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# A “FIT” OVER RANKINGS

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Why College Engagement Matters More Than Selectivity

CHALLENGE  
**SUCCESS**

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## EXECUTIVE SUMMARY

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Based on the Challenge Success survey data of more than 100,000 high school students across the country, we know that the college admissions process can often be a top source of stress and anxiety for students. While many schools, counselors, and parents encourage students to focus on finding the “right fit” college, this advice can be difficult to follow without a better understanding of what “fit” means and what matters most — both for learning and engagement in college — and for life outcomes beyond college.

This paper reviews and synthesizes key research in order to address many of the important questions and concerns we hear from students, parents, and schools about the college admissions process: What do college rankings really measure? Are students who attend more selective colleges better off later in life? What is “fit” and why does it matter? What the research shows:

**RANKINGS ARE PROBLEMATIC.** Many students and families rely on college rankings published by well-known organizations to define quality. The higher the ranking, the logic goes, the better the college must be and vice versa. We find that many of the metrics used in these rankings are weighted arbitrarily and are not accurate indicators of a college’s quality or positive outcomes for students.

**COLLEGE SELECTIVITY IS NOT A RELIABLE PREDICTOR OF STUDENT LEARNING, JOB SATISFACTION, OR WELL-BEING.** We explore the research on whether attending a selective college predicts important life outcomes and find no significant relationship between a school’s selectivity and student learning, future job satisfaction, or well-being. We find a modest relationship between financial benefits and attending more selective colleges, and that these benefits apply more to first-generation and other underserved students. We also find that individual student characteristics (such as background, major, ambition) may make more of a difference in terms of post-college outcomes than the institutions themselves.

**ENGAGEMENT IN COLLEGE IS MORE IMPORTANT THAN WHERE YOU ATTEND.** Colleges that provide ample opportunities for students to deeply engage in learning and campus community may offer the key to positive outcomes after college. For instance, students who participate in internships that allow them to apply what they learn in the classroom to real life settings, students who have mentors in college who encourage them to pursue personal goals, and students who engage in multi-semester projects are more likely to thrive after college.

There is no question that the college admissions process can be stressful. We hope that this paper prompts students and families to examine what college success means to them and to question common assumptions about college selectivity. A good fit is a college where a student will be engaged — in class and out — by what the college has to offer. With over 4,500 colleges in the United States, there are many schools from which to choose. We encourage students and families to look beyond rankings in the college search process, and instead to seek a school where students can participate fully in academic, civic, and social life in order to thrive both during the college years and beyond.

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## INTRODUCTION

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Since 2007, we have asked over 100,000 high school students, “Right now in your life, what, if anything, causes you the most stress and why?” The number one answer is the heavy workload they face. The second is usually college admissions. Indeed, most of the high-performing high schools in the Challenge Success program list the college admissions process as one of the most common root causes of stress for their students. The students and schools identify other stressors as well, such as too many courses and extracurricular activities in a day, too little time for deep learning and collaboration, and an over-reliance on testing for assessment, but these are issues that the students and schools feel they can ultimately address. They know they can work to change homework policies and modify schedules and implement more authentic assessments, but the college admissions process is particularly frustrating to them because it feels like it is out of their hands.

This paper addresses some of the concerns of schools, students, and parents who are stressed by the college admissions process. We know that students are often advised to find the “right fit” college, but in our

experience, students don’t necessarily know what that means or how to follow that advice. Some students define “fit” as a match between their SAT scores and the average SAT scores of other students at a college. Many become consumed with the idea that they need to be admitted to a “selective” college regardless of fit.

This focus on selectivity may stem from misconceptions about college rankings and how college selectivity affects both what happens during the college years and life after graduation. In order to help explain what makes a good fit and to clear up some of these misconceptions, we conducted an extensive review of the literature on college outcomes, such as student learning, well-being, job satisfaction, and future income, and we explored the relationship between these outcomes and rankings and college selectivity. In this paper, we synthesize the current research to address the following three questions:

- 1. What do college rankings really measure?**
- 2. What is the relationship between college selectivity and student outcomes?**
- 3. What is “fit”? Why does it matter?**

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### ABOUT CHALLENGE SUCCESS

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*Challenge Success is a non-profit organization affiliated with the Stanford University Graduate School of Education. We partner with schools, families, and communities to embrace a broad definition of success and to implement research-based strategies that promote student well-being and engagement with learning.*

[www.challengesuccess.org](http://www.challengesuccess.org)

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## WHAT DO COLLEGE RANKINGS MEASURE?

