# Replacing the Student List Business

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## 1 Executive Summary

TEXT TEXT

## 2 Introduction

On February 21, 2020, represented by counsel, we issued a public records request to a public research university (herein "University X") seeking information about "student list" purchases. Student lists – sometimes referred to as "names" – contain the contact information of prospective students that meet the criteria (e.g., test score range, zip codes) specified in an order. They are the fundamental input for recruiting campaigns, which target individual prospects by mail, email, text, and on social media. Our records request sought (A) "order summary" – which lists the criteria specified – and (B) de-identified student list data for each student list purchase made by the university over the prior four years.

On April 27, 2020, University X responded to our request, "The university has a substantial and proprietary interest in maintaining the confidentiality of the documents you have requested. Accordingly, with the exception of the attached slide, the records requested will not be produced." The slide, titled "2016-2020 Name Purchases by Source," indicated that University X purchased about 816,000 names in 2016, including about 517,000 from College Board and 246,000 from ACT. In 2020 University X purchased about 1,251,000 names, including about 648,000 from College Board and 220,000.

The footer of the attached slide read "©EAB Global, Inc." We learned that EAB, an education consulting firm known for enrollment management, purchases student lists on behalf of University X. This became a barrier to our records request. University X General Counsel stated, on 12/7/2020, that "while [University X] indeed purchases student lists, the University does not actually have physical possession of such lists" and, on 1/27/2021, that "this is because [University X] does not receive anything directly from College Board or from ACT or other list sources. Rather, EAB, on [University X's] behalf, places the order, receives the data, and then [University X] is billed directly for it." An interesting aside, the Vice President for Enrollment management came to University of X after working as an enrollment consultant for EAB. Upon our request, University X asked if EAB could produce the records but EAB indicated they could not. As of December, 2021 – following X months of emails,

conference calls, and officious letters – we have not received the requested order summaries or student lists.

Our request to Unviersity X is part of a larger project – funded by the Joyce Foundation and Kresge Foundation and in partnership with the Lawyers' Committee for Civil Rights and the pro bono offices of four law firms – that issued public records requests to XX universities in five states in order to collect quantifiable data about student list purchases (and also off-campus recruiting visits). Each request is a protracted negotiation, often several negotiations.

We began this project on the heels of a project that used web-scraping and public records requests to collect data about off-campus recruiting events made by public research universities during the 2017 calendar year [CITE]. Most universities in our sample made fewer in-state than out-of-state visits and these out-of-state visits focused on affluent, predominantly white high schools, but a few universities did a "good" job of visiting schools across their state and without evidence of racial or socioeconomic bias. We initially approached the student list data collection with a similar focus of identifying which universities do a "good" job of reaching out to their surrounding community when purchasing student lists. However, we made two key observations that helped us realize that instead of focusing on university behavior we should focus on the student list products themselves and on the organizations that make money selling student data.

First, once we started analyzing the data, we observed that inequality in purchased vs. excluded names is a function of (A) who is included in the underlying database the student list product pulls from and (B) the set of filters that customers (universities) can utilize to select prospects. The dominant vendors of student list data are the testing organizations, College Board and ACT. Prospective students who do not take College Board (PSAT, SAT, AP) or ACT (PreACT, ACT) assessments are excluded from the underlying student list databases. Filters on College Board and ACT student list products encourage customers to purchase prospects based on their score range in a particular assessment. As an example, we observed many purchases that filtered on scoring of 3 or higher on any AP exam. But who attends high schools with widespread access to AP classes? Geographic filters additionally enable to customers to filter prospect based on state, county, metropolitan area, zip code. A more recent creation is filters that enable customers to select prospects based on the characteristics of their high school or their neighborhood (e.g., how many students from this school attended an out-of-state university). Yes, universities can choose which filters to apply, but these choices are structured by what the product allows.

Second, over the course of data collection we noticed that many universities outsourced student list purchases to an enrollment management consulting firm. Our records requests tended to be less successful in these cases. Following our experience with University X, we initially suspected that universities were using consulting firms as a wedge to withhold data. Over time, we realized that many universities simply did not understand what we were asking for because they had not purchased the lists themselves. EAB, an organization previously unknown to us, was the name that popped up most often, so we decided to learn more.

The EAB origin story begins in 1983, when Bill Royall founded Royall & Company to provide

direct marketing and fundraising for political campaigns. Royall & Company did not sign its first university client until 19XX, but buy 1995 universities became the primary focus. In 2015, the Advisory Board Company acquired Royall & Company for $850 million [CITE StreetInsider]. In 2017, Vista Equity Partners acquired the Royall & Company business for $1.5 billion and renamed it EAB. Under Vista Equity Partners, EAB has utilized acquisitions (e.g., Cappex college search engines) and alliances (e.g., Naviance software used by high school students) to become a substantial supplier of student list data. Like College Board and ACT, EAB controls proprietary student list data. But whereas any university can buy names from College Board and ACT, only EAB clients have access to the names controlled by EAB.

WHERE DOES THIS TEXT GO? At the time of our request, the three largest student list vendors nationwide were College Board, ACT, and National Research Center for College and University Admissions (NRCCUA). However in XX ACT purchased NRCCUA.

## 2.1 The Effects of Student Lists

What is the effect of student lists on college access outcomes for students? Howell, Hurwitz, Mabel, & Smith (2021) analyzed the college access outcomes of SAT test-takers who graduated from high school between 2015-2018. When registering for any College Board exam, students are given the opportunity to opt-in to the College Board Student Search Service, which enables universities to purchase their contact information. Howell, Hurwitz, Mabel, & Smith (2021) merged the database of SAT test-takers to college enrollment data from the National Student Clearinghouse in order to assess whether the college access outcomes of students who opted in to Student Search differed from those who opted out, controlling for covariates such as gender/sex, race/ethnicity, parental education, SAT score, and the high school they attended.

After controlling for covariates, 58.0% of students who participated in Search attended any college compared to 50.2% of students who opted out of Search, representing a 15.5% relative increase in the probability of college enrollment ((58-50.2)/50.2=15.5). 41.1% of students who participated in Search attended a 4-year college compared to 32.8% of students who opted out, representing a 25.3% relative increase in the probability of attending a 4-year college. Furthermore, change in the relative probability of attending a four-year college associated with opting in to Search out was higher for students who identified as Black (24.5%), Hispanic (34.4%), American Indian or Alaska Native (AI/AN) (23.8%), and Native Hawaian or Pacific Islander (26.1%) than it was for students who identified as White (21.6%) or Asian (15.2%). Similarly, change in the relative probability of attending a four-year college was higher for students whose parents did not attend college (40.6%), and students whose parents had some college but no BA (30.1%), than it was for students whose parents had a BA (18.9%).

Howell, Hurwitz, Mabel, & Smith (2021) also analyzed the four-year BA completion rates of SAT test takers from the 2015 and 2016 high school graduation cohorts. 20.6% of students who participated in Search obtained a BA compared to 15.7% of students who opted out, representing a 31.2% relative increase in the probability of obtaining a BA within four years

((20.6-15.7)/15.7=31.2). Additionally, this relative increase in the probability of obtaining a BA was higher for Black, Hispanic, and AI/AN students than it was for White and Asian students and higher for first-generation students than for students whose parents had a BA.

In a separate study, Smith, Howell, & Hurwitz (2021) employ a clever natural experiment strategy to estimate the causal effect of a university buying a particular name on the probability the student will attend that university. The design strategy is based on the fact that when universities make a student list purchase, they can set an upper limit on the number of names they buy. When the number of prospects that satisfy the filter criteria – let's say 15,000 names – exceeds this upper limit – let's say 10,000 names, the university would receive a random subset of 10,000 names from the 15,000 names that satisfied the filter criteria. These conditions create a natural experiment. Smith, Howell, & Hurwitz (2021) found that students were significantly more likely to apply a college that licensed their name and to enroll in a college that licensed their name compared to a college that did not license their name. The effect sizes are large in terms of relative change (e.g., 23% for "apply") but they are tiny in terms of percentage point change (e.g., 0.1 percentage point for "apply") because any given name is often purchased by dozens of universities. The effect sizes are also relatively larger for first-generation students, low-income students, and students who identify with a historcially underserved racial/ethnic group.

Although the authors are current or former College Board employees, the Research division of College Board has a long track record of high quality empirical research. Therefore, we believe the findings from these studies are credible.

## 2.2 Why Should Policymakers Care About Student Lists?

Why should policymakers care about the student list business? Universities expend substantial portion of their recruiting budget on student lists each year because buying names is the primary way universities identify the set of prospective students who will receive subsequent targeted recruiting interventions (Noel-Levitz, 2020a, 2020b). With the exception of prospects who contact universities on their own, names that a university does not purchase will not be recruited by the university. Drawing from research by Howell, Hurwitz, Mabel, & Smith (2021) and Smith, Howell, & Hurwitz (2021), student lists affect college access outcomes and degree completion outcomes of millions of students. Furthermore, findings indicate that the effects are larger for low-income students, first-generaton students, and students from racial and ethnic groups that have been historically under-served by higher education.

However, our analysis of the student list industry suggests that students from underrepresented populations are the ones most likely to be excluded from student list purchases. Furthermore, this systematic exclusion is not merely a function of individual university preferences. Rather, it is substantially a function of the student list products themselves, particularly who is included in the underlying databases and how the products enable to filter prospective students based on criteria that are highly correlated with race and income.

We believe that the student list business is an equality of opportunity issue because the processes that determine which names are purchased by which universities have consequences for

student enrollment opportunities. Many universities hire enrollment management consulting firms to develop and implement recruiting campaigns, including student list purchases. Consulting firms are not primarily motivated by equality of opportunity; rather, they are charged with meeting university enrollment goals. University enrollment goals are often concerned about the racial and socioeconomic composition of the student body, but these concerns are different from the idea that every talented, hard-working student should have equal opportunity to attend a high-quality university.

In contrast to enrollment management consulting firms and individual universities, policymakers have a clear responsibility to the goal of equality of opportunity. Therefore, we believe that the policy community and the research community must take an interest in the student list business. The student list business is an opaque and increasingly dynamic market that is understood by a small number of insiders. As outsiders, a definitive analysis is beyond our capabilities. Our task is the initial analysis that begins the conversation.

This report is divided into four substantive sections. First, "Student List Basics" describes .....TEXT. Second, "Student List Market Dynamics," discusses recent dynamics in the marketplace for student data, focusing on data generation processes and associated student list vendors, the growing role of acquisitions, and the blurring of boundaries between student list vendors and enrollment management consulting. Third, "regulating the student list busines," XXXXTEXTXXXX, with a focus on regulating product attributes that contribute to systematic inequality in who is targeted and on the trend towards exclusive ownership of data about prospects. Fourth, "replacing the student list business," develops the contours for a "public option" student list product that would be free to universities and would overcome equality of opportunity concerns of the current system.

# 3 Student List Basics

The student list business is a match-making intermediary that connects colleges and universities (herein universities) to prospective students. What problem does the student list business solve for these two groups? From the perspective of universities, they must enroll students to survive and to thrive they must enroll "right-fit" (desirable) students. Most universities cannot subsist from students that find the university on their own (inquiries), so they must find desirable prospects who can be convinced to enroll. The problem is, they don't who these prospects are, where they are, or how to contact them. The student list business overcomes the problem universities face by providing the contact information (e.g., mailing address, email address, cell phone) of prospective students, allowing universities to filter on geograhpic, demographic, academic, and other characteristics when deciding which prospects to purchase. From the perspective of students who want to attend a university, they face the problems of not knowing all their options and not knowing which universities are interested in them. In theory, the student list business helps overcome problems by enabling interested universities to contact prospective students. In practice, the student list business is largely responsive to the problems faced by universities because universities buy the lists.

## 3.1 Situating the Student List Business

Before providing details about the student list business, we compare how other industries use lists to identify customers – with a particular focus on politics – and we differentiate list-based leads from behavioral-based leads (e.g., ads that appear on a Google search results).

### 3.1.1 List-Based Leads

The student list business is based on the same business model as direct mail. When thinking about why certain prospective students receive marketing material from certain universities, it is useful to ask, "how did I receive that catalog from Land's End or Williams-Sonoma, or that student loan refinancing [what is the product?] from Navient? Once you begin purchasing products from a particular company, they know a lot about you – your contact information, your preferences, etc. – and can develop campaigns that target to your tastes. Before you make that initial purchase, companies must buy lists that contain your contact information and indicators of your customer preferences. [ONE SENTENCE HISTORICAL ROOTS OF DIRECT MAIL BUSINESS - LIKE STARTED WITH PERSON SELLING ENCYCLOPEDIAS IN 1880S ENGLAND]. Singer (1988) [CITE, NYT ARTICLE] described the U.S. names business in the 1980s. List data are produced from many sources, including company sales records and small businesses that compile original lists."'A list-management company. . . is a wholesaler who manages lists for clients and sells lists to brokers who in turn rent the names to mailers. Companies give us the exclusive right to manage their lists, which are a byproduct of main businesses. The revenues they generate by renting out their lists is found money.'" [QUOTE FROM DAVID FLORENCE FOUNDER OF DIRECT MEDIA INC A LIST WHOLESALER]. "List brokers" buy or rent lists from list wholesalers to companies looking for customers.

The market described by Singer (1988) is similar to the "Chegg Cloud" from the 2010s, in which Chegg "Chegg has partnered with 18 of the top college search websites and mobile apps to aggregate student data and requests for information, and connect those students to the institutions they request information from" and to "reach 8 out of 10 students actively researching schools online."[pg 5]. Here, college search engines – where prospects voluntarily enter their data in exchange for information about college choices – are the producers of list data. Chegg plays the roles of list-wholesaler – buying names from list produces – and the role of list broker – selling lists to individual universities looking for customers. By contrast, the student list businesses of College Board and ACT contain fewer intermediaries. The testing agencies produce list data as an intentional byproduct of their assessment products and sell lists directly to universities looking for customers.

The names business in political campaigns also offers a useful comparison. Like the student list business, the political names business is based on the direct mail model [CITE]. Richard Viguerie is considered the modern pioneer of political direct mail. He founded the "Richard A. Viguerie Company, Inc" in 1965 after copying the contact information of all 12,500 donors that had given over $50 to Goldwater's 1964 presidential campaign. [maybe a sentence about how Viguerie acquired lists]. Perlstein (2020) credits Viguerie as "the guy who figured out

that the bigger the mailing listyou had and the more terrifying the letters you sent to this mailing list about how liberals were going to, you know, end Western civilization as we know it, the better youcould do for politicians." [INTERVIEW QUOTE]. There is a direct link between direct marketing in politics and marketing in higher education. Bill Royall began his career in the 1970s as a republican political operative, serving as a campaign manager and press secretary for Virginia Governor John Dalton and as Executive Director of the Virginia Republican Party [CITE]. In 1983 he founded Royall & Company to provide direct marketing and fundraising for political campaigns. Royall & Company did not sign its first university client until 19XX, but buy 1995 universities became the primary focus, and Royall & Co. was sold to EAB for $850 in 2015.

Culliford (2020) depicts how contemporary US political parties create and utilize voter databases, highlighting four sequential steps: national database; layering data; predictive models; data-informed campaigns. A national voter database is analogous to a national database of prospective students. The fundamental inputs are public voter files compiled by state and local governments, which data firms combine to create a national database. Second, firms "layer on data from a wide range of sources onto the national database to create detailed profiles of voters" (Culliford, 2020, para X). For example, "political data firms buy data from companies like Experian or Acxiom, which can include real estate property records, estimated income levels, consumer purchasing patterns" (Culliford, 2020, para X). Third, after layering data, predictive models are developed to predict the opinions and behavior of prospective voters. Fourth, the database and predictive models are used to inform campaign decisions, and both the Republican National Committee (RNC) and Democratic National Committee (RNC) have developed processes by which these data can be shared with campaigns and outside political organizations. [INCLUDE VISUAL IMAGE FROM REUTERS STORY AS A FIGURE?]

### 3.1.2 Behavioral-Based Leads

Advances in digital technology have yielded behavioral-based targeting as opposed to list-based targeting. List-based marketing proceeds in two sequential steps, first, obtaining contact information and, second, serving marketing material via this contact information. In behavioral based targeting, users of a platform (e.g., Google Search) are served advertisements while they are on the platform – or a partner of the platform – based on their user profile, which includes prior user behavior. In contrast to list-based targeting, lead identification and serving ads occurs simultaneously, and without necessarily knowing the contact information fo prospects. Most advertising we see on web pages, for example display ads on a news website, are based on a behavioral based strategy. Google Ads enables advertisements to target users in particular audience "segments" and based on geographic location. Segments are "groups of people with specific interests, intents, and demographic information, as estimated by Google. When adding an audience to a campaign or ad group, you can select from a wide range of segments. For example, these segments could include fans of sport and travel, people shopping for cars, or specific people that have visited your website or app. Google Ads will show ads to people who are likely in the selected categories" LINK FOR CITE [QUESTIONS: IN PRACTICE, DOES BEHAVIORAL BASED TARGETING

INCORPORATE KNOWING YOUR CONTACT INFO?]

To what extent does higher education marketing and recruiting depend on list-based versus behavioral-based identification of leads? The article "Making Your Digital Ads Count" by EAB (2018) provides insight (p. 9):

> For industries outside of higher education and for non-freshman recruitment, a primary aim of digital marketing is often that of identifying a pool of potentially interested customers ... [By contrast] Where the recruitment of college-bound high school students is concerned, digital channels are less important from a lead-generation perspective, because the vast majority of likely candidates are already readily identifiable via testing and survey services (ACT, College Board, etc.). Digital marketing is, instead, of greatest value in further stages of the recruitment funnel, including inquiry generation and application generation.

In other words, many industries rely on behavioral-based targeting to identify leads because prospect lists are unavailable. For the recruitment of college-bound high school students, prospect lists can be purchased from College Board and ACT. EAB (2018) argues it is more efficient to identify leads by purchasing lists and then serve these leads digital (and non-digital) recruiting interventions to solicit inquiries, applications, and enrollment. Our conversations with enrollment management professionals and consultants have corroborated the perspective offered by EAB (2018). Thus, behavioral-based targeting is the primary means of identifying leads for degree programs targeting adults – including graduate degree programs – and is often the primary source of undergraduate leads for community colleges and for-profit colleges because many target students do not take ACT/College Board assessments. Enrollment management consultants told us that for "traditional" college freshmen, larger and more well-resourced universities often engage in a dual strategy, with the enrollment management office using list-based recruitment and the marketing department engaging in behavioral-based marketing designed to promote the brand. By contrast, smaller institutions often rely solely on list-based advertising because they have small in-house marketing operations.

## 3.2 The Enrollment Funnel

In order to situate the student list business with the process of recruiting students, Figure X depicts the "enrollment funnel." The enrollment funnel is a conceptual heuristic that identifies stages in the student recruitment process – prospects, inquiries, applicants, accepted applicants, and enrolled students – and is used by the enrollment management industry to inform interventions that target one or more stages. "Prospects" are "all the potential students you would want to attract to your institution" (**RN4322?**). We define "leads" as prospects whose contact information has been purchased. "Inquiries" are prospects that contact your institution and includes two subsets: inquiries who respond to an initial solicitation from the institution (e.g., email); and "student as first contact" inquiries who reach out to the university on their own, for example, by sending ACT scores to the institution,

filling out an online admissions inquiry form, by visiting campus, or by visiting a "virtual tour" website that records IP addresses. Applicants include the set of inquiries who apply and also "stealth applicants" who did not contact the university before applying.

INSERT FIGURE ref(fig:em-funnel) ABOUT HERE [HOW TO REVISE FIGURE: MAKE PROSPECTS THE UNKNOWN GROUP OF PEOPLE YOU WANT TO APPLY TO YOUR INSTITUTION; LEADS ARE NAMES YOU PURCHASE; INQUIRIES; SPLIT INQUIRIES INTO TWO COLUMNS; INSTITUTION-AS-FIRST-CONTACT AND STUDENT-AS FIRST CONTACT; SPLIT APPLICANTS INTO TWO COLUMNS; INQUIRIES WHO APPLY VS. APPLICATION AS FIRST CONTACT]

Where does the student list business fit within the enrollment funnel? Universities are tying to maximize some combination of enrollment goals (e.g., total enrollment, tuition revenue, academic profile, racial diversity, selectivity) while minimizing the recruiting cost expended to achieve these goals. Enrollment management operations require data to deliver and to inform interventions that target specific stages of the enrollment funnel. Universities identify "leads" by purchasing student lists from College Board, ACT, and other vendors. The sum of purchased leads plus student-as-first-contact inquiries (e.g., filled out an online admissions inquiry form) constitutes the set of all prospects the university has contact information for,

The enrollment funnel has an upside-down pyramid shape – wide at the top and narrow at the bottom – in order to convey the assumption of massive "melt" at each stage, for example only a subset of inquiries will apply, a subset of applicants will be accepted, and a subset of admits will enroll. Thus, if the goal is to enroll an incoming class of size X – and hit targets for academic profile, tuition revenue, and diversity – the institution must buy a identify a much larger set of leads.

## 3.3 Buying and Using Student Lists

We describe how universities purcahse student lists from vendors and how they utilize student lists. Although many vendors of student list data exist (discussed below), we initially focus on the two largest vendors, College Board and ACT. Having established a near duopoly in the market for high school standardized tests, these organizations capitalized on their unparalleled bank of test-takers to create a near duopoly in the student list business. [MOVE THIS PARAGRAPH SOMEWHERE]

How are student lists purchased? Each student list purchased by a university is a subset of prospects from the population of test-takers. College Board and ACT student list products utilize filters that enable the university to control which prospects are included in a particular list. The set of available prospect search filters includes information about performance on an assessment (e.g., test score range) and information students provided in the pre-test questionnaire (e.g., high school GPA, gender). For the ACT Encoura student list product, for example, commonly specified prospect search filters include high school graduation year, high school GPA, test score range (ACT or PreACT), gender, ethnicity, intended major, and geography (e.g., state, county, zip code)LINK FOR CITE. College Board student list products offer similar sets of filters, but also enable prospects to filtered based on characteristics

of the high school the prospect attends and characteristics of the neighborhood the prospect lives in. As a hypothetical example, a university could purchase a student list from College Board that consists of all prospects who scored between 1100 and 1300 on the SAT, AND have a high school GPA greater than 3.5, AND are expected to graduate high school in 2022, AND who resides within some set of zip codes. Universities often purchase many student lists, each targeting different market segments the university is attempting to recruit.

What data do purchased student lists contain? Each purchased student list is essentially a spreadsheet that contains one row for each prospect that meets all criteria specified in the purchase. The columns of the student list includes detailed contact information (name, address, email, cell phone) and detailed student characteristics dervied from the pre-test questionnaire (e.g., ethnicity, race, gender, high school GPA, graduation year, high school code, intended major, first-generation status). However, student lists contain very little data about performance on assessments (e.g., SAT score), which creates an incentive – whether intended or unintended – for universities to purchase many lists, each within a small score range (e.g., 1250-1260) in order to know the test scores of specific prospects they will target.

How do universities use student lists? Enrollment management consulting firms and sophisticated in-house operations use algorithms to inform recruiting interventions. Both the algorithms and the interventions must be fed data (e.g., cannot send an email without an email address). Because student lists are costly, decisions about student list purchases are also informed by algorithms. Purchased lists are the basic building block for data-informed recruiting. These lists are layered with additional data sources, such as consumer data about prospects from credit companies, records of interactions with prospects (e.g., visiting virtual tour), historical application/enrollment data about students who attended the same high school, etc. These layered data are the input of predictive models that inform decisions about which recruiting interventions to send to which prospects (e.g., who gets a $0.50 postcard and who gets a $7 brochure). A key takeaway is that the way enrollment managers utilize student lists is nearly identical to the way political parties utilize public voter files as the basic input to national voter databases. However, voter files are free but student lists are not, which turns out to have important implications for college access.

The cost of student lists creates an incentive for "efficient" name buys, whereby universities only purchase the names of desirable prospects that are likely to apply and enroll. For example, the consultancy Ruffalo Noel Levitz states the "RNL Student Search and Engagement" product enables universities to "Target the right students in the right markets" by making "the most efficient name purchases using predictive modeling" [CITE; PDF SAVED] the consulting firm Fire Engine Red states that their "student search modeling" product "can save your school money, by helping you purchase only the names of students who are most likely to apply and enroll" [CITE; PDF SAVED]. Furthermore, student list vendors develop student list products that cater to this desire for efficiency. For example, College Board states that their "Search" product suite "allows you to filter your queries on the characteristics that matter most to you. New filters are coming soon to help you connect with students based on attributes about their hometown or high school, like the rates of AP engagement and student [geographic] mobility" [CITE; PDF SAVED]. In off-the record conversations, enrollment management consultants told us that at the name-buying stage, a university

cannot afford to purchase all names, but very little is known about which prospects will be interested in the institution. Therefore, the institution makes purchase decisions based on crude criteria, such as the characteristics of their neighborhood or school.

The emphasis student list products place on efficiency has important implications for college access because purchases that attempt to maximize efficiency (e.g., based on neighborhood characteristics) may systematically exclude talented students from low-income rural communities and communities of color. For example, a prospective student with a 4.0 high school GPA from a poor, rural community is likely to be purchased by fewer universities than a 4.0 prospect from an affluent suburb because many universities view rural communities with low college-going rates as inefficient name buys. This systematic exclusion is a function of student names costing money. By contrast, while political campaigns have an incentive to be choosy about who receives expensive interventions (e.g., a glossy brochure targeting donors), they have no incentive to exclude people from their database – or from inexpensive interventions like email – because voter names are free.

# 4 Student List Market Dynamics

The market for student list data is surprisingly dynamic. Advances in data analytics spawned the "EdTech" sector. Over the past decade, private equity firms and publicly traded corporations used product development and acquisitions to compete with College Board and ACT in the market for student list data. Some of these efforts flopped famously, while others appear to have gained a foothold. More recently, consistent with the surge of mergers and acquisitions in EdTech [CITE], the market for student list data has shifted back towards oligopoly, though with a stronger for-profit orientation. This section discusses changes in the market for student list data, analyzing who are the players and what do they want, with a particular focus on student list vendors and the processes of generating student list data.

## 4.1 Customers

Who are the customers in the student list market, and what do they want? The principal customers are colleges and universities looking for students. However, third-party scholarship programs (e.g., Jack Kent Cooke Scholars) looking for scholarship recipients also purchase student lists, as do third-party organizations that match students to universities (e.g., [IDENTIFY EXAMPLE]). Universities ultimately want to enroll a student body that collectively achieves university goals around tuition revenue, academic profile, racial composition, and the needs of various campus constituents (e.g., academic majors, the university marching band, etc.). Independent of enrollment goals, a university may want more applications as a means of raising selectivity (for rankings) or as a means of obtaining better terms on bonds (interest rates often tied to indicators of student demand).

Colleges and universities serve many different student markets, including high school students, transfer students, and adult learners (including graduate students). The student list products offered by College Board and ACT are primarily used for recruiting high school

students. By contrast, community colleges and for-profits primarily enroll adult learners and students who do not take College Board/ACT assessments. For these student markets, colleges and universities primarily use behavioral-based marketing rather a list-based approach to identify prospective students.

## 4.2 Sources of Student List Data

Where do student list data come from? Several data generating processes yield student list data – including standardized assessments, college search websites, software used by high school students and guidance counselors – each associated with a set of student list vendors.

First, student list data are generated by students completing standardized assessments (e.g., SAT, ACT, PSAT, AP test, GRE, TOEFL) developed by testing companies College Board, ACT, and ETS. Before completing the SAT, for example, test-takers are asked to complete a voluntary background questionnaire that,

> collects information about your grades, interests, intended major, college plans, and other things. You don't have to answer the questions, but we recommend that you do. If you fill out the questionnaire and opt into (Student Search Service)[https://collegereadiness.collegeboard.org/about/benefits/student-search-service], participating colleges and scholarship organizations that are looking for students like you will be better able to find you LINK FOR CITE

For students that opt-in, the questionnaire and results from the standardized assessment form the basis for student list data purcahsed by universities. Although most College Board and ACT assessment names for universities seeking US high school students, TOEFL yields names of international prospects, the GRE yields names for the graduate student market, [DO OTHER ASSESSMENTS YIELD NAMES FOR DIFFERENT MARKETS?]. The testing agencies dominate the market for high school student names because they offer unparalleled coverage of prospective students, because they enable universities to target prospective students early in the college search process (e.g., sophomores take the PSAT), and because the data quality is high.

A second, broad source of student list data consists of data student voluntarily enter in order to create a profile that is shared with universities or in order to identify "match" universities or scholarships. Services like College Bound Selection Service (CBSS), Cirkled In, and Zinch (acquired by Chegg) enable prospective students to enter data about their academic achievement and college preferences, with the explicitly stated purpose of matching prospective students to universities looking for students. For example, Cirkled In's website says "Go beyond test scores and connect directly to colleges. Cirkled In's portfolio platform showcases students' entire educational story." College Bound Selection Service states, "if you take our survey... you'll receive valuable information from colleges, universities, career / technical schools, and other post-secondary institutions looking for students with your specific interests, talents, skills, and career goals."

A related set of services help students identify "match" universities and scholarships based on data entered by students. Examples include myOptions, cappex, and Going Merry. In comparison to sites like Cirkled In that have the explicit goal of developing a profile that will be shared with universities, these sites are often less clear on whether/how data entered by students will be shared, except in the privacy policy page. For example, Cappex – a subsidiary of EAB – helps students "find colleges and scholarships that are right for you" and the Privacy Policy statement reads, "services require us to collect detailed personal information from you and in many cases to share your personal information with colleges, universities, counselors, scholarship administrators, EAB, employers, marketing partners and advertisers."

A third set of student list data comes from software used by high schools and high school students. For example, Naviance is software purchased by high schools/districts that enables students to plan for college and enables guidance counelors to help students with the college search process. In turn, Naviance user data feeds into Intersect, a software product that connects prospects to universities looking for students. Another example is Parchment, "the digital credential service," which... [NOT SURE HOW IT WORKS EXACTLY https://www.parchment.com/recruit-self-serve/]

[MENTION AZ HIGH SCHOOL GRADUATES CLASS RANK ]

## 4.3 Scholarship on Market Dynamics

Before discussing important trends and the growing prevalence of acquisitions in the student list market, we introduce concepts from theories of organizational behavior that speak to "make or buy" decisions by firms [Pfeffer & Salancik (1978); Williamson (1985); RN980], which we will to as "in-house" (make) or "contract-out" (buy). Consider the example of student list data generated from "college search" websites, in which prospective students enter personal data in order to receive recommendations about best-match colleges and these data are sold to universities looking for students. For simplicity, imagine this business consists of two activities: building/maintaining the website; and, second, selling the student lists to universities. "Vertical integration" refers to whether two distinct activities are done by two organizations (contract-out) or by one organization (in-house), which develops internal capacity for a second activity or acquires a firm that possesses this capacity. A firm that specializes in building college search websites must decide whether to sell lists directly to individual universities (in-house) – the way Tesla sells direct to consumer – or whether to contract-out sales to another firm. Similarly, a firm specializing in selling student list data to individual universities must decide whether to build the website that generates the student list data (in-house) or whether to buy student list data from firms that own college search websites.

Resource dependence theory states that organizations seek to maximize profit and growth while minimize uncertainty. All organizations depend on resources from the external environment to achieve these goals. An external resource provider that controls access to a vital resource with few alternative suppliers wields great power over an organization dependent on that resource. If only one firm makes college search websites and many firm sell student

lists to universities, seller firms are extremely dependent on the college website firm. If many firms make college search websites and only one firm buys these data and sells to universities, firm that build websites depend on one buyer for 100% of sales and the buyer can force them to sell at low prices, the way GM did in the 1970s to companies that produced auto parts [CITE]. When deciding how to respond to the problem of dependence, resource dependence theory recommends that organizations "choose the least-constraining device [action] to govern relations with your exchange partners that will allow you to minimize uncertainty and dependence and maximize your autonomy" (Davis & Cobb, 2010) [PG?].

Of particular importance to the market for student list data are mergers & acquisitions, which resource dependence theory views as the "most resource-intensive means" (Scott & Davis, 2007, p. 237) means of exerting control over the external resource environment, both in terms of price paid and in terms of coordination of activities. A "vertical acquisition" occurs when a firm acquires an organization that controls an essential resource/activity. For example, when a firm that sells student list data buys a firm that owns college search websites, it is less dependent on the external environment for its primary input. A "horizontal" acquisition occurs two firms that perform similar activities merge, for example a firm that builds college search websites buys another firm that builds websites. Horizontal mergers increase market share and reduce competition, potentially enabling the firm to charge higher prices. More generally, larger firms can exert influence on their external environment, including the ability to control suppliers, buyers, and regulators [CITE]. Our analysis of the student list market reveals many "related" acquisitions, that are not quite vertical or horizontal, where the goal seems to be acquiring an activity that increases the value of another activity. For example, when a company that owns a college search website buys a company that builds virtual college tours for universities, the college search website can push users to the virtual tours of its client universities.

A less-costly alternative to acquisitions are "alliances," which "involve agreements between two or more organizations to pursue joint objectives through a coordination of activities" (Scott & Davis, 2007, pp. 236–237). JERRY SAYS AGREEMENT BETWEEN POWERSCHOOL AND EAB FEELS LIKE AN ALLIANCE

## 4.4 EAB Enters the Student List Business

By 2021 EAB, formerly Royall & Company, arguably became the third vendor in the student list cartel. Whereas College Board and ACT student lists can be purchased by any university, only EAB clients have access to names owned by EAB. How did this come to be? From our perspective as outsiders – relying on the financial news, press releases, and background conversations with enrollment management professionals – the EAB story is substantially a story about acquisitions.

In 2015, the Advisory Board Company acquired Royall & Company for $850 million [CITE StreetInsider]. The Advisory Board, a technology and consulting company, operating primarily in the health sector, purchased Royall as the centerpiece for its entrance into the higher education consulting market. "Central to the Advisory Board's higher education

growth strategy," reported *StreetInsider.com*, "is developing service offerings to aid members across the entire student lifecycle." *StreetInsider.com* described Royall as "the higher education industry leader in strategic, data-driven student engagement and enrollment management solutions, financial aid optimization, and alumni fundraising. Royall's solutions help non-profit colleges and universities achieve such critical institutional goals as strengthening national reputations, broadening student enrollment, improving overall academic profiles, and enhancing revenue." Given that Royall had 350 college and university clients, the price tag of $850 million speaks to the value of the business model propietary platform developed by Royall. Robert Musslewhite, CEO of the Advisory Board said that the acquisition

> creates a one-of-a-kind resource to enable higher education executives to apply data and analytics to both engage and enroll the right students and help those students graduate on time. Royall's leadership position in higher education, its track record of delivering measurable ROI, its exceptional and experienced staff, and its analytics-driven, scalable business model -— which translates into highly recurring revenues and strong bottom line performance —- make it a compelling strategic and financial fit. . . Over time, we also expect to realize additional value by expanding member relationships across the portfolio and developing new programs and technologies based on the joint assets.

This last sentence contains two nuggets – "expanding member relationships across the [Advisory Board] portfolio" and "developing new programs. . . based on joint assets" – that remain prophetic although the Advisory Board no longer exists. In 2017, the Advisory Board sold its healthcare business for $1.3 billion and its education business to the private equity firm Vista Equity Partners for $1.5 billion, with the Royall & Company division renamed EAB and operating as a standalone business [CITE WASHINGTON BUSINESS JOURNAL]. Under Vista, the largest private equity firm in the world, EAB pursued acquisitions that increased the value of existing activities and also leveraged relationships with Vista-owned businesses, particularly PowerSchool. [SOMEWHERE MENTION THAT THEY HAVE DONE DOZENS OF ACQUISITIONS; ONLY MENTIONING SOME]

In 2019, EAB acquired YouVisit, "the leading provider of virtual tour and interactive web content for higher education" [CITE EAB PRESS RELEASE]. EAB CEO David Felsenthal said that " 'Integrating EAB's enrollment platform with YouVisit's market-leading student-centric content will help to drive even greater success for our partners in today's challenging enrollment environment.' " In 2020, EAB acquired Cappex, a college search and scholarship search website, reportedly used by 1.5 million students each year [CITE PRESS RELEASE]. The press release cites EAB survey research indicating that more prospective students are using college search sites and notes that more universities are adopting test-ptional admission policies. Chris Marett, President of EAB Enrollment Services, said the Cappex acquisition "will enable EAB partners to identify and engage prospective students who do not interact with schools through the traditional channels, such as campus visits or standardized tests. By expanding schools' inquiry pools, we can help institutions grow and diversify their student populations." Cappex CEO Alex Stepien, said " 'Leveraging EAB's enrollment data and analytics expertise and experiential marketing services, such as YouVisit virtual tours, we can deliver more personalized and impactful student experiences' "

Analyzing these deals, Cappex is a source proprietary student list data. The Cappex deal should be considered a vertical acquisition – acquiring a firm the provides a key input – if EAB a vendor of student list data. EAB is an enrollment management consulting firm, but is also a student list vendor in that price universities pay for access to Cappex names is built into the contract they sign with EAB. Additionally, the comments by Cappex CEO Alex Stepien suggest that students searching for colleges on Cappex will be served the virtual tours of EAB clients, resulting in more inquiries for EAB clients. Thus, purchasing Cappex increases the value of the YouVisit virtual tour asset.

Now fully integrated with the broader enrollment platform, EAB virtual tours track "individual data for each Virtual Tour inquiry based on submitted information and network behavior" so clients know "provide data on who your visitors are and where their interests lie so that you can effectively recruit them" LINK. If we conceptualize inquiries as a university-specific set of names, then EAB virtual tour is a product that produces university-specific student lists. Furthermore, EAB virtual tours use "Inquiry Capture and Optimization" that "prompt[s] students to take action —- to register, schedule a visit, or apply -— based on their engagement level so you can more effectively recruit them." Finally, virtual tours are optimized to be "found through third-party search sites"

The most profound foray into the student list market occurred in 2021, when Hobsons was broken up and split between EAB and PowerSchool, both subsidiaries of Vista Equity Partners. Hobsons was an education technology/consulting company – itself a subsidiary of British media company the Daily Mail and General Trust – that operated three main software-as-service products, Naviance, Intersect, and Starfish. Naviance – founded in 2002 and acquired by Hobsons in 2007 – is a college and career readiness platform for high school students, reportedly used by "40% of U.S. high schools" [CITE] and Intersect is a student recruitment platform that connects colleges and universities to students using Naviance to plan for college. Starfish is a "student success" platform for colleges and universities that "provides advising, communication and nudges to support student engagement and retention" [CITE EDSURGE].

PowerSchool acquired Naviance and Intersect for $320 million and EAB acquired Starfish for $90 million. Given that EAB already had its own student success platform, the Starfish acquisition can be read simply as the horizontal acquisition of a competitor that increases market share and reduces competition. The Naviance and Intersect acquisitions require more nuanced analysis. Upon completing the transactions, Powerschool and EAB announced an agreement "that makes EAB the exclusive provider of the Intersect student recruitment platform. . . This partnership will allow EAB to connect its higher education partners to millions more high school students" [CITE]. In July, 2021 PowerSchool became a publicly traded company (NYSE: PWSC) and the IPO prospectus reveals details of the partnership:

> we entered into a reseller agreement with EAB Global, Inc. ("EAB"), a portfolio company of Vista, for them to serve as, among other terms, the exclusive reseller of the Intersect student recruitment platform in the United States and Canada. has a ten-year term and includes annual minimum revenue commitments from EAB. The commitment amount for the first 12-month period was $32.4 million, and will increase upon anniversary of the Agreement CITE IPO

How do we analyze this partnership from the perspective of EAB? If we begin with the premise that EAB is simultaneously an enrollment management consulting firm and a student list vendor that sells names its clients, granting EAB exclusive access to Naviance users can be seen as a vertical integration by which EAB obtains exclusive access to an important input resource. Just like College Board and ACT are exclusive providers of the unique set of names generated by College Board assessments, the Intersect agreement grants EAB exclusive control over the unique set of names and behavioral data generated by Naviance users. Whereas College Board and ACT use their oligopoly position in the supply of names to charge oligopoly prices, we expect will utilize the Intersect agreement to attract new clients and to charge clients higher prices for the right to recruit Naviance users. Consistent with these expectations, promotional material on the EAB website reads, "With access to the 6.5 million high school students on Naviance, Intersect is the preeminent provider of high-intent student inquiries and candidates for colleges" CITE. Furthermore, we expect that EAB will funnel Naviance users towards client universities. For example, the EAB website states that "80% of high school students who connect with a college through Intersect apply to that institution." These issues raise important questions for policymakers. Should access to a substantial share of college-going high school students be restricted to clients of a private firm? Are we concerned that these students are being funneled towards clients of a private firm and away from other universities?

OTHER THINGS TO CONSIDER ADDING TO SUB-SECTION ABOUT EAB

- SOMETHING ABOUT VISTA EQUITY PARTNERS; THEIR APPROACH; HOW THEY VIEW SOFTWARE AS A SOURCE OF PROFIT
- EAB BEING PARTLY SOLD TO ANOTHER PRIVATE EQUITY FIRM AND – PRESUMABLY – GETTING MORE INVESTMENT WHICH PROBABLY MEANS MORE CASH ON HAND FOR ACQUISITIONS
- ADD A FINAL PARAGRAPH THAT TALKS ABOUT INTEGRATION OF ALL THESE ACQUISITIONS – AND MAYBE ALSO TALKS ABOUT WISR?
- QUOTE FROM PRESS RELEASE ANNOUNCING INTERSECT AGREEMENT: "Through YouVisit virtual tours, college research site Cappex, and now Intersect, we offer our partners unparalleled opportunities to engage prospective students—on platforms that facilitate more than 8 million connections each year," said EAB Enrollment Services President Chris Marett.
  - CAN ADD TEXT FROM WEBSITE THAT TALKS ABOUT INTEGRATED APPROACH; SEE NOTES FROM EAB GOOGLE DOC
- MAYBE, DRAWING FROM QUOTE ABOUT CROSS-SELLING, SUGGEST THAT EAB BUSINESS MODEL IS TO GET PEOPLE ONE ONE PRODUCT AND THEN SELL THEM OTHERS
- You could just verbatim quote text from EAB Enroll360, which basically writes this lead for you
  - https://eab.com/insights/blogs/enrollment/introducing-enroll360-recruitment-ecosystem/

## 4.5 College Board and ACT

College Board and ACT are the largest student list vendors. Both are non-profit, mission-driven organizations. The College Board mission is "to connect students to college success and opportunity" [CITE] and the ACT mission is "helping people achieve education and workplace success" CITE. The core activity of both organizations is developing and delivering standardized assessments. College Board revenues were $1.049 billion in 2019, with $490 million coming from "AP and Instruction" and $404 million from "Assessments" [CITE COLLEGE BOARD FORM 990 2019]. ACT total revenue was $302 million in the fiscal year ending August 2019, with $262 million coming from "educational assessment" [CITE ACT FORM 990 ENDING AUG 2019]. [NONE OF THE REVENUE FIGURES ADJUSTED FOR INFLATION YET. I THINK!]

The student list business of College Board and ACT are byproducts of their core assessment businesses. Student lists sold by College Board are generated from the SAT, PSAT, SAT subject test, and AP assessments. Lists sold by ACT are generated from the ACT and PreACT assessments and, more recently, from the "myoptions" college and career planning program. Data about the annual revenue College Board and ACT generate from selling names is not publicly available. However, College Board recorded $130 million in revenue from "College Opportunities & Enrollment" in 2019 [CITE COLLEGE BOARD FORM 990 2019] – the business that includes selling names – compared to $100 million in 2017 [CITE COLLEGE BOARD FORM 990 2017] and $63 million in 2010 [CHECK; GOT THIS FIGURE FROM BELKIN 2019 WSJ STORY].

Why do College Board and ACT have a competitive advantage compared to other student list vendors? The obvious answer is unparalleled coverage. Until recently, the vast majority of college-going high school students took the SAT or ACT. Most states can be categorized either as "SAT states" – meaning that the majority of college-going high school students take the SAT – or ACT states. Contributing to this either-or dichotomy, a growing number of states have adopted either the ACT or the SAT as a requirement for high school graduation CITE. The majority of coastal states are SAT states and the majority of non-coastal states are ACT states. Depending on the geographic markets a university recruits from, they buy names from College Board, ACT, or both.

A second source of competitive advantage is data quality. Compared to student lists generated from college search engines, list data from College Board and ACT possess more-reliable indicators of academic achievement and less missing data with respect to contract information, student characteristics, and preferences. Higher data quality enables universities to filter more precisely when deciding which names to purchase and also makes the lists universities receive more useful for recruiting purposes. Third, names generated from the PSAT and PreACT assessments enable universities to begin recruiting high school students early in their high school career, which is viewed as important for successful recruiting campaigns [CITE]. By contrast, lists generates from college search engines can only target prospects who have already begun their college search process.

The diffusion of test-optional admissions policies threatens the coverage competitive advantage. If fewer universities require the SAT/ACT for admissions, fewer students will take the

tests. [ONE SENTENCE PROVIDING STATS ABOUT TEST-TAKERS?] If fewer students take the tests, College Board and ACT databases will contain a shrinking share of prospective college students, lowering their value in the eyes of universities and encouraging market entry by other vendors of student list data. How have College Board and ACT responded to test optional movement? A fundamental strategy seems to be convincing states to adopt the SAT/ACT as a statewide requirement for high school graduation [CITE].

### 4.5.1 College Board

In contrast to EAB and in contrast to recent moves by ACT, College Board has developed student list products gradually and built them internally. As 2021, "College Board Search" is an interrelated product suite – going by taglines "recruit with confidence" and "the best way to reach and recruit high school students" – that consists of three primary products, "Student Search Service," "Segment Analysis Service," and "Enrollment Planning Service." The foundational product, "Student Search Service" was created in 1972 "at the request of school counselors who wanted a wider array of students to have access to information about more colleges" [BELKIN]. Student Search Service which allows universities to purchase the contact information of PSAT, SAT, and AP test-takers, filtering on geographic, demographic, achievement, and college/major preferences criteria. College Board describes Student Search Service as

> the largest, richest database of college-bound students, and new students are added each week as they join the program online or through a College Board assessment. With College Board Search, you can reach students long before it's time to apply, building a relationship with students early enough to create a real pipeline of best-fit prospects CITE.

**Segment Analysis Service**. In 2XXX, College Board created Segment Analysis Service, which is built directly on top of the Student Search Service. Essentially, Segment Analysis Service allows universities to additionally filter on the characteristics of the high schools prospects attend and on the neighborhoods prospects live in. In 2011, College Board revised the Segment product and published a surprisingly transparent explanation of the conceptual and technical underpinnings [CITE COLLEGE BOARD 2011]. Conceptually, Segment Analysis Service is based on "geodemography," which is a branch of market research – now often referred to as "spatial big data" – that estimates the behavior of consumers based on where they live. CollegeBoard (2011) p. 1 states,

> The basic tenet of geodemography is that people with similar cultural backgrounds, means, and perspectives naturally gravitate toward one another or form relatively homogeneous communities; in other words, birds of a feather flock together. When they are living in a community, people emulate their neighbors, adopt similar social values, tastes, and expectations, and -— most importantly for consumer marketers —- share similar patterns of consumer behavior toward

> products, services, media, and promotions. The primary appeal of geodemography from the marketer's perspective is that, with just an address, s/he can begin to craft an image about a particular set of individuals based on the values, tastes, expectations, and behaviors associated with their geographic community.

Conceptually, the application of geodemography to a college access product seems problematic in that geodemography assumes that "people with similar cultural backgrounds . . . naturally gravitate toward one another." In reality, American communities are racially segregated because of centuries of systematic, discriminatory policies enacted by federal, state, and local governments and the private interests these governments enable (Harris, 1993; Rothstein, 2017)

Explaining the technical underpinnings of Segment Analysis Service, CollegeBoard (2011) states that "traditional" consumer industries apply geodemography by (p. 1)

> mapping small bounded geographical regions, typically at a nine- digit zip-code level, against data from credit card agencies, U.S. Census data, and other consumer databases that track consumer characteristics, attitudes, and behaviors. The result is a series of geodemographic "clusters" that represent types of individuals based on a unique set of characteristics, attitudes, and behaviors.

In contrast to "standard consumer-focused neighborhoods that are thinly populated with college-bound students" (CollegeBoard, 2011, p. 2) Segment Analysis Service incorporates publicly available data and proprietary College Board data to create "a new set of geodemographic communities composed entirely of college-bound students – referred to throughout this paper as *educational neighborhoods*."

The data used to build the Segment product "begins with the most detailed pieces of information available to the College Board about college-bound students: their actual responses to a series of detailed, academically relevant questions that are asked when they register for various assessments (PSAT/NMSQT, SAT, SAT II, AP)" (CollegeBoard, 2011, p. 3). These data are additionally layered with "other relevant data elements, such as individual student test-performance results and individual student test-score sending patterns, [that] are attached to each record" (CollegeBoard, 2011, p. 3).

This prospect-level dataset is grouped two ways: at high school level (over 33,000 high schools); and at the neighborhood level, with neighborhoods defined by Census tracts (about 44,000 neighborhoods). Because "market segmentation and communication strategies rely on the use of a manageable number of prototypical high schools and a manageable number of prototypical neighborhoods that describe college-choice behaviors" (CollegeBoard, 2011, p. 4), cluster analysis is used "to group the 33,000+ high schools and 44,000 neighborhoods into 29 unique high-school types and 33 unique neighborhood types referred to as clusters" (CollegeBoard, 2011, p. 4).

As a hypothetical example, a Census tract in the Boston suburb Wellesley might belong to the same Segment Analysis Service neighborhood cluster as a Census tract in the Chicago

suburb Barrington. Weston High School, a public high school in Weston, MA might belong to the same Segment Analysis Service high school cluster as Barrington High School in Barrington, IL. Universities who use Segment Analysis Service could purchase a student list that consists of all prospects with SAT/PSAT scores in this range, who live in this set of metro areas, and who have these combinations of neighborhood and high school cluster (e.g., live in neighborhood cluster "D" and attend a high school in high school cluster "15" or "21.")

The problem is that Segment neighborhood and high school clusters are highly correlated with both racial and income demographics. Residential racial redlining in the US occurs at fine-grained geographic levels. Segment allows customers to purchase prospects in a metro area who live in a particular "kind" of census tract, without explicitly naming the census tract. Additionally, within a purchased neighborhood cluster, Segment allows customers to exclude students who do not attend a particular "kind" of high school. Therefore, a Segment purchase that includes student "A" can exclude student "B" who has identical achievement, but attends a different high school in the same neighborhood. Although a sophisticated user might use Segment with the explicit purpose of identifying prospects from historically underserved populations, we are concerned that fine-grained geographic targeting capabilities of Segment can – intentionally and unintentionally – lead to racial redlining in recruiting.

[INSERT PARAGRAPH SUMMARIZING AN ANALYSIS OF A PROBLEMATIC SEGMENT STUDENT LIST PURCHASE]

[MAYBE INSERT PARAGRAPH THAT TALKS ABOUT EVEN STUDENT LIST PURCHASES THAT USE SEGMENT EXPLICITLY TO TARGET UNDERREPRESENTED POPULATIONS MIGHT TEND TO ONLY INCLUDE THOSE WHO WENT TO THE RIGHT "KIND" OF SCHOOL/NEIGHBORHOOD OR TOOK THE RIGHT "KIND" OF TEST (E.G., AP)]

**Enrollment Planning Service**. Enrollment Planning Service, the third product within the College Board Search suite, incorporates proprietary student list data (not available for purchase), software-as-service data visualization and analysis tools, and enrollment management consulting.

The data universities receive when they purchase student lists from Student Search Service or Segment Analysis Service contains a subset of the academic achievement and college preferences data that College Board knows about each prospect. Access to the full set of data would enable universities – and the enrollment management consulting firms they hire – to make more efficient and effective decisions about recruiting interventions. By purchasing the Enrollment Planning Service, universities get access to richer data about prospects that are not included in purchased student lists. [ONE SENTENCE EXAMPLE OF RICHER DATA AVAILABLE FROM EPS] In addition, College Board enrollment management experts work with Enrollment Planning Service clients to help them make decisions about target markets, recruiting interventions, etc.

Thus, Enrollment Planning Service, the similar product XXXX from ACT, and EAB exemplify the blurring of lines between student list vendors and enrollment management consultants. On one hand, EAB is enrollment management consultancy that has become a

vendor of proprietary student list data they make available only to EAB clients. On the other hand, the student list vendors College Board and EAB have developed enrollment management consulting capabilities, including customer-facing software-as-service predictive analytics products.

The value proposition College Board Enrollment Planning Service makes to universities is this: you are free to purchase student list data from College Board and hire a enrollment management consultancy like EAB, Capture, or Fire Engine Red to develop and implement recruiting strategy. But if you do, you won't have access to the much richer prospect data available to Enrollment Planning Service clients. So why not purchase Enrollment Planning Service and simultaneously get enrollment management consulting and the best data.

**Search enhancements, Fall 2021**. In Fall 2021, College Board added three new features to the College Board Search suite, "Environmental Attributes," "Interest in My College," and "Prospect Notifications."

"Environmental Attributes" adds three geodemographic filters to the basic Student Search Service product, which enable universities to filter prospects based on characteristics of the high school they attend or the neighborhood they live in. Preveiously, only the Segment Analysis Service product enabled universities to filter prospects based on characteristics of their school or neighborhood. The Environmental Attributes enhancement add three new filters. First, "out-of-state travel rate" measures the extent to which students from that school/neighborhood have attended an out-of-state university in the past, and is measured as "low," "medium," or "high." Second, "distance from home travel rate" the extent to which students from that school/neighborhood have attended a university far from home, and is measured as "low" (average distance less than 46 miles) "medium" (average distance 46 to 95 miles), or "high" (average distance 95 miles or more). Third, "AP engagement rate" measures the extent to which students from that school/neighborhood have taken AP exams, measured as "low," "medium," or "high." [QUESTION: WHEN PURCHASING DO YOU HAVE CHOICE TO SELECT BASED ON "SCHOOL" OR "NEIGHBORHOOD" OR NO DISTINCTION?; YOUTUBE VIDEO DIDN'T MAKE IT CLEAR]

In using these Environmental Attribute filters, a universtiy might purchase all prospects from a particular metro area, with SAT scores within some interval, and who attend a high school where a "high" percentage of students have attended an out-of-state university in the past. Environmental Attributes may increase the efficiency and precision of student list purchases. However, like Segment Analysis Service, Environmental Attributes raises concerns that meritorious students may be ignored if they don't live in the right "kind" of neighborhood or attend the right "kind" of school.

Second, the "Interest in my College" is based on the "BigFuture" college search website owned by College Board. The BigFuture website encourages students to create a list of universities they are interested in. The "Interest in My College" feature enables universities to filter prospects who expressed interest in your university when purchasing student lists. This feature is an example of using one internal asset (BigFuture website) to increase the value of another product (Student Search Service).

Finally, "Prospect Notification" provides Search clients with monthly notifications about

new prospects who meet the criteria of recent student list purchases. Prospect Notification enables universities "to connect with students as soon as they join the program" CITE, improving on the competitive advantage of College Board Search in targeting prospects as early as possible.

### 4.5.2 ACT, Products and Dynamics

Marten Roorda – ACT CEO from 2015 to 2020 – attempted to transform ACT from a "testing organization" to a provider of "learning, measurement, and navigation" services in the broader EdTech space. Acquisitions were core to Roorda's transformation strategy. The majority of acquisitions were in the "learning" and "measurement" spaces, for example XXXX. However, in 2018 ACT acquired the National Research Center for College and University Admissions (NRCCUA), a major player in the student list business, and its subsidiary Eduventures, a research and consulting firm focused on innovations in higher education. While the acquisitive approach of ACT contrasts with the internal development aproach of College Board, by 2020 the student list businesses of College Board and Act had adopted many of the same innovations.

Prior to Roorda's tenure as CEO, the ACT student list product – named the "Educational Opportunity Service" – was based on data generated by the ACT and PreACT assessments. University of Iowa professor Everett Lindquist developed the ACT in 1959 as a competitor to the ACT and with a focus on measuring achievement in contrast to the SAT focus on measuring aptitude. This emphasis on achievement bore fruits in the 2000s when many states began adopting the ACT as a statewide high school exit exam, bolstering the coverage of ACT's student list business.

The National Research Center for College and University Admissions (NRCCUA) was founded in 1972, the same year that College Board created its Student Search Service. Alongside alongside College Board and ACT, NRCCUA was one of the three organizations that dominated the student list business. NRCCUA generated student list data by collecting survey data from high school students (completed in school) about their academic achievement, extracurricular pursuits, and college and career preferences. In return, students received recommendations about best-match colleges and occupations. Compared to College Board and ACT, NCRCCUA was more liberal in the sale of student list data [CITE NYT ARTICLE]. The FTC issued a complaint in 2003, stating that NRCCUA claims that student data "is shared only with colleges, universities, and other entities providing education-related services," but that "in truth and in fact... is shared... also with commercial entities for marketing purposes" and that the survey "also receives substantial funding from ASL [American Student List]" which uses NRCCUA survey data to "create lists of college-bound students that it sells to"consumer productsmanufacturers, credit card companies, direct marketers, list brokers, database marketing companies,and advertising agencies" [CITE FTS COMPLAINT].

In 2018, ACT acquired NRCCUA from the private equity firm Sterling Partners, which had acquired NRCCUA in 2016. For ACT, the acquisition can be viewed as a horizontal integration; the second-largest supplier of student list data gains market share by eating the

third-largest supplier. Under Sterling, NRCCUA student surveys – which had been completed by students during school – were re-launched as an online college search engine named myOptions, self-described as "the nation's largest free college and career planning program." Thus, the NRCCUA acquisition diversified ACT's student list generating processes, from reliance on standardized tests to the inclusion of a major playing in the college search/planning space.

As of 2021, ACT enrollment management products consist of Encoura Data Lab, Eduventures, and Omnichannel Enrollment Services. Encoura integrates the ACT and NRCCUA student list businesses, while providing providing sophisticated data analysis functionality to inform student list purchases and broader decisions about enrollment strategy: "We've combined the myCollegeOptions program, Education Opportunity Service (EOS), and ACT College Score Reporting service inside Encoura Data Lab – higher ed's app-based platform for using data science, analytics, and research to enroll the best-fit students" CITE.

Eduventures is the higher education consulting wing of ACT. Eduventures, a market research and consulting firm focused "focused on innovations in higher education" [CITE BLOOMBERG PRESS RELEASE], was acquired by NRCCUA in 2016. Under ACT, Eduventures offers "primary research, analysis, and advisory services to support decision-making throughout the student life cycle" – from recruitment to student success. Eduventures also advises universities in areas such as curriculum, gifts, and investments in technology. Finally, ACT Omnichannel Enrollment Services provides enrollment management consulting around digital marketing, helping universities decide which prospects to target with which marketing materials and also delivering the marketing interventions on behalf of universities.

While broader organizational transformation initiated by CEO Marten Roorda was viewed skeptically – contributing to his resignation in 2020 – acquisitions and new products in the enrollment management space complement one another, at least in theory. ACT gained a new source of student list data while leveraging its student list business to generate demand for new enrollment management consulting services.

## 4.6 A Failed Coup [DIFFERENT SECTION TITLE NAME]

Before considering regulations and policy alternatives, it is instructive to analyze a failed attempt to revolutionize the student list business. The story of Zinch and Chegg is illustrative of a larger number of edtech start-up firms that attempted enter the student list business. Zinch, initiated by several students at Princeton University in 2006, was a company company that matched students to colleges and to scholarships. The Zinch website "enabled students to create a profile similar to a college application, which could be browsed by colleges in which they were interested, providing a forum for a connection between college and Zinch user. Colleges also had the ability to search through these profiles in order to contact interested students" [CITE WIKIPEDIA].

Chegg, a company known for online textbook rentals, purchased Zinch in 2011 for $27.2 million [CITE IPO]. The press release headline reads, "Chegg plans to expand into $7 Billion college recruiting market and increase student base by over 3.5 Million" [CITE CHEGG

BUYS ZINCH]. In 2013, Chegg became a publicly traded company (raising $187 million and valuation of $1.1 billion) [CITE TECHCRUNCH CHEGG IPO STORY]. The IPO prospectus provides insight about Chegg's strategy to enter the student list business [CITE IPO]. Following the acquisition of Zinch, Chegg began offering College Admissions and Scholarship Services to students, which generated names for enrollment marketing services to universities:

> Our College Admissions and Scholarship Services currently serve approximately 40% of all college-bound high school seniors in the United States allowing them to highlight their interests, passions and personalities in a way that transcripts and standardized tests do not. Our goal is to connect high school students to the "best fit" educational and scholarship opportunities at colleges... If a student expresses an interest in, or her profile matches the interest of, a college in our network, we offer the student an opportunity to connect with that college.

Chegg enrollment marketing services claimed to "delivering approximately 2.6 million paid leads for interested students" to 750 colleges in 2012 [CITE IPO]:

> Using the information from the more than one million college-bound high school students who fill out a profile using our College Admissions and Scholarship Services, we provide colleges with qualified leads to potential candidates... The leads can be based either on students' expressed preference for a particular college or matching students' general preferences with college profiles. We only provide student contact information to colleges after the student has agreed to be referred. Colleges pay for these services on a per-lead basis or on a subscription fee basis... Rather than spending hundreds or thousands of dollars per enrollment, colleges that use our enrollment marketing services can realize recruiting costs of generally less than $100 per student enrolled through our enrollment marketing services, and we believe they are better able to shape their incoming class, reducing transfers and drop-outs by using our services.

A cost of enrollment marketing services reported in the IPO was "leads purchased from third-party suppliers to fulfill leads that we are unable to fulfill through our internal database." Chegg's long-term stratety was to increase the number of users by creating the Chegg Student Hub. In turn, more users would enable Chegg to "Increase Monetization of Marketing Services":

> We intend to leverage our enrollment marketing platform to increase monetization of potential leads by demonstrating our value proposition to more colleges, which will increase the number of paying colleges as the number of students and leads per student increases [CITE IPO]

Around 2014, Chegg began promoting itself as a student list broker/reseller with the "Chegg Cloud," which claimed to reach "8 out of 10 students actively researching schools online" by

partnering with 18 of the top college search websites and mobile apps to aggregate student data and requests for information" [CITE CHEGG-2015-SOCIAL-ADMISSIONS-REPORT]. Unfortunately, while Chegg's brand advertising business – pushing brands to Chegg users – worked, it's enrollment marketing service never took hold. In 2017, Chegg entered a partnership with NRCCUA whereby "NRCCUA will assume responsibility for managing, renewing, and maintaining our existing university contracts and become the exclusive reseller of our digital Enrollment Marketing services for colleges and universities" [CITE 2017 ANNUAL REPORT], effectively shuttling Chegg's enrollment marketing service. To this day, Chegg remains a successful company – recording revenue of $644 million in 2020 [2020 ANNUAL REPORT] compared to $255 million in 2013 [2013 annual report]

This case study raises the question, why did Chegg's foray into the student list business fail? In the absence of a published autopsy, we relied on background conversations with enrollment management consultants who purchased names on behalf of universities. The consultants we spoke with had little respect names provided by Chegg and similar providers. A principal concern was coverage; universitis are often trying to target particular subsets of prospective students but the names contained by these lists were a sparse, scattered subset of all prospects. Second, consultants criticized the low quality of these data (e.g., many missing fields), a function of names being generated from voluntary online survey responses. Another concern was timeliness. College Board and ACT generate student list data early in the college search process (e.g., PSAT, PreACT). By contrast, names cannot be derived from college search websites until students start searching for college. Finally, we reason that it is difficult to create a foothold in the student list business based on user data from a competitive market – college search enignes – that has no barriers to entry.

# 5 Regulating the Student List Business

## 5.1 Regulating Student List Filters

## 5.2 Exclusive ownership of user/student-data?

# 6 Replacing the Student List Business

Is this the best we can do???? a cartel dominated by racially problematic tests/ap curriculum and looming takeover by a private equity firm

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