Points for 30 Peer Institutions and Lane College*
(Student data includes for full-time, first-time degree-seeking undergraduates)

| **Data Points, Fall 2018** |
|---|
| Tuition & Fees |
| Undergraduate Enrollment Count |
| Percent of Applicants Admitted |
| Percent of Students Full Time |
| Percent of In-State Residence |
| Percent of Female |
| Percent Pell Recipients |
| Retention Rate |
| Graduation Rate |
| Transfer-Out Rate |
| Student:Faculty Ratio |
| Average Salaries 9-month Contract, all ranks |
| School Type (Public or Private) |
| Distance Learning Offered |
| Religious Affiliation |

## Methods

### Defining a New Comparison Group

This data was collected and downloaded as an Excel spreadsheet, sorted and then filters were used to determine a peer comparison group with similar characteristics to Lane College. Firstly, the characteristics of each institution included in the peer group identified by Lane College for its 2018 IPEDS Data Feedback Report was reviewed and, based on current literature, the peer comparison group was refined and narrowed. This refinement was based on data available and research in line with institutional comparison groups for higher education (Burke et al., 2017; Hinrichs, 2019). A school with an all female student population was removed first because Lane College has a majority male population, and because from data shared from Lane College, female students attending Lane are having more success than male students. For this study, it would not make sense to include Spelman College. The researcher determined that the admissions rate of the institution would be the most valuable variable with which to begin. Lane College has open admissions, very much like a community college, and thus should be compared

with institutions that have a similar policy because student academic background would be similar. A filter process was used in which the five institutions with 100% (open admissions), with student bodies in the range of 1,000 to 2,200, and at least 90% full time student body were included. The five institutions are: Talladega College, Philander Smith College, Texas College, Benedict College, and Miles College. In addition to the five institutions identified, one additional school, Saint Augustine's University, was added as the researcher reviewed the data, knowing that Lane College has a majority male student body. Saint Augustine's University has a smaller student body of 767, and an admission rate of 63%, different from the others, but has a majority male student population, as does Lane College.

**Analysis with New Comparison Group**

An average in each category was found in order to compare Lane to its new peer comparison group. Next, using the newly narrowed peer group, descriptive statistics were used to describe the basic features of the comparison data. This allowed for an analysis of retention and graduation rates in light of a set of institutional characteristics. Finally, IPEDS tools were used to create a Customized Data Feedback Report (See Appendix 1), comparing Lane College to the median data points of the six identified new institutions.

# Findings

**Study Question 1**

*To what extent do student background characteristics and student choices, such as choice of major, influence student departure at Lane College? What patterns are identified in the departure behaviors particular and unique to the students of Lane College? What are the characteristics of students who depart Lane College at the highest rates, and when does the departure occur most frequently?*

Figure 1 reports that of the first-year full-time students who departed during any semester. This figure indicates that the percentage of females departing Lane was less than the percentage of males departing Lane for all Cohort years. We see that the Cohort of Fall 2019 does not follow this trend as the percentages of males and females reaches parity.

Figure 1
*Departed Students, Male verses Female, by Cohort Year*

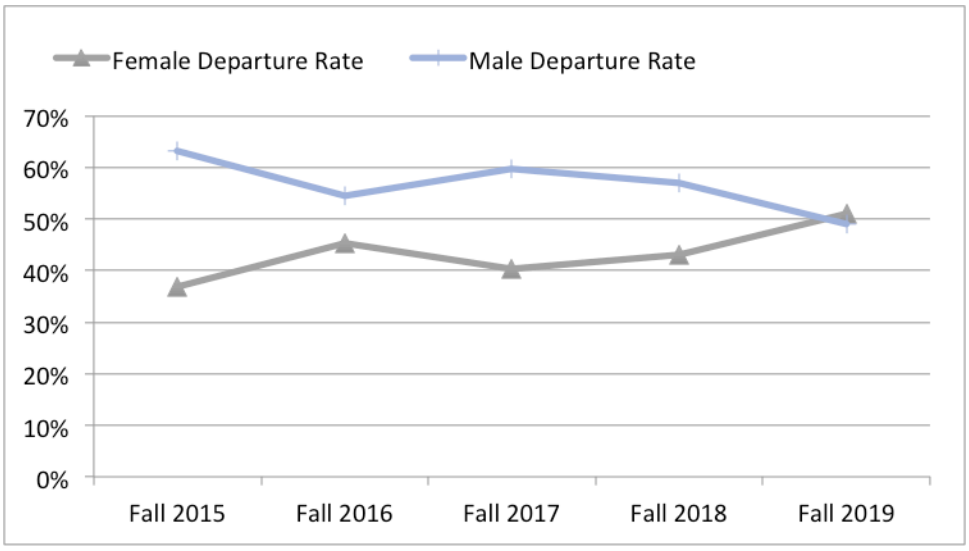



Figure 2 reports that of the first-year full-time students who departed, the percentage of students from Tennessee left at a higher rate than those not from Tennessee.

Figure 2

*Departed Students, In-state verses Out-of-State, by Cohort Year*

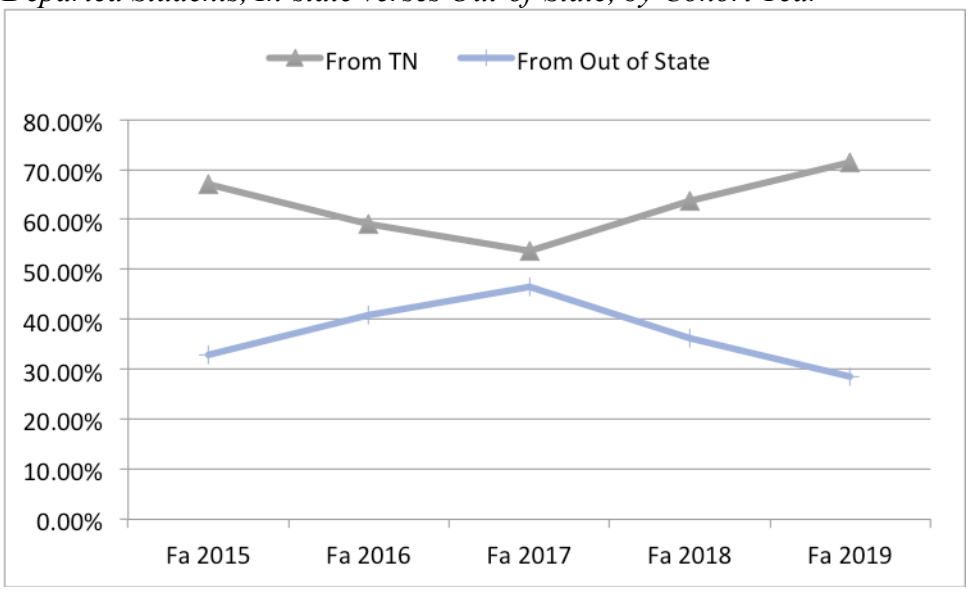



Figure 3 reports that of the first-year full-time students who departed, the percentage of students who lived off campus had a higher rate of departure for Cohorts Fall 2015 and Fall 2016. However, those that lived in on campus housing at any time had a higher rate of departure for Cohorts Fall 2017, Fall 2018, and Fall 2019.

Figure 3
*Departed Students, On Campus Housing verses Off Campus Housing, by Cohort Year*

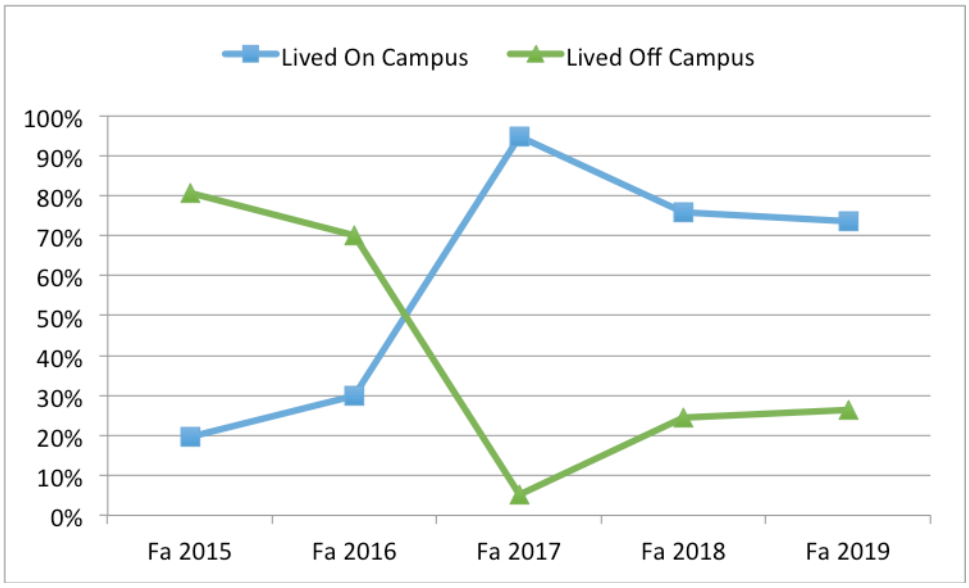



Figure 4 indicates that of the first-year full-time students who departed, regardless of where they live, male students depart at a greater rate than female students.

Figure 4
*Departed Students, Living On or Off Campus, by Gender*

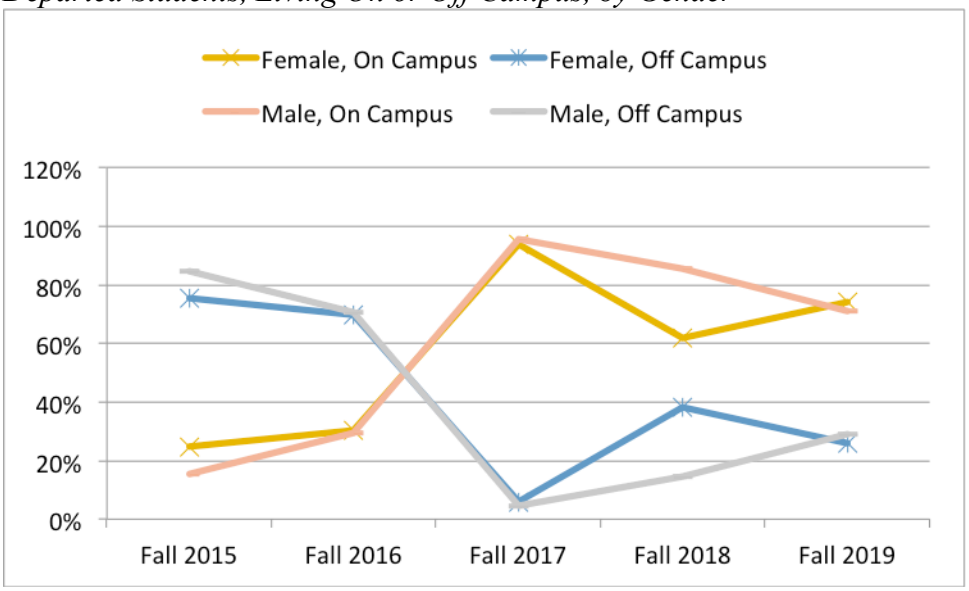
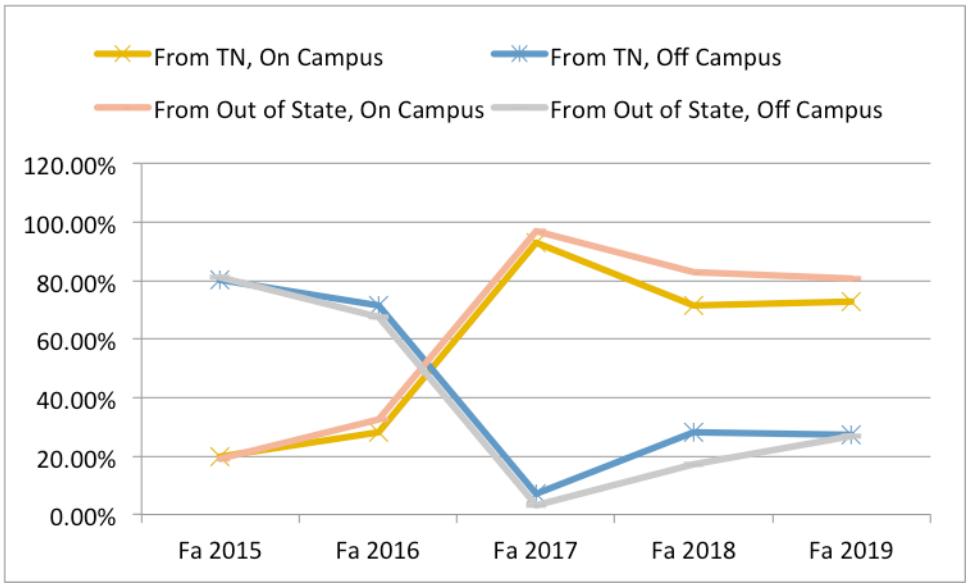


Figure 5 reports that of the first-year full-time students who departed, those who were from Tennessee departed at a higher rate then students not from Tennessee, whether living on or off campus.

Figure 5
*Departed Students, In-state verses Out-of-State, and On or Off Campus*




The following findings relate specifically to Cohort Fall 2015. Table 7 reports that of the first-year full-time students who began in the Fall 2015 and earned a degree, the percentage that lived on campus, and by gender. Majors with the highest graduation rates, and the only ones here above the national average 32% graduation rate for open enrollment institutions (NCES IPEDS, 2018), are also the majors with the least enrollment at Lane: English, History, Religion, Mathematics. Also, the graduates of these four majors all lived on campus. This table also shows that of the students who earned a degree, what percentage lived on campus by gender. For the Fall 2015 Cohort, 75 of the 441 students who enrolled earned a degree, and of those, 65 lived on campus for some or all of their time at Lane.

Table 7
*Fall 2015 Cohort, Degrees Earned by Major and Living On Campus, and by Gender*

| Major | Entering Cohort | 4-Year Graduation | | Earned Degree and Lived On Campus | | |
|---|---|---|---|---|---|---|
| | | Number of Degrees Earned | Rate | Total | Female | Male |
| Business | 101 | 19 | 19% | 84% | 75% | 100% |
| Criminal Justice | 51 | 10 | 20% | 60% | 40% | 80% |
| Sociology | 28 | 4 | 14% | 50% | 33% | 100% |
| English | 9 | 3 | 33% | 100% | 100% | 100% |
| History | 5 | 2 | 40% | 100% | 100% | 100% |
| Interdisciplinary Studies | 36 | 5 | 14% | 100% | 100% | 100% |
| Mass Communications | 35 | 4 | 11% | 100% | 100% | 100% |
| Music | 16 | 2 | 13% | 100% | 100% | 100% |
| Physical Education | 51 | 6 | 12% | 100% | 100% | 100% |
| Religion | 3 | 1 | 33% | 100% | 100% | 100% |
| Biology | 55 | 8 | 15% | 100% | 100% | 100% |
| Chemistry | 11 | 2 | 18% | 100% | 100% | 100% |
| Computer Science | 35 | 7 | 20% | 86% | N/A | 86% |
| Mathematics | 5 | 2 | 40% | 100% | 100% | 100% |
| TOTALS | 441 | 75 | | | | |

Table 8 reports that of the first-year full-time students in the Fall 2015 Cohort, who departed by Major, and in which semester they departed. The most common semester in which students departed was the semester after Spring of Year 1. For the students departing Lane after Spring Year I the largest percentage of departed student were in the following majors: Business, Criminal Justice, Interdisciplinary Studies, Mass Communications, Biology and Chemistry. For Sociology and Religion, the most common semester for student departure was after Fall Year 1, and for English and Computer Science, it was after the Spring Year 2 semester. History and PE both lost the 20% of their students after the first two semesters, Fall Year 1 and Spring Year 1.

Table 8
*Fall 2015 Cohort, Departed by Major, and by Semester*

| Major | Entering Cohort | Departed | Semester Departure Rate | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Fall Yr 1 to Spring Yr 1 | Spring Yr 1 to Fall Yr 2 | Fall Yr 2 to Spring Yr 2 | Spring Yr 2 to Fall Yr 3 | Fall Yr 3 to Spring Yr 3 | Spring Yr 3 to Fall Yr 4 | Fall Yr 4 to Spring Yr 4 |
| Business | 101 | 82 | 21.78% | 24.75% | 2.97% | 10.89% | 10.89% | 1.98% | 7.92% |
| Criminal Justice | 51 | 33 | 13.73% | 23.53% | 9.80% | 5.88% | 7.84% | 0.00% | 3.92% |
| Sociology | 28 | 21 | 21.43% | 14.29% | 10.71% | 7.14% | 3.57% | 3.57% | 0.00% |
| English | 9 | 5 | 11.11% | 0.00% | 0.00% | 22.22% | 0.00% | 0.00% | 11.11% |
| History | 5 | 2 | 20.00% | 20.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Interdisciplinary Studies | 36 | 30 | 19.44% | 25.00% | 19.44% | 8.33% | 0.00% | 5.56% | 0.00% |
| Mass Communications | 35 | 25 | 20.00% | 22.86% | 2.86% | 20.00% | 0.00% | 0.00% | 5.71% |
| Music | 16 | 10 | 12.50% | 0.00% | 25.00% | -6.25% | 31.25% | 0.00% | 0.00% |
| Physical Education | 51 | 37 | 23.53% | 23.53% | 9.80% | 5.88% | 5.88% | 1.96% | 1.96% |
| Religion | 3 | 2 | 66.67% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Biology | 55 | 39 | 7.27% | 21.82% | 16.36% | 12.73% | 9.09% | 1.82% | 0.00% |
| Chemistry | 11 | 5 | 0.00% | 27.27% | 0.00% | 0.00% | 9.09% | 0.00% | 9.09% |
| Computer Science | 35 | 28 | 17.14% | 14.29% | 17.14% | 20.00% | 5.71% | 2.86% | 2.86% |
| Mathematics | 5 | 3 | 20.00% | 20.00% | 0.00% | 20.00% | 0.00% | 0.00% | 0.00% |

Figure 6, reports the departure rate and count by Major. The Business major shows the highest loss count with 82 students, and a rate of 81%, while the highest departure rate, 83%, is in the major of Interdisciplinary studies.

Figure 6
*Departure by Major, Rate and Student Count*

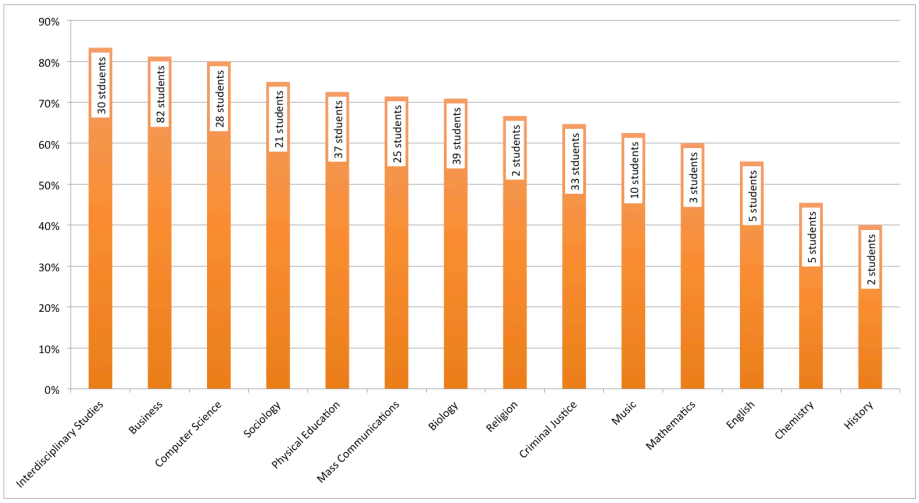


Figure 7 shows the number and rate of students by major that continued to be enrolled after 8 semesters at Lane College. Many students across the U.S. take more than 4 years to graduate, and we see here that Lane students do also. These students were not included in the departure calculations since they are still enrolled.

Figure 7
*Continued Enrollment After Spring Year 4 (No degree, not departed)*

| Major | Continued Enrollment | |
|---|---|---|
| | **Count** | **Rate** |
| Business | 0 | 0.00% |
| Criminal Justice | 8 | 15.69% |
| Sociology | 3 | 10.71% |
| English | 1 | 11.11% |
| History | 1 | 20.00% |
| Interdisciplinary Studies | 1 | 2.78% |
| Mass Communications | 6 | 17.14% |
| Music | 4 | 25.00% |
| Physical Education | 8 | 15.69% |
| Religion | 0 | 0.00% |
| Biology | 8 | 14.55% |
| Chemistry | 4 | 36.36% |
| Computer Science | 0 | 0.00% |
| Mathematics | 0 | 0.00% |

Figure 8 reports the rate at which departed students, by gender, lived off campus. For example, of the Mathematics students who departed, 100%, both male and female, lived off campus. This is a key finding, even more so because the on campus/off campus variable analysis was inconclusive.

Figure 8
*Departed by Major and Living Off Campus, by Gender*

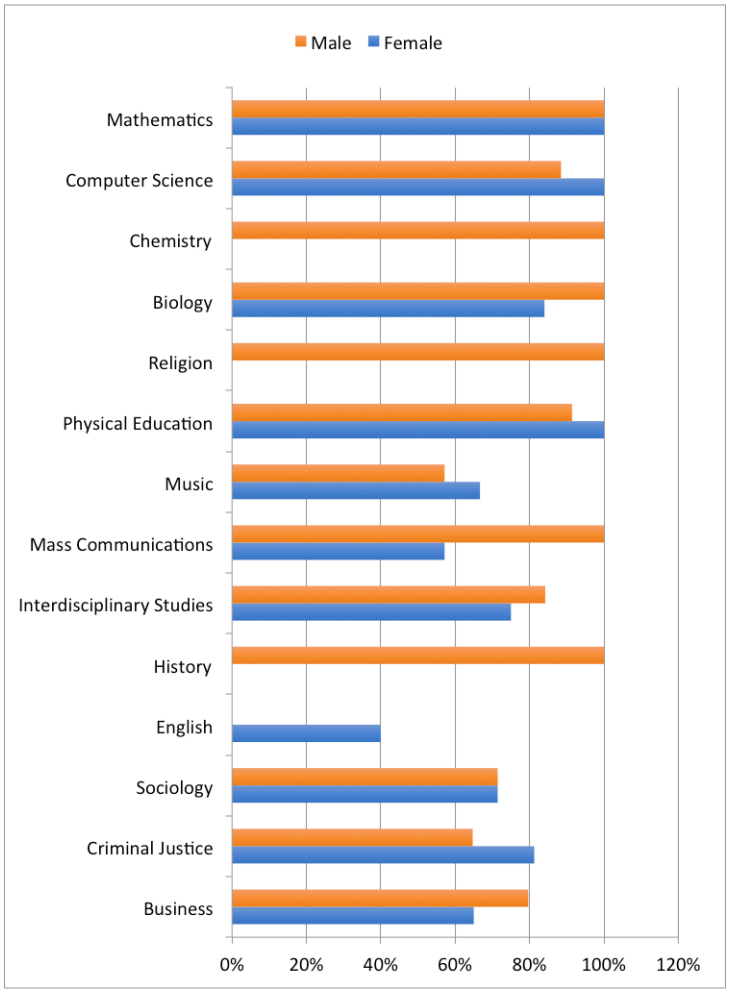



Table 9 shows that Attendance rates do vary between students who earned a degree and those who did not. It is important to note that the average attendance rate for "Graduates and Still Enrolled" only includes graduates for only the Fall 2015 cohort since other cohorts have not yet completed four years at Lane College to have the opportunity to graduate.

Table 9
*Average Attendance by Cohort, by Graduated and Still Enrolled and Departed*

| | | | Fall 2015 | Fall 2016 | Fall 2017 | Fall 2018 | Fall 2019 |
|---|---|---|---|---|---|---|---|
| **Average** | | | | | | | |
| Overall Average Attendance | | | 58% | 54% | 46% | 52% | 51% |
| Average Attendance, Graduates and Still Enrolled | | | 73% | 61% | 61% | 57% | 55% |
| Average Attendance, Departed | | | 45% | 43% | 36% | 47% | 32% |
| **Median** | | | | | | | |
| Overall Median Attendance | | | 60% | 57% | 46% | 54% | 52% |
| Median Attendance, Graduates or Still Enrolled | | 75% | 62% | 63% | 57% | 54% | |
| Median Attendance, Departed | 48% | 46% | 35% | 49% | 48% | | |

**Study Question 2**

*How is a peer comparison group best created and how do peer comparisons help in retention analysis? How do the departure patterns and characteristics of students who depart Lane College compare with those of other Historically Black Colleges and Universities (HBCUs)?*

First, the new peer group was defined and is listed with characteristics in Table 10. All of the schools included in the group are religiously affiliated and are private. All but one has an open enrollment policy. The one that does not, St. Augustine's University was included because it has a student body that is majority (51%) male, similar to Lane College.

Table 10
*New Peer Comparison Group, Fall 2018 Data*

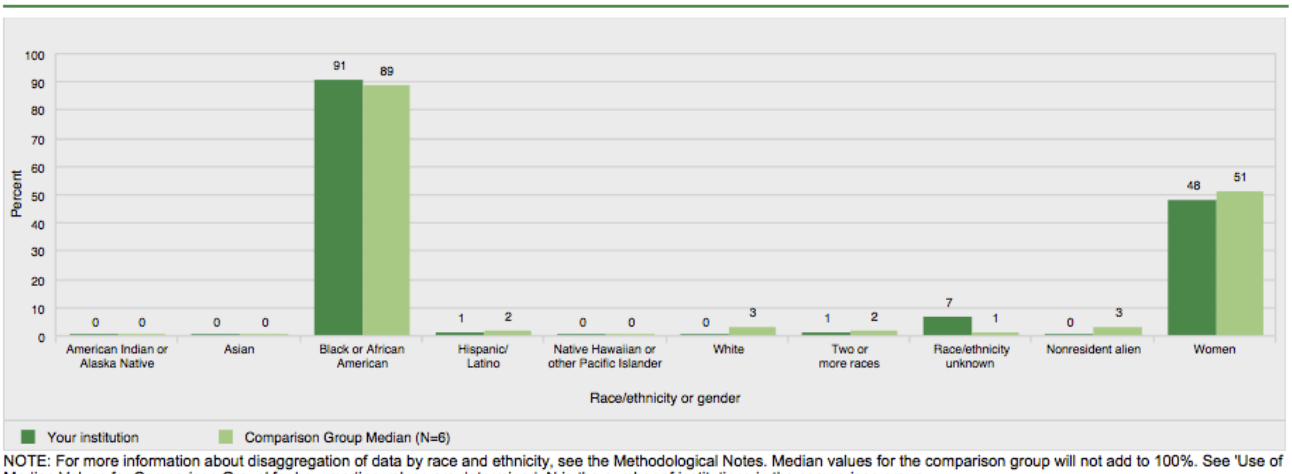
| Institution | Undergrad Enrollment | Tuition and Fees | Awarded Pell grant aid: 2017-18 | Percent In-State Residence | Percent Female | Retention Rate, Fall 2017-2018 | 6-Year Grad Rate, 2012 cohort | FTE Students : FTE Instructor | Distance Learning In Use |
|---|---|---|---|---|---|---|---|---|---|
| Talladega College | 1,208 | 13,571 | 85 | 22 | 49 | 70 | 24 | 22 | ✓ |
| Philander Smith College | 1,000 | 13,014 | 85 | 43 | 66 | 69 | 41 | 16 | ✓ |
| Texas College | 1,042 | 10,008 | 71 | 88 | 45 | 65 | 10 | 25 | ✗ |
| Benedict College | 2,165 | 16,600 | 85 | 54 | 52 | 57 | 29 | 17 | ✗ |
| Miles College | 1,550 | 12,132 | 91 | 66 | 53 | 54 | 24 | 16 | ✓ |
| Saint Augustine's University | 767 | 17,890 | 80 | 70 | 49 | 45 | 31 | 9 | ✓ |
| **PEER GRP AVG** | **1,289** | **13,869** | **83** | **57** | **52** | **60** | **27** | **18** | |
| Lane College | 1,232 | 11,500 | 91 | 62 | 48 | 50 | 24 | 18 | ✗ |

Table 10 indicates that Philander Smith College, similar to Lane in size of student body, open admissions, and student-instructor ratio, has a higher retention rate of 69% and graduation rate of 41%, the highest of this group. The big difference from this data is that Philander Smith College is comprised of 66% female students. The schools, that are majority male, like Lane College, are Talladega College, Texas College, and Saint Augustine's University. Talladega College boasts an impressive retention rate of 70%, and Texas College 65% for its first time, full-time freshman of Fall 2017, while Lane's retention rate for that cohort was 50%. However, Talladega College's graduation rate was only 24%, matching Lane's, and Texas College's was a mere 10%.

As mentioned earlier, IPEDS tools were used to create a Customized Data Feedback Report (Appendix 1), comparing Lane College to the median data points of the six identified new institutions. Further analysis of this data, related to retention and graduation, showed the following results.

Figure 9 shows all undergraduate race categories with the additional category of women undergraduates. Lane enrolls slightly more African-American students (91%) than it peer group institutions (89%). Lane is slightly below average of the peers, as Lane College serves a 48% female population, compared with the 51% that the peer group serves.

Figure 9
*Peer Comparison: All Enrolled Undergraduate students by Race and Women*

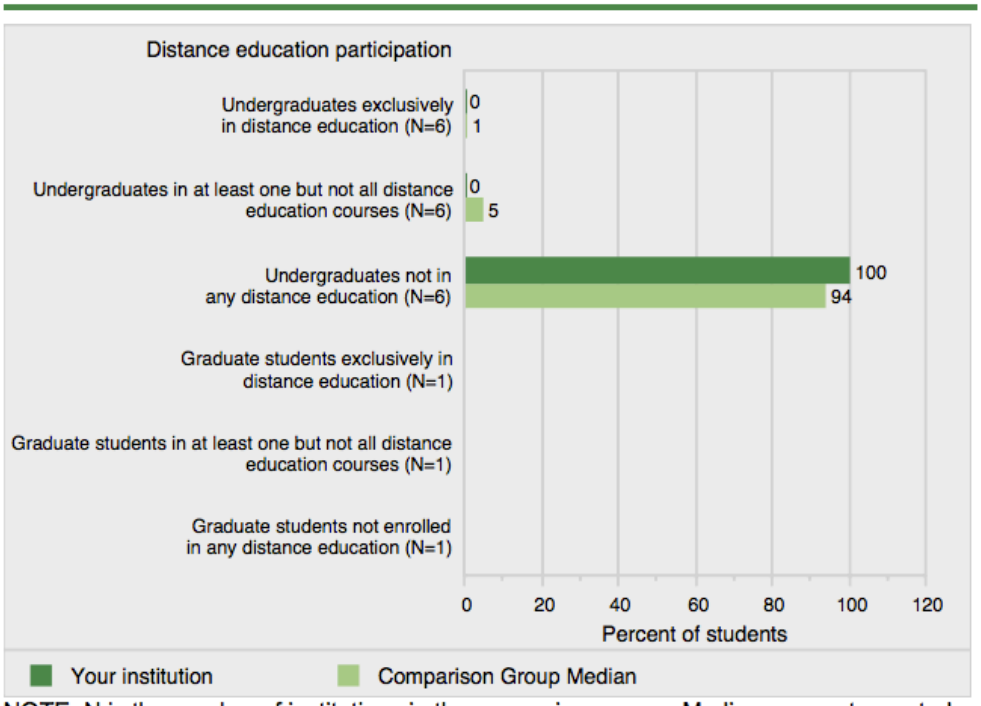



NOTE: For more information about disaggregation of data by race and ethnicity, see the Methodological Notes. Median values for the comparison group will not add to 100%. See 'Use of Median Values for Comparison Group' for how median values are determined. N is the number of institutions in the comparison group.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Spring 2019, Fall Enrollment component.

Figure 10 shows the percent of students taking courses online. Lane has no students taking part in online courses in comparison to its peer group that has only 6% of students taking part in online courses.

Figure 10

*Peer Comparison: Percent of Students enrolled in Distance Education Courses*



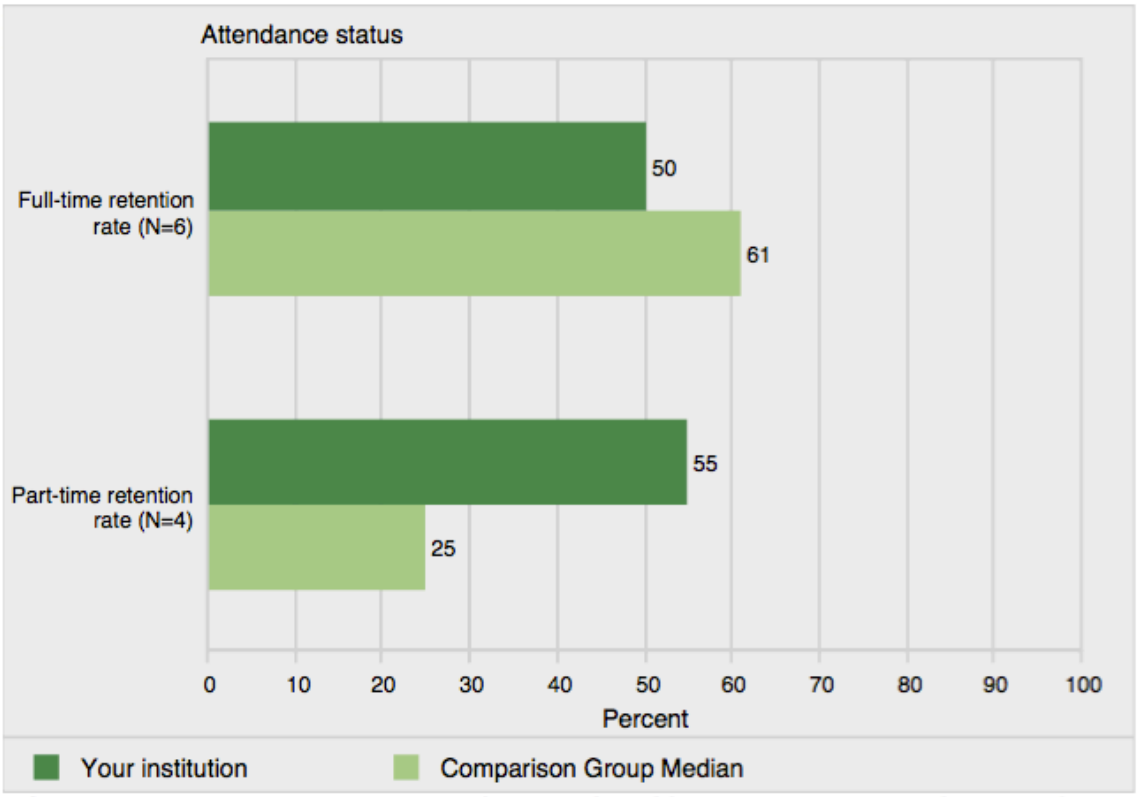

NOTE: N is the number of institutions in the comparison group. Medians are not reported for comparison groups with less than three values.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Spring 2019, Fall Enrollment component.

Figure 11 shows the fall-to-fall retention rate for full time students and for part time students. The peer group average fall-to-fall retention for full-time students is 61%, ranging from 45% to 70%. In contrast, the fall-to-fall retention rate for full-time students at Lane College is 11 percentage points lower than the peer group. It should be noted that 96% of the student body at Lane College is full-time, and with regard to part-time students, Lane College has a much lower fall to fall retention (25%) rate that the peer group (55%).

Figure 11

*Peer Comparison: Retention Rate, Fall 2017 Cohort*




NOTE: Retention rates are measured from the fall of first enrollment to the following fall. Academic reporting institutions report retention data as of the institution's official fall reporting date or as of October 15, 2017. Program reporters determine the cohort with enrollment any time between August 1-October 31, 2017 and retention based on August 1, 2018. Four-year institutions report retention rates for students seeking a bachelor's degree. For more details, see the Methodological Notes. N is the number of institutions in the comparison group.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Spring 2019, Fall Enrollment component.

# Limitations

The conclusions and recommendations advanced should be tempered with the following limitations in mind.

Firstly, the data file included data from five fall cohort years, but was limited to only one cohort year, Fall 2015, that included 4 years of data, in other words, in which students could earn degrees. If data were available to conduct this analysis with other previous cohorts before Fall 2015, trends in data could have been confirmed and other trends may have emerged. Also, from the data, it seems that some data points began to be collected at certain points in time, or were collected for some semesters and not all. For example, high school GPA would have been interesting to analyze, but Fall 2018 did not have high school GPA listed. A complete picture could not be gained because earlier year's data was not complete.

An area for further study would be transfer out data. If students who departed are going to other institutions, maybe there is a reason they begin at Lane and then move on, possibly using Lane somewhat like a community college. Additionally, trauma was identified early on in this project as one Lane College administrator's educated guess as to the low retention rate at Lane College; however, data related to trauma was not available for this study.

Finally, detailed retention data, besides a basic retention rate, for comparison with other institutions was not available.

# Discussion and Conclusion

This study began with a charge to use data to learn more about patterns and characteristics of the students who departed Lane College before earning a degree. It was discussed with Lane College that students at Lane were very similar in race and economic status – 93% African-American and 89% Pell award recipients. An investigation into the data was necessary to determine if the data held any answers to why some students succeeded at Lane, and some did not. Another outcome of the findings is a note of what other data elements are needed to draw further conclusions. In addition, these analysis efforts allowed for a picture of a successful student at Lane College to be drawn, along with common characteristics of those who depart. Key findings are presented as conclusions below, and connected to relevant research.

***Gender Matters*.** Female students are retained and graduate at higher rates than male students. Current research tells us that African-American men on HBCU campuses are not as successful as they once were. Lane College's student population, according to the 2018 IPEDS Data Feedback Report, was 54% male. Consistent with findings from researchers (Harper, Carini, Bridges & Hayek, 2004; Lundy-Wagner & Gasman, 2008: Palmer & Gasman, 2008) the academic success of African-American men at HBCUs is being impeded.

***Geographic Origin of Students Matters*.** Students from other states are retained and graduate at higher rates than students from Tennessee. Some institutions seek out of state students because they pay more tuition. Some factors that influence student choice could also play a role in student success once in college (Brown, Hernandez, Mitchell & Turner, 1999). For example, parents' education level and shared confidence in the college experience could lead to students choosing a school further away than students who are first generation college students.

Or, family income will allow students to pay the higher tuition at an out-of-state school. This data was not analyzed for students at Lane College, but are possible reasons for the finding.

***Living On Campus Matters.*** Regarding students who earned their degree in four years, it appears that 65 out of the 75 students who earned a degree from the Fall 2015 Cohort lived on campus, and this is true for a higher percentage of males than females.

***Semesters One and Two Matter.*** The majority of students who depart do so during their first two semesters. Although students depart at all semesters, the majority departs in the first two semesters at Lane College. Lane College stakeholders can identify students by major and semester in order to gather more data. Courses or instructors identified during these semesters could possible play a role in working more closely with students to retain them.

***Attending Class Matters.*** Students who earned degrees had higher average class attendance rates than those who departed. Class attendance rate is the number of times a student attended enrolled class meetings verses the total number of enrolled class meetings to attend. Graduates of the Fall 2015 cohort led with an average attendance rate of 73%, while those from that cohort that departed attended at a rate of 45%. Attendance is one element of success that Fowler notes in his 2007 study, in which students signed a contract that required them to attend their developmental classes 90% of the time.

***Defining Peer Institutions Matters***. Lane College has a peer comparison group defined by like characteristics, but still with differences in outcomes. No two institutions are the same, and even in defining a similar peer group, some that excel, and some that do not excel in retention and graduation rates surface. As Simms (2014) notes, "educational outcomes at HBCUs are cohesive and distinct from other institutional groups" (p. 7), however, this researcher believes that the differences we see here are evidence that each institution is unique within the

HBCU institutional group. Lane College has a lower retention rate (50%) than its peers' average (60%) and a lower graduation rate (24%) than its peers' average (27%), while enrollment (Lane's 1,232 and Peers' 1,289) and student to instructional staff ratios (Lane's 18 and Peers' 18) are similar or the same.

# Recommendations

We are guided by Tinto (1999), who suggests that institutions of higher education must recognize that there are four conditions of student success. Those conditions are expectations, support, feedback, and engagement. In order to improve student retention, data should be collected related to students, the situations they face, and the educational setting (West et al., 2016).

Based on findings of this study and current literature already cited in this report, the following recommendations are respectfully shared with Lane College:

**Recommendation #1: Continue targeting students at risk for departure by using specific data of student characteristics and choices.** The early alert system that Lane has recently rolled out can help identify students at risk of departing. Institutions can use their own longitudinal data around student departure to build the early alert system, to track specific characteristics or choices that have arisen in the data indicating a student is more likely to depart. Characteristics or choices noted by this study, if not already included, to include in an early alert system:

- Students who fail to attend 90% or more of their classes.
- Students in first and second semester of all Majors.
- Students in third and fourth semester of the following Majors: English, Mass Communications, Computer Science and Mathematics
- Female and Male students living off-campus
- Female and Male students from Tennessee
- Students who start as first-time full-time freshman in Spring semesters

In addition to working with students who are still enrolled, it is important to track students who depart, and target departed students for re-entry.

**Recommendation #2: Define a peer comparison group specifically for retention and completion improvement goals, and conduct case study on a successful peer.** While this study defined a smaller peer group for its analysis, it is recommended that Lane College use statistical methodologies in conjunction with other political and field knowledge to define a peer group that could be used specifically in efforts to increase retention and completion. One might use this study to conclude, for example, that students that depart Lane College are typically males from in-state (Tennessee) who live off-campus, have low attendance rates, and are in the majors of Business or Interdisciplinary Studies. This is just an example, but could be used to locate peer institutions with similar characteristics of departing students. A smaller comparison group may lead to identifying partner institutions that could share specific strategies that work. Several institutions use cluster analysis, a system of organizing members into groups that share common characteristics or properties to a high degree of association (Luna, 2018; McLaughlin et al., 2011).

Of the six peer institutions defined by this study, the one with the highest first year, first time freshman retention rate is Talladega College (70%). The institution of the six with the highest 6-year graduation rate is Philander Smith College (41%). It is recommended that Lane College conduct a case study and document review to determine causes of success at Philander Smith College because of its somewhat similar student population demographics, and location. There are clear differences, such as Philander Smith's 66% female student body, but a more in-depth study would reveal success factors for particular defined student groups.

**Recommendation #3: Build a more encompassing and cohesive data collection system.** Data used for this study provided an opportunity to gain some insight into the students at Lane College, and additionally, to determine other ways to improve the data collection system by noting data needs throughout the analysis. Two ways in which the data collection system at Lane may be improved are collecting more data points and connecting systems across campus.

***More data points***

Anecdotal conversations with agents of Lane College make it clear that data collection for the purposes of improving student retention is being refined. In order to collect more information about students' academic and social choices, experiences and perspectives, more data is needed. For instance, including student engagement data is key to predictive analytic initiatives (Burke, Parnell, Wesaw, & Kruger, 2017). Student affairs offices are usually the ones on the implementation side of intervention strategies for at-risk students, but the data collected by this area, engagement data, are usually not included in predictive analytics. Baker et al. (2018) is very clear that HBCUs offer a "distinctive, supportive environment" that leads to student persistence. Capturing data related to this, which may include data points related to student engagement, mentoring relationships, and the approach to student conduct/care at Lane.

The study by Burke, Parnell, Wesaw, & Kruger (2017) focused on the success of some institutions using card swipe technology to collect information regarding student touch points on campus. Although the hardware is expensive, campuses that use this claim it is more accurate and consistent than other collection methods, and allows for a clean connection between student affairs and academic affairs data (Burke et al., 2017).

The area of Learning Analytics, which is the, "measurement, collection, analysis and reporting of data about learners and their contexts, for purposes of understanding and optimizing

learning and the environments in which it occurs (Siemans & Long, 2011, p.34 in West et al., 2016). As West et al. (2016) point out, student retention, success and engagement correspond with learning analytics. Collecting this data would be extremely helpful in identifying how students are experiencing expectations, support, feedback and engagement in the classroom.

Additional data elements that are also important to analyze are those related to student engagement are participation in Greek life and participation in the work force.

***Connecting data systems***

With an institutional commitment by many departments to increase undergraduate retention at Lane College, a plan that garners strong partnerships between campus functions, with particular focus on information technology and institutional research, is achievable. High levels of coordination between the units that collect and analyze student data, with individual capacity across those units to interpret data/results will lead to more agents of the institution using the data to inform decisions related to interventions for student success. The early alert system Lane College identifies at-risk students, and if this could be connected to student engagement, behavioral and learning analytic data, the more able administrators would be to assess each student's need for support.

This study contributes to Lane College's efforts to improve its student retention rate. By analyzing institutional data, reviewing current literature related to key data elements and HBCUs, and identifying a peer comparison group focused on retention, the three recommendations are offered.

# References


Baker, D. J., Arroyo, A. T., Braxton, J. M., Gasman, M., & Francis, C. H. (2018). Expanding the Student Persistence Puzzle to Minority Serving Institutions: The Residential Historically Black College and University Context. Journal of College Student Retention: Research, Theory & Practice. https://doi.org/10.1177/1521025118784030

Braxton, J., Doyle, W., Hartley, H., Hirschy, A., Jones, W., & McLendon, M. (2014). *Rethinking college student retention.* (First edition.). San Francisco: Jossey Bass.

Bengfort, Jacquelyn. (August 2017). *Colleges embrace data analytics to improve student retention.* EdTech. https://edtechmagazine.com/higher/article/2017/08/colleges-embrace-data-analytics-improve-student-retention

Brown, R. C., Hernandez, M. Y., Mitchell, T. D., & Turner, C. R. (1999). Factors influencing student college choice between in-state and out-of-state students. *Journal of the Student Personnel Association at Indiana University*, 30-44.

Burke, M., Parnell, A., Wesaw, A., & Kruger, K. (April 2017). Predictive analysis of student data. *NASPA: Student Affairs Administrators in Higher Education*, from https://www.naspa.org/images/uploads/main/PREDICTIVE_FULL_4-7-17_DOWNLOAD.pdf

Fowler, Paul. (2007.) Three elements for success: attendance, tutoring and advising. *NADE Digest. 3*(1). https://files.eric.ed.gov/fulltext/EJ1097758.pdf

Harper, S., Carini, R., Bridges, B., & Hayek, J. (2004). Gender differences in student engagement among African American undergraduates at Historically Black Colleges and Universities. *Journal of College Student Development, 45*(3), 271–284. https://doi.org/10.1353/csd.2004.0035

Hinrichs, P. (March 2019). *Custom comparison groups in the Integrated Postsecondary Education Data System*. Economic Commentary, from https://www.clevelandfed.org/en/newsroom-and-events/publications/economic-commentary/2019-economic-commentaries/ec-201904-custom-comparison-groups.aspx

Lane College. (2018). *Lane College Characteristics: Fact Book 2018-19*, from https://www.lanecollege.edu/text/LANE%20COLLEGE%202018-2019%20FACT%20BOOK.pd

Luna, A. (Fall 2018). (Fall 2018). *Austin Peay State University White Paper Series: Selecting peer institutions using cluster analysis*. https://www.apsu.edu/dsir/reports/apsu_white_paper_peer_final.pdf

Lundy-Wagner, V., & Gasman, M. (2011). When gender issues are not just about women: Reconsidering male students at Historically Black Colleges and Universities. *Teachers College Record*, *113*(5), 934–968, from https://catalog.library.vanderbilt.edu/permalink/01VAN_INST/11nigse/eric_sEJ931361

Mah, D. (2016). Learning analytics and digital badges: Potential impact on student retention in higher education. *Technology, Knowledge and Learning, 21*(3), 285–305. https://doi.org/10.1007/s10758-016-9286-8

Martinez, Eligio. (2010, January). *Lane College (1882-),* from https://www.blackpast.org/african-american-history/lane-college-1882/

McLaughlin, G., Howard, R., McLaughlin, J. (2011). Forming and using peer groups based on

Nearest Neighbors with IPEDS data. *AIR Annual Forum*, from https://files.eric.ed.gov/fulltext/ED531716.pdf

NCES IPEDS. (May 2018). *Undergraduate Retention and Graduation Rates*, from https://nces.ed.gov/programs/coe/pdf/Indicator_CTR/coe_ctr_2018_05.pdf

Palmer, R., & Gasman, M. (2008). "It Takes a Village to Raise a Child": The role of social capital in promoting academic success for African American men at a Black college. (Author abstract)(Report). *Journal of College Student Development*, from https://catalog.library.vanderbilt.edu/permalink/01VAN_INST/11nigse/proquest195179753

Palmer, R., Wood, J., & Arroyo, A. (2015). Toward a model of retention and persistence for Black men at Historically Black Colleges and Universities (HBCUs). *Spectrum: A Journal on Black Men, 4*(1), 5–20. https://doi.org/10.2979/spectrum.4.1.02

Schmarzo, B. (Sept 2017). Using big data to improve retention and graduation rates. *Educause Review*, from https://er.educause.edu/blogs/sponsored/2017/9/using-big-data-to-improve-retention-and-graduation-rates

Raju, D., & Schumacker, R. (2015). Exploring student characteristics of retention that lead to graduation in higher education using data mining models. *Journal of College Student Retention: Research, Theory & Practice*, 16(4), 563–591. https://doi.org/10.2190/CS.16.4.e

Shapiro, D., Ryu, M., Huie, F., Liu, Q., & Zheng, Y. (Dec 2019). *Completing college 2019 national report (Signature Report 18),* Herndon, VA: National Student Clearinghouse Research Center, from https://nscresearchcenter.org/wp-content/uploads/Completions_Report_2019.pdf

Simms, K. (2014). Educational Outcomes at Historically Black Colleges and Universities: Eclectic or Cohesive? *SAGE Open*, *4*(2), 1–9. https://doi.org/10.1177/2158244014530131

Tinto, V. (1999) Taking retention seriously: Rethinking the first year of college. *NACADA Journal*. 19 (2), 5-9. https://doi.org/10.12930/0271-9517-19.2.5

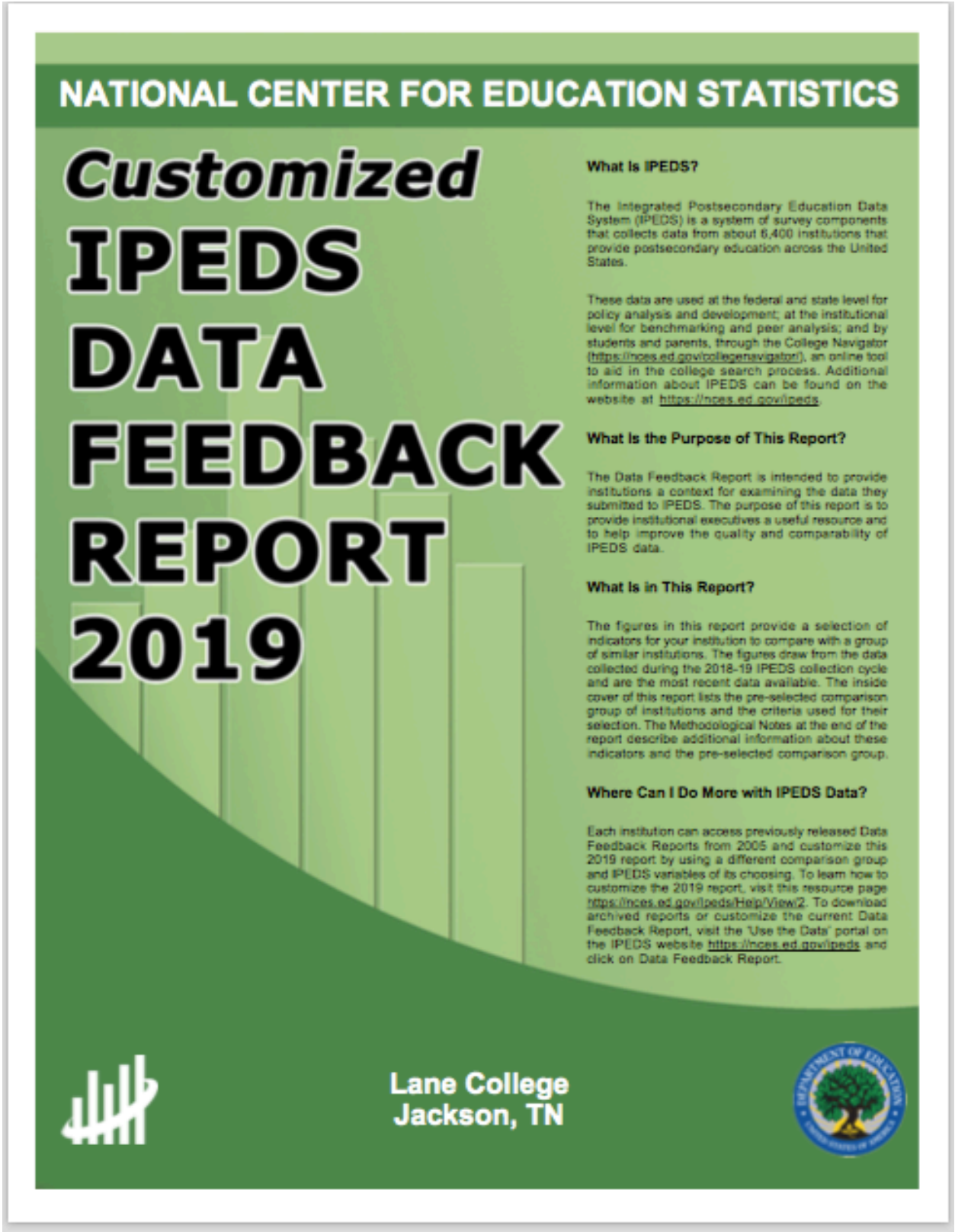
United States Department of Labor (n.d.) *White house initiative on historically black colleges and universities,* from https://www.dol.gov/ofccp/HBCUInitiative/WhiteHouse.html

West, D., Huijser, H., Heath, D., Lizzio, A., Toohey, D., Miles, C., Searle, B., & Bronnimann, J. (2016). Higher education teachers' experiences with learning analytics in relation to student retention. *Australasian Journal of Educational Technology*, *32*(5), 48–60. https://doi.org/10.14742/ajet.3435

Wintrup, J. (2017). Higher education's panopticon? learning analytics, ethics and student engagement. *Higher Education Policy, 30*(1), 87-103, from http://login.proxy.library.vanderbilt.edu/login?url=https://search-proquest-com.proxy.library.vanderbilt.edu/docview/1878784522?accountid=14816

# Appendices

**Appendix 1**


NATIONAL CENTER FOR EDUCATION STATISTICS
Customized
IPEDS
DATA
FEEDBACK
REPORT
2019
What Is IPEDS?
The Integrated Postsecondary Education Data System (IPEDS) is a system of survey components that collects data from about 6,400 institutions that provide postsecondary education across the United States.
These data are used at the federal and state level for policy analysis and development; at the institutional level for benchmarking and peer analysis; and by students and parents, through the College Navigator (https://nces.ed.gov/collegenavigator/), an online tool to aid in the college search process. Additional information about IPEDS can be found on the website at https://nces.ed.gov/ipeds.
What Is the Purpose of This Report?
The Data Feedback Report is intended to provide institutions a context for examining the data they submitted to IPEDS. The purpose of this report is to provide institutional executives a useful resource and to help improve the quality and comparability of IPEDS data.
What Is in This Report?
The figures in this report provide a selection of indicators for your institution to compare with a group of similar institutions. The figures draw from the data collected during the 2018-19 IPEDS collection cycle and are the most recent data available. The inside cover of this report lists the pre-selected comparison group of institutions and the criteria used for their selection. The Methodological Notes at the end of the report describe additional information about these indicators and the pre-selected comparison group.
Where Can I Do More with IPEDS Data?
Each institution can access previously released Data Feedback Reports from 2005 and customize this 2019 report by using a different comparison group and IPEDS variables of its choosing. To learn how to customize the 2019 report, visit this resource page https://nces.ed.gov/ipeds/Help/View/2. To download archived reports or customize the current Data Feedback Report, visit the 'Use the Data' portal on the IPEDS website https://nces.ed.gov/ipeds and click on Data Feedback Report.
Lane College
Jackson, TN

## COMPARISON GROUP

Comparison group data are included to provide a context for interpreting your institution's statistics. For this report, you specified a custom comparison group.

The custom comparison group chosen by Lane College includes the following 6 institutions:

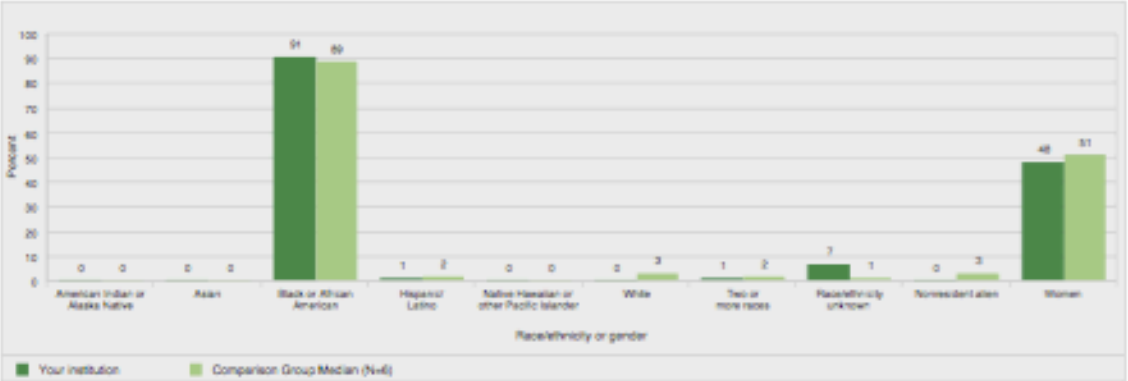
- Benedict College (Columbia, SC)
- Miles College (Fairfield, AL)
- Philander Smith College (Little Rock, AR)
- Saint Augustine's University (Raleigh, NC)
- Talladega College (Talladega, AL)
- Texas College (Tyler, TX)

**The figures in this report have been organized and ordered into the following topic areas:**

| | | |
|---|---|---|
| 1) Admissions (only for non-open-admissions schools) | [No charts applicable] | |
| 2) Student Enrollment | Fig. 1 and 2 | Pg. 3 |
| 3) Awards | Fig. 3 | Pg. 3 |
| 4) Charges and Net Price | [No charts applicable] | |
| 5) Student Financial Aid | Fig. 4 | Pg. 4 |
| 6) Military Benefits* | [No charts applicable] | |
| 7) Retention and Graduation Rates | Fig. 5, 6 and 7 | Pg. 4 |
| 8) Finance | [No charts applicable] | |
| 9) Staff | Fig. 8 | Pg. 5 |
| 10) Libraries* | [No charts applicable] | |

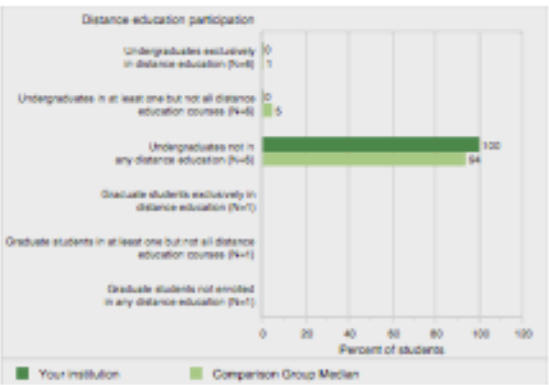
*These figures only appear in customized Data Feedback Reports (DFR), which are available through Use the Data portal on the IPEDS website.

**Figure 1. Percent of all undergraduate students enrolled, by race/ethnicity, and percent of students who are women: Fall 2018**



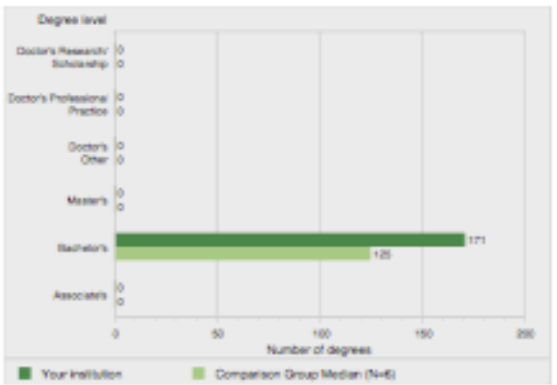

NOTE: For more information about disaggregation of data by race and ethnicity, see the Methodological Notes. Median values for the comparison group will not add to 100%. See 'Use of Median Values for Comparison Group' for how median values are determined. N is the number of institutions in the comparison group.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Spring 2019, Fall Enrollment component.

**Figure 2. Percent of students enrolled in distance education courses, by amount of distance education and student level: Fall 2018**




NOTE: N is the number of institutions in the comparison group. Medians are not reported for comparison groups with less than three values.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Spring 2019, Fall Enrollment component.

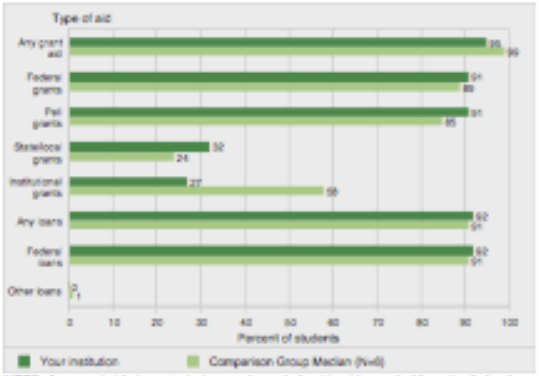
**Figure 3. Number of degrees awarded, by level: 2017-18**




NOTE: For additional information about postbaccalaureate degree levels, see the Methodology Notes. N is the number of institutions in the comparison group.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Fall 2018, Completions component.

## Lane College

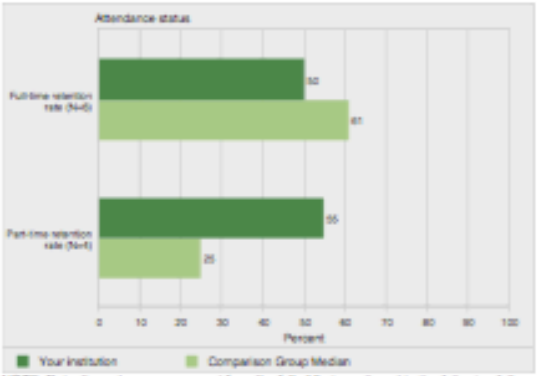
**Figure 4. Percent of full-time, first-time degree/certificate-seeking undergraduate students who were awarded grant or scholarship aid from the federal government, state/local government, or the institution, or loans, by type of aid: 2017-18**




NOTE: Any grant aid above includes grant or scholarship aid awarded from the federal government, state/local government, or the institution. Federal grants includes Pell grants and other federal grants. Any loans includes federal loans and other loans awarded to students. For details on how students are counted for financial aid reporting, see Cohort Determination in the Methodological Notes. N is the number of institutions in the comparison group.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Winter 2018-19, Student Financial Aid component.

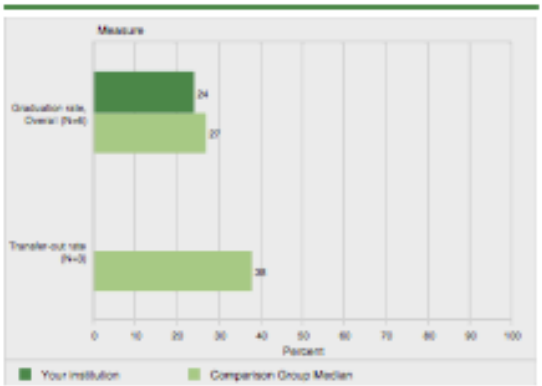
**Figure 5. Retention rates of first-time bachelor's degree seeking students, by attendance status: Fall 2017 cohort**




NOTE: Retention rates are measured from the fall of first enrollment to the following fall. Academic reporting institutions report retention data as of the institution's official fall reporting date or as of October 15, 2017. Program reporters determine the cohort with enrollment any time between August 1-October 31, 2017 and retention based on August 1, 2018. Four-year institutions report retention rates for students seeking a bachelor's degree. For more details, see the Methodological Notes. N is the number of institutions in the comparison group.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Spring 2019, Fall Enrollment component.

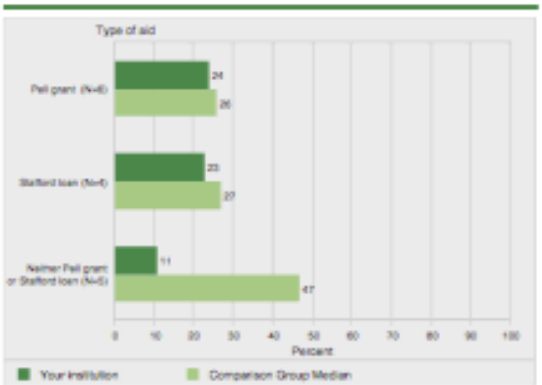
**Figure 6. Graduation and transfer-out rates of full-time, first-time degree/certificate-seeking undergraduates within 150% of normal time to program completion: 2012 cohort**




NOTE: Graduation rate cohort includes all full-time, first-time degree/certificate-seeking undergraduate students. Graduation and transfer-out rates are the Student Right-to-Know rates. Only institutions with mission to prepare students to transfer are required to report transfer out. For more details, see the Methodological Notes. N is the number of institutions in the comparison group.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Winter 2018-19, Graduation Rates component.

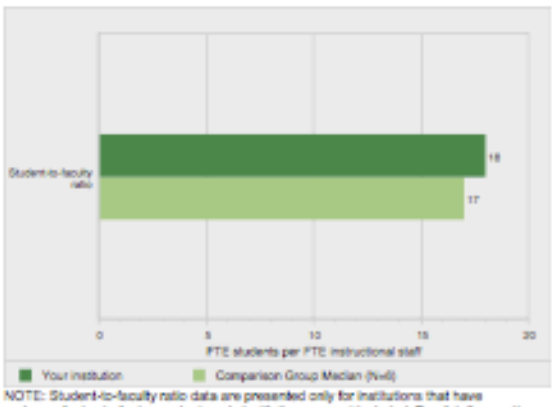
**Figure 7. Graduation rates of full-time, first-time degree/certificate-seeking undergraduates within 150% of normal time to program completion, by type of aid: 2012 cohort**




NOTE: Graduation rate cohort includes all full-time, first-time degree/certificate-seeking undergraduate students. Data were collected on those students, who at entry of the cohort, were awarded a Pell Grant and students who were awarded a Subsidized Stafford loan, but did not receive a Pell Grant. Graduation rates are the Student Right-to-Know rates. For more details, see the Methodological Notes. N is the number of institutions in the comparison group.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Winter 2018-19, Graduation Rates component.

**Figure 8. Student-to-faculty ratio: Fall 2018**




NOTE: Student-to-faculty ratio data are presented only for institutions that have undergraduate students; graduate only institutions are not included. For details, see the Methodological Notes. N is the number of institutions in the comparison group.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS): Spring 2019, Fall Enrollment component.

## Lane College

### METHODOLOGICAL NOTES

#### Overview

This report is based on data supplied by institutions to IPEDS during 2018-19 data collection year. Response rates exceeded 99% for most surveys. IPEDS First Look reports at https://nces.ed.gov/pubsearch/getpubcats.asp?sid=010 provide some information on aggregate institutional responses. Furthermore, data used in this report are provisional level and may be revised for a limited time through the IPEDS Prior Year Revision system.

#### Use of Median Values for Comparison Group

This report compares your institution's data to the median value for the comparison group for each statistic shown in the figure. If more than one statistic is present in a figure, the median values are determined separately for each indicator or statistic. Medians are not displayed for comparison groups with fewer than three values. Where percentage distributions are presented, median values may not add to 100%. To access all the data used to create the figures included in this report, go to 'Use the Data' portal on the IPEDS website at this provided link (https://nces.ed.gov/ipeds).

#### Missing Statistics

If a statistic is not reported for your institution, the omission indicates that the statistic is not relevant to your institution and the data were not collected. Not all notes may be applicable to your report.

#### Use of Imputed Data

All IPEDS data are subject to imputation for total (institutional) and partial (item) nonresponse. If necessary, imputed values were used to prepare your report.

#### Data Confidentiality

IPEDS data are not collected under a pledge of confidentiality.

#### Disaggregation of Data by Race/Ethnicity

When applicable, some statistics are disaggregated by race/ethnicity. Data disaggregated by race/ethnicity have been reported using the 1997 Office of Management and Budget categories. Detailed information about the race/ethnicity categories can be found at https://nces.ed.gov/ipeds/Section/Resources.

#### Cohort Determination for Reporting Student Financial Aid, Graduation Rates, and Outcome Measures

Student cohorts for reporting Student Financial Aid and Graduation Rates data are based on the reporting type of the institution. For institutions that report based on an academic year (those operating on standard academic terms), student counts and cohorts are based on fall term data. Student counts and cohorts for program reporters (those that do not operate on standard academic terms) are based on unduplicated counts of students enrolled during a full 12-month period.

Student cohorts for reporting Outcome Measures are based on a full-year cohort from July 1-June 30 for all degree-granting institutions.

### DESCRIPTION OF STATISTICS USED IN THE FIGURES

#### Admissions (only for non-open-admissions schools)

*Admissions and Test Score Data*

Admissions and test score data are presented only for institutions that do not have an open admission policy, and apply to first-time, degree/certificate-seeking undergraduate students only. Applicants include only those students who fulfilled all requirements for consideration for admission and who were notified of one of the following actions: admission, non-admission, placement on a wait list, or application withdrawn (by applicant or institution). Admitted applicants (admissions) include wait-listed students who were subsequently offered admission. Early decision, early action, and students who began studies during the summer prior to the fall reporting period are included. For customized Data Feedback Reports, test scores are presented only if scores are required for admission.

## Student Enrollment

*Enrollment Counts*

12-month Enrollment captures a cumulative unduplicated headcount of enrollment over the full 12-month period beginning July 1 and ending June 30. In contrast, Fall Enrollment captures number of students enrolled on a particular date in the fall. Fall enrollment is often referred to as a "snapshot" of an institution's enrollment at a specific time.

*FTE Enrollment*

The full-time equivalent (FTE) enrollment used in this report is the sum of the institution's FTE undergraduate enrollment and FTE graduate enrollment (as calculated from or reported on the 12-month Enrollment component). Undergraduate and graduate FTE are estimated using 12-month instructional activity (credit and/or contact hours). See "Calculation of FTE Students (using instructional activity)" in the IPEDS Glossary at https://surveys.nces.ed.gov/ipeds/VisGlossaryAll.aspx.

*Total Entering Undergraduate Students*

Total entering students are students at the undergraduate level, both full- and part-time, new to the institution in the fall term (or the prior summer term who returned in the fall). This includes all first-time undergraduate students, students transferring into the institution at the undergraduate level, and non-degree/certificate-seeking undergraduates entering in the fall. Only degree-granting, academic year reporting institutions provide total entering student data.

## Completions

*Completions and Completers*

Completions collects data on undergraduate and graduate completions and completers in a 12-month period. Completions are the counts of postsecondary awards granted where each award reported once but multiple awards may be reported for one recipient. Completers are the counts of students granted postsecondary awards. The count of completers is collected in two ways. The first way counts all completers, while the second way counts completers by award level (e.g., number of associate's completers, number of bachelor's completers).

## Charges and Net Price

*Average Institutional Net Price*

IPEDS collects data to calculate average net price at each institution for two groups of undergraduate students: those awarded grant aid and those awarded Title IV federal aid.

Average net price is calculated for full-time, first-time degree/certificate-seeking undergraduates who were awarded grant or scholarship aid from the federal government, state/local government, or the institution anytime during the full aid year. For public institutions, this includes only students who paid the in-state or in-district tuition rate. Other sources of grant aid are excluded. Average net price is generated by subtracting the average amount of federal, state/local government, and institutional grant and scholarship aid from the total cost of attendance. Total cost of attendance is the sum of published tuition and required fees, books and supplies, and the average room and board and other expenses.

For the purpose of the IPEDS reporting, aid awarded refers to financial aid that was awarded to, and accepted by, a student. This amount may differ from the aid amount that is disbursed to a student.

## Student Financial Aid

*Financial Aid Recipients and Amounts*

Student Financial Aid collects the counts of undergraduate students awarded different types of financial aid and the total amounts of aid awarded. The average dollar amount of aid awarded is then calculated. In addition, Student Financial Aid collects counts of full-time, first-time undergraduate student awarded aid and amounts of aid, and counts of undergraduate and graduate students receiving military educational benefits.

## Lane College

### Military Benefits

*Military Benefits*

IPEDS collects data on two military educational benefit programs – Post 9/11 GI Bill and Tuition Assistance.

The Post 9/11 GI Bill is a federal education benefit for veterans, who served on active duty after September 1, 2001. This benefit provides up to 36 months of education benefits for the following college costs: tuition and fees, books and supplies and housing. The tuition and fees benefit payment is made directly to the postsecondary institution; whereas, payments for books, supplies, and housing are sent to the student.

The Tuition Assistance Program covers the tuition and course-specific fees of active, eligible service members. The benefit is directly paid to the institution by the service member's Armed service.

### Retention, Graduation Rates, and Outcome Measures

*Retention Rates*

Retention rates are measures of the rate at which students persist in their educational program at an institution, expressed as a percentage. For four-year institutions, this is the percentage of first-time bachelors (or equivalent) degree-seeking undergraduates from the previous fall who are again enrolled in the current fall. For all other institutions this is the percentage of first-time degree/certificate-seeking students from the previous fall who either re-enrolled or successfully completed their program by the current fall. The full-time retention rate is calculated using the percentage of full-time, first-time degree/certificate-seeking undergraduates, while the part-time rate is calculated using the percentage of part-time, first-time degree/certificate-seeking undergraduates.

*Graduation Rates and Transfer-out Rate*

Graduation rates are those developed to satisfy the requirements of the Student Right-to-Know Act and Higher Education Act, as amended, and are defined as the total number of individuals from a given cohort of full-time, first-time degree/certificate-seeking undergraduates who completed a degree or certificate within a given percent of normal time to complete all requirements of the degree or certificate program; divided by the total number of students in the cohort of full-time, first-time degree/certificate-seeking undergraduates minus any allowable exclusions. Institutions are permitted to exclude from the cohort students who died or were totally and permanently disabled; those who left school to serve in the armed forces or were called up to active duty; those who left to serve with a foreign aid service of the federal government, such as the Peace Corps; and those who left to serve on an official church mission.

A further extension of the traditional Graduation Rates (GR) component which carries forward 100% and 150% graduation rates data previously reported in the GR component is the Graduation Rates 200% (GR200) component, which requests information on any additional completers and exclusions from the cohort between 151% and 200% normal time for students to complete all requirements of their program of study.

Transfer-out rate is the total number of students from the cohort who are known to have transferred out of the reporting institution (without earning a degree/award) and subsequently re-enrolled at another institution within the same time period; divided by the same adjusted cohort (initial cohort minus allowable exclusions) as described above. Only institutions with a mission that includes providing substantial preparation for students to enroll in another eligible institution are required to report transfers out.

*Outcome Measures Data*

Alternative measures of student success are reported by degree-granting institutions to describe the outcomes of four degree/certificate-seeking undergraduate student groups: First-time, full-time (FTFT); First-time, part-time (FTPT); Non-first-time, full-time entering (NFTFT); and Non-first-time, part-time entering (NFTPT). Additionally, each of the four cohorts collects data on two subcohorts: Pell grant recipients and non-Pell grant recipients. These measures provide the 4-year, 6-year, and 8-year award rates (or completions rates) after entering an institution. NCES calculates award rates by dividing a cohort's or subcohort's adjusted cohort into the number of total awards at 4-year, 6-year, and 8-year status points.

The initial cohort can be revised and take allowable exclusions resulting in an adjusted cohort. Institutions are permitted to exclude from the initial cohort students who died or were totally and permanently disabled; those who left school to serve in the armed forces or were called up to active duty; those who left to serve with a foreign aid service of the federal government, such as the Peace Corps; and those who left to serve on an official church mission.

The highest award and the type of award (i.e., certificate, Associate's, or Bachelor's) are reported at each status point. For students who did not earn an undergraduate award after 8-years of entry, the enrollment statuses are reported as either still enrolled at the institution, or subsequently transferred out of the institution. Unlike the Graduation Rates data, all institutions must report on a full-year cohort (students entering July 1 of one year to June 30 to the next) and on their transfer out students, regardless if the institution has a mission that provides substantial transfer preparation.

## Finance

*Core Revenues*

Core revenues for public institutions reporting under GASB standards include tuition and fees; government (federal, state, and local) appropriations and operating and nonoperating grants/contracts; private gifts, grants, and contracts (private operating grants/contracts plus gifts and contributions from affiliated entities); sales and services of educational activities; investment income; other operating and nonoperating sources; and other revenues and additions (capital appropriations and grants and additions to permanent endowments). "Other core revenues" include federal appropriations, sales and services of educational activities, other operating and nonoperating sources, and other revenues and additions.

Core revenues for private, not-for-profit institutions (and a small number of public institutions) reporting under FASB standards include tuition and fees; government (federal, state, and local) appropriations and grants/contracts; private gifts, grants and contracts (including contributions from affiliated entities); investment return; sales and services of educational activities; and other sources (a generated category of total revenues minus the sum of core and noncore categories on the Finance component). "Other core revenues" include government (federal, state, and local) appropriations, sales and services of educational activities, and other sources.

Core revenues for private, for-profit institutions reporting under FASB standards include tuition and fees; government (federal, state, and local) appropriations and grants/contracts; private grants/ contracts; investment income; sales and services of educational activities; and other sources (a generated category of total revenues minus the sum of core and noncore categories on the Finance component). "Other core revenues" include government (federal, state, and local) appropriations and other sources.

At degree-granting institutions, core revenues exclude revenues from auxiliary enterprises (e.g., bookstores and dormitories), hospitals, and independent operations. Non-degree-granting institutions do no report revenue from auxiliary enterprises in a separate category, and thus may include these amounts in the core revenues from other sources.

*Core Expenses*

Core expenses include expenses for instruction, research, public service, academic support, institutional support, student services, grant aid/scholarships and fellowships (net of discounts and allowances), and other functional expenses (a generated category of total expense minus the sum of core and noncore functions on the Finance component). Expenses for operation and maintenance of plant, depreciation, and interest are allocated to each of the other functions. Core expenses at degree-granting institutions exclude expenses for auxiliary enterprises (e.g., bookstores and dormitories), hospitals, and independent operations. Non-degree-granting institutions do not report expenses for auxiliary enterprises in a separate category and thus may include these amounts in the core expenses as other expenses. "Other core expenses" is the sum of grant aid/scholarships and fellowships and other expenses.

*Endowment Assets*

Endowment assets, for public institutions under GASB standards, and private, not-for-profit institutions under FASB standards, include gross investments of endowment funds, term endowment funds, and funds functioning as endowment for the institution and any of its foundations and other affiliated organizations. Private, for-profit institutions under FASB do not hold or report endowment assets.

*Salaries and Wages*

Salaries and wages for public institutions under GASB standards and private (not-for-profit and for-profit) institutions under FASB standards, include amounts paid as compensation for services to all employees regardless of the duration of service, and amounts made to or on behalf of an individual over and above that received in the for of a salary or wage.

## Staff

*FTE Staff*

The full-time-equivalent (FTE) by occupational category is calculated by summing the total number of full-time staff and adding one-third of the total number of part-time staff. Graduate assistants are not included.

*Equated Instructional Non-Medical Staff Salaries*

Institutions reported the number of full-time nonmedical instructional staff and their salary outlays by academic rank, gender, and the number of months worked (9-, 10-, 11-, and 12-months). Salary outlays for staff who worked 10-, 11-, and 12-months were equated to 9-months of work by multiplying the outlays reported for 10-months by 0.90, the outlays reported for 11 months by 0.818, and the outlays reported for 12-months by 0.75. The equated 10-, 11-, and 12-outlays were then added to the outlays for instructional staff that worked 9-months to generate a total 9-month equated salary outlay. The total 9-month equated outlay was then divided by total number of instructional non-medical staff to

determine an equated 9-month average salary. This calculation was done for each academic rank. Salary outlays were not reported for staff that work less than 9-months and were excluded.

*Student-to-Faculty Ratio*

Institutions can provide their institution's student-to-faculty ratio (i.e., student-to-instructional staff) for undergraduate programs or follow the NCES guidance in calculating their student-to-faculty ratio, which is as follows: the number of FTE students (using Fall Enrollment survey data) divided by total FTE instructional staff (using the total Primarily instruction + Instruction/research/public service staff reported in Human Resources component and adding any not primarily instructional staff that are teaching a credit course). For this calculation, FTE for students is equal to the number of the full-time students plus one-third the number of part-time students; FTE for instructional staff is similarly calculated. Students in "stand-alone" graduate or professional programs (such as, medicine, law, veterinary, dentistry, social work, or public health) and instructional staff teaching in these programs are excluded from the FTE calculations.

## Libraries

*Library Collections*

Collections comprise of documents held locally and remote resources for which permanent or temporary access rights have been acquired. Degree-granting institutions with total library expenditures greater than zero and/or had access to a library collection reported their physical books, media, and serials collections and their digital/electronic books, media, serials and database collections.

Digital/electronic books and media are reported by titles owned or leased by the library if individual titles are cataloged and/or searchable through the library catalog or discovery system. E-serials are reported by titles that are accessible through the library's catalog or discovery system. Digital and Electronic databases are reported by the total number of licensed digital/electronic databases in the institutions collection if there is bibliographic or discovery access at the database level.

Counts in each category (i.e., physical books, media, and serials as well as digital/electronic books, media, serials, and databases) are the number of held at the end of the most recent fiscal year. The percent distribution of each resource is derived by dividing the counts in each category by the total of all categories.

*Library Expenditures*

Library expenditures are funds expended by the library (regardless of when received) from its regular budget and from all other sources, reported for the most recent fiscal year. Salaries and wages are reported from the library budget or all other institutional sources that are identifiable. Fringe benefits are reported only if paid from the library budget. Degree-granting institutions with total library expenditures less than $100,000 were not required to report their expenditures to IPEDS. The percent distribution of each category of expense is derived by dividing each expense ategory by the sum of total library expenditure.

## Additional Resources

Additional methodological information on the IPEDS components can be found in the publications available at https://nces.ed.gov/pubsearch/getpubcats.asp?sid=010.

Additional definitions of variables used in this report can be found in the IPEDS online glossary available at this provided link https://surveys.nces.ed.gov/ipeds/VisGlossaryAll.aspx.

Visit the IPEDS Data Feedback Report resource page that provides instructions on creating a custom comparison report, FAQs, and video tutorials https://nces.ed.gov/ipeds/Help/View/2.