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National and international rankings of colleges<sup>1</sup> and universities play an increasingly large role in the way students, parents, administrators, and researchers understand the landscape of higher education. Because of the influence of the rankings, many colleges work hard to conform with the formulae used by the ranking agencies, particularly the early commercially successful agencies like *Barron's*, *The Princeton Review*, and, especially, *U.S. News and World Report* (Hazelkorn, 2015). In fact, the rankings have become so popular, that many people consider selectivity and ranking to be the same thing. The logic is that the more competitive the admissions process, and the more difficult it is to get into a particular college, the better that college is.

Ranking systems and researchers use a more specific definition of selectivity. *Barron's*, for example, sorts colleges into tiers based on selectivity as measured by SAT scores, high school GPA and class rank, and acceptance rate (Barron's College Division, 2018). *U.S. News and World Report* also uses SAT scores, class rank, and acceptance rate in its formula, all under the

heading of “selectivity.” In these ranking systems and in much of the college research, the term “non-selective” is used for those colleges that admit nearly every student, for example, community colleges that only require evidence of a high school diploma or equivalent. The term “selective” typically refers to colleges that “select” students to admit from a pool of applicants. Depending on the research, “selective” may refer to colleges that admit very high percentages of applicants as well as those that admit much smaller percentages.<sup>2</sup>

Let's take a closer look at how *U.S. News and World Report*, a particularly prominent ranking agency, determines its rankings for National Universities and Liberal Arts Colleges (they use a slightly different formula for “Regional” institutions). Doing so will provide insight into how ranking lists are created and what they mean. The chart on the following page explains the fifteen metrics used by *U.S. News and World Report* in 2017,<sup>3</sup> though many other ranking agencies use similar metrics (Barron's College

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<sup>1</sup> Following U.S. colloquial conventions, we use the terms “college” and “university” interchangeably.

<sup>2</sup> In this paper, we do *not* use the terms “ranking” and “selectivity” interchangeably. When we refer to rankings, we mean where a college is ranked according to a particular ranking system. When we refer to selectivity, we use the more specific definition according to the research we are citing each time.

<sup>3</sup> The weights cited and discussed below come from the 2017 *U.S. News and World Report* website (see <https://www.usnews.com/education/best-colleges/articles/ranking-criteria-and-weights>). Note that these are recalculated to provide the exact weight of each metric. In the original rankings, there are seven major ranking areas, each made up of one to five of the listed metrics. For example, “Graduation and Retention Rates” make up 22.5% of the total ranking. 80% of “Graduation and Retention Rates” comes from the graduation rate, while 20% comes from the first-year retention rate. Thus, 18% of the total score (22.5% × 80%) comes from graduation rate, while 4.5% (22.5% × 20%) comes from the first-year retention rate. All percentages are rounded to one decimal place.

## U.S. NEWS AND WORLD REPORT: “Best Colleges” Ranking Criteria & Weights (2017)



**GRADUATION RATE** is a measure of what percentage of students who enroll in a school graduate within 6 years. A higher graduation rate is considered better.



**REPUTATION AMONG PEERS** is calculated by surveying university administrators, then averaging the results. It is a subjective measure of prestige.



**EXPENDITURES PER STUDENT** is the amount of money a college spends on instruction, research, public service, academic support, student services, and institutional support (adjusted logarithmically). Higher is considered better.



**SAT SCORES** are an average across all students at the school. ACT scores are recalculated to match the SAT score.



**AVERAGE CLASS SIZE** is a measure of how many students are in each class. Lower is considered better.



**REPUTATION AMONG GUIDANCE COUNSELORS**, like peer reputation, is calculated by surveying high school guidance counselors.<sup>4</sup> It is a subjective measure of prestige.



**PROJECTED GRADUATION RATE** differs from actual graduation rate because it is an educated guess as to what percentage of new students will graduate, rather than a measure of previous graduation rates. It takes into account institutional changes over time, including changes in actual graduation rates over the past six years, and projects those changes forward. As with graduation rates, higher is considered better.



**FACULTY COMPENSATION** is a measure of faculty salaries, including benefits, adjusted for regional cost-of-living rates. Higher compensation is considered better.



**ALUMNI GIVING RATE** measures what percentage of graduates contribute financially to the college. Higher is considered better, as it implies that graduates valued their time at the college enough to donate.



**FIRST-YEAR RETENTION** is how many students who enroll at the college stay after their first year. Higher is considered better.



**TOP 10% OF CLASS IN HIGH SCHOOL** is a measure of how many students at the college were in the top of their high school classes by GPA. This is an alternative measure of student quality, compared to SAT, as some students may not do well on the SAT, but still excel in high school. Higher is considered better.



**FACULTY WITH TERMINAL DEGREES** is a measure of the proportion of faculty who have PhDs, MDs, or another top-level degree, depending on their field. Higher is considered better.



**ACCEPTANCE RATE** is the number of students who are admitted to the school, divided by the number who apply. Lower is considered better.



**FULL-TIME FACULTY RATIO** is a measure of the proportion of faculty who are employed full-time by the college, usually in positions that combine teaching and research, as opposed to part-time or adjunct faculty, who usually have only teaching positions. Higher is considered better.



**STUDENT-FACULTY RATIO** is the number of students divided by the number of faculty. This correlates closely with class size, as smaller classes necessitate more faculty, meaning this ratio gets lower. Lower is considered better.

Division, 2018; *The Princeton Review*, n.d.<sup>5</sup>). The percentages indicate what percent of the total ranking score comes from each metric. Colleges are ranked according to the scores derived from this set of metrics.

Rankings may seem like they are objective measures of quality because they use complex formulae and present their findings definitively. Ellen Hazelkorn notes in *Rankings and the Reshaping of Higher Education* that “differences between institutions are often statistically insignificant” (2015, p. 52). Indeed, each of the metrics listed above seems to be carefully selected, but the weight each is given in calculating an overall score is artificially precise. Against what standard are these weights evaluated? Other ranking systems? Past years’ results? Do they get modified year to year to ensure some changes in the rankings? There is no objective way to decide whether the rankings produced by this selection and weighting of metrics are accurate or meaningful. What’s more, some colleges engage in

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*Ranking systems generally use data that are easy to gather, not necessarily data that are the most meaningful.*

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creative reporting of metrics to present themselves in the best light (Stevens, 2007).

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<sup>4</sup> *U.S. News and World Report* uses the term “guidance counselors,” but some high schools use slightly different terms like “college counselors” or “college advisors.” For the purposes of this metric, these terms can be used interchangeably.

<sup>5</sup> *The Princeton Review* uses some different metrics but overlaps with *U.S. News and World Report* in many categories, namely: class rank of incoming students, standardized test scores, acceptance rate, class size, student-teacher ratio, full-time faculty ratio, and institutional financial resources. As mentioned above, the *Barron’s* selectivity index looks specifically at SAT scores, high school class rank and GPA, and acceptance rates. Note that *Barron’s* does not rank ordinally, and instead groups colleges into broader selectivity categories, from “most selective” to “non-selective.”

A closer look at some of these metrics raises even more questions. For instance, considering the list of expenditures, where do construction expenses and infrastructure costs factor in? Does the alumni giving rate metric encourage colleges to admit students who are more likely to be able to afford to donate after graduation? And why are colleges with more faculty members with higher degrees regarded more favorably? Faculty with terminal degrees may do more research, but they may or may not be experts in teaching or advising. We won’t go into all of our questions for each metric here, especially since different ranking systems measure them differently, but the rest of this section highlights some of our biggest concerns.

In the following paragraphs, we discuss a few of the metrics that are more heavily weighted. These are the major drivers of ordinal differences in the rankings, but the differences are often not particularly meaningful. These categories and weights (used here and in other ranking systems) are often unclear and can be manipulated. Moreover, there are many possible measures of quality that are missing entirely, such as long-term learning outcomes, student happiness on campus, graduate satisfaction, and civic engagement. Granted, many of these are hard to measure or compare, but that’s exactly the point: ranking systems generally use data that are easy to gather, not necessarily data that are the most meaningful.

## ***Graduation Rates and Projected Graduation Rates***

Graduation rate is the most heavily-weighted category and is in a sense counted twice because of the inclusion of a “projected graduation rate” metric (which is intended to show whether schools are improving their graduation rates). These two metrics add up to 25.5% of each school’s score in the rankings. Actual graduation rates are readily available from the Integrated Postsecondary Educational Data System (IPEDS). A typical highly-ranked private university might have a graduation rate around 95%, while flagship public state university rates vary widely from state to state (ranging from over 90% to less than 50% in a few states, with most between 65% and 85%).<sup>6</sup> However, research suggests the chance of any particular student graduating in six years is not related to selectivity once background characteristics like family income are controlled for (Heil et. al., 2014). In other words, individual student characteristics — including family wealth — tend to drive student graduation outcomes, as opposed to the schools themselves (or even peer effects at those schools). Nevertheless, this metric remains a major factor in rankings, despite being more a reflection of student characteristics than of institutional quality.

## ***Reputation...What’s in the Box?***

Two of the most important components of the previously described ranking system are peer reputation and guidance counselor reputation (combined to account for 22.5% of a school’s score). These are “black box”

items because there is little transparency to the way they are calculated. The inner workings of these metrics are mysterious and poorly understood except by a few in the know. Whereas figures like graduation rates, SAT scores, and acceptance rates are public knowledge, the survey participants and results that lead to these black box metrics are not identified or reported.

It’s safe to say that most college administrators and high school counselors don’t know the inner workings of even a few — much less all — colleges well enough to accurately evaluate their quality on a year-to-year basis. A somewhat low-profile college might have just invested in an innovative academic program, but its overall reputation is unlikely to change because most college administrators and high school counselors won’t be aware of that program unless they are specifically paying attention to that institution. Reputation, thus, is something of a self-fulfilling metric. University administrators and high school counselors are likely to give good evaluations to schools they have heard more about, which may be those schools that are already at the top of the rankings (Hazelkorn, 2015).

The problem here is that reputation is supposed to capture exactly these more qualitative shifts in what’s going on in colleges. If a graduation rate dips, or expenditures grow, ranking systems notice and shift accordingly. If, however, the quality of instruction at a college improves, the only metrics that might capture that change are peer and counselor reputation, but keeping track of such changes across the entire higher education landscape (and then turning that into an

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<sup>6</sup> All IPEDS data are publicly available at <https://nces.ed.gov/ipeds/>

ordinal ranking) is an unreasonable task for already busy administrators and high school counselors.

### ***The Problem with Class Size***

Class size makes up 8% of a college’s score and is calculated by giving schools more points for the proportion of their classes that are smaller. While small classes are often seen as desirable, this metric is problematic for reasons articulated in *How College Works* (Chambliss and Takacs, 2018). When schools offer more small classes, there is less space for students in those classes, meaning fewer students actually get to take them. Consider, as an extreme example, a school with 200 students where each student takes only one class. If there are 9 classes with 2 students each, and one huge class with the remaining 182 students, the average class size at the school would still be only 20 students, and a full 90% of those classes would be .....

*Rankings are problematic, and high school students would do well to broaden their gaze.*

.....

considered “small” classes. However, less than 20% of the students at the school would be enrolled in a small class.

Rather than measuring the proportions of class sizes, emphasis should be put on the number of students who have the opportunity to enroll in and complete smaller courses. Of course, this is a much harder figure to determine, which echoes a larger issue with rankings: they are based on institution-level data that are easy to collect, and not necessarily student-level data, which

may be more informative.

### ***Other Approaches to Rankings***

There are a number of different ranking systems available these days, each with its own particular weightings and categories. Some rankings have subtle differences in metrics without much explanation. Why should rate of alumni giving, for example, be worth exactly 5%, while first-year retention is worth 4.5%? What accounts for the 0.5% difference? If you swapped some of these metrics around, you would get only slightly different results.

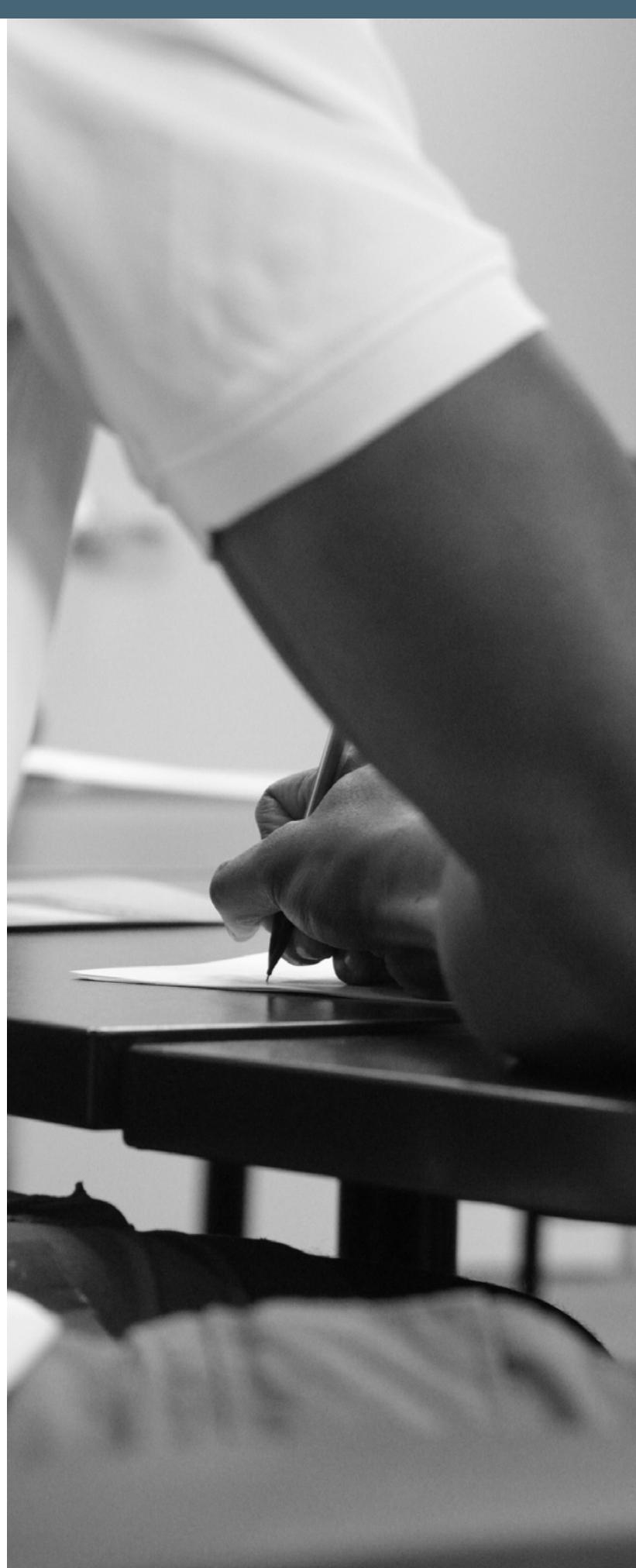
There are, however, some other approaches to rankings that measure colleges according to outcomes like value added to expected income (that is, how much more money graduates make because they attended a specific institution). For example, in its first edition, *Brookings* ranked three maritime academies, various technical colleges, and a few schools with specialized business and entrepreneurship programs above most of the colleges ranked in the top 100 in more popular ranking systems (Rothwell, 2015). Many of the highest-ranking schools in this ranking system are non-selective colleges that accept all or nearly all applicants, or selective colleges that admit over 70% of their applicants. If your goal in attending college is simply to maximize your income, attending one of these easier-to-get-into, less expensive programs at a lesser-known school is worth considering. Other ranking systems look at criteria such as the number of low-income and first-generation students enrolled (such as *Washington Monthly*; see Carey, 2017) or surveys of student satisfaction (*Niche*, for example). Because of these different metrics, the colleges that end up at or

near the top of these rankings differ from those at the top of the more popular ranking systems.

### ***Rankings in Summary***

While any ranking system has its own internal rhyme and reason, there is little objective basis for any particular set of metrics and weightings. In the words of one economist, “There is no such thing as a single index of quality that uniformly affects all possible outcomes [for students in college]” (Long, 2008). It seems impossible to reduce the quality of an institution to a single number, and then to sort schools by that number in any kind of rigorous, accurate way, especially given the wide range of goals students have as they enter college, as well as the tremendous variability in student backgrounds.

Traditional college rankings measure a set of factors that are weighted arbitrarily, drawn from data that are most easily quantifiable and comparable, sometimes poorly documented, and not always relevant to undergraduate education. In short, rankings are problematic, and high school students would do well to broaden their gaze. There are better ways to choose a college than to rely on rankings and, especially, selectivity as the main criteria, as we explain below.



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## WHAT IS THE RELATIONSHIP BETWEEN COLLEGE SELECTIVITY & STUDENT OUTCOMES?

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Much of the research on college outcomes looks primarily at financial results from college attendance, including short-term employment and long-term earnings. This is an important outcome, both for individual students and their families, and for society. However, a lot more happens in college than career preparation. For example, Matthew Mayhew and his co-authors (2016) divide their 600-plus-page review of over 1,800 peer-reviewed research studies on the effects of college into eight major categories, ranging from growth in basic quantitative and verbal skills to moral development to changes in social attitudes to quality of life impacts. In short, college affects students in a variety of ways: economically, socially, psychologically, and intellectually.

In the following paragraphs, we'll examine a few outcomes that tend to be of particular concern to families: student learning, job satisfaction and general well-being, and financial outcomes. And we'll explore the relationship between these outcomes and selectivity. Do the most selective colleges lead to the best outcomes in terms of learning, well-being, and future income?

### *College as a Place of Learning*

Students and their families hope that students will learn new skills, acquire new knowledge, and grow

intellectually during their time in college. The results here are clear and have been consistent for decades. In the most recent edition of their literature review on college outcomes, Mayhew et al. (2016) write:

Little evidence suggests that selectivity is related to measures of students' self-reported gains in learning, let alone verbal, quantitative, or subject-matter competence measured by standardized tests. This finding, which has been consistent over the past 40 to 50 years, has implications for college choice, family finances, and public policy, particularly as students, their families, and policymakers deal with the differential allocation of resources of publicly supported institutions. Accounting for student background characteristics, the weight of evidence simply does not support students' or policymakers' beliefs that a selective admissions process enhances student learning. (p. 96)

What does correlate with student learning? Time spent studying (Arum and Roska, 2011). This is true regardless of institution and for all kinds of students. In other words, a student who studies hard at a non-selective school is very likely to learn, while a student who slacks off at a selective one is less likely to learn.<sup>7</sup>

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<sup>7</sup> In addition to studies showing no difference in student learning at more selective schools, two studies have found that civic values and engagement – for example, likelihood of voting or doing community service – *decrease* when attending a selective institution (Astin and Antonio, 2004; Lott, 2013).

What are the unstated implications of these findings? There are several, but most important for college-going applicants and their families is that they would be well-served by casting a wider net in their college searches. There is no evidence that students' learning will suffer

*There is no evidence that students' learning will suffer for attending a less selective college.*

for attending a less selective college, and they may well find a better fit in other ways. In particular, students are best served by attending institutions where they are motivated to invest meaningful time in their studies. We'll return to this in the final section of the paper.

### **College as Preparation for Job Satisfaction and General Well-Being**

Since 2014, Gallup-Purdue has conducted a survey of job satisfaction and general well-being of graduates from a wide variety of colleges. The 2014 survey results included data from 1,557 associate degree holders and 29,560 bachelor's degree holders. Rather than focusing narrowly on income, this survey looked more holistically at how college graduates feel about their jobs and careers.

The 2014 Gallup-Purdue annual report found no relationship between college selectivity and both workplace engagement and general well-being (Gallup Inc., 2014). Gallup-Purdue measured well-being along five dimensions: purpose, social, financial, community,

and physical, using ten survey questions to determine in which categories graduates demonstrate they are "thriving," "struggling," or "suffering." They then compared how many graduates report thriving in one, two, three, four, or all five categories. They found no relationship, in most cases, between the type,<sup>8</sup> location, or selectivity of college and well-being after graduation. Similarly, workplace engagement, as measured by a 12-question "Engagement Index" that Gallup uses in other studies as well, did not differ between graduates of more and less selective colleges.

While Gallup-Purdue acknowledges that college decisions — where to apply, where to attend — are not easy, they argue that,

The data presented in this report suggest ...that the answers lie in thinking about things that are more lasting than selectivity of an institution or any of the traditional measures of college. Instead, the answers may lie in *what* students are doing in college and *how* they are experiencing it. (Gallup Inc., 2014, p. 5)

Gallup-Purdue's findings echo other prior research on job satisfaction and well-being. For instance, ten years after graduation, former students of selective colleges report lower job satisfaction than students from less selective colleges; students from more selective colleges are more likely to feel underpaid (Liu et al., 2010).

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<sup>8</sup> The only exception is private, for-profit institutions, the graduates of which show significantly lower well-being.

## College as an Economic Opportunity

If selectivity does not predict learning, well-being, or job satisfaction, does it predict economic outcomes? There are many different ways researchers define and measure selectivity, which can lead to differing conclusions about economic outcomes. This makes it problematic to compare findings. In the paragraphs below, we'll present various findings — using, for the sake of accuracy, the language from the original studies as much as possible — and we'll highlight the broader takeaways.

There is some evidence to suggest that institutional selectivity is associated with long-term financial outcomes. In one seminal study, Zhang (2008, 2012) finds that the graduates of “high quality” (Zhang’s term) institutions have salaries approximately 6 to 8% higher directly out of college than graduates from what he calls “low quality” institutions (which refers to “non-selective” colleges that admit almost any student who applies), with that percentage rising to 16 to 19% a decade after college.<sup>9</sup> While the average earnings of a graduate of these “high quality” colleges are higher than those from non-selective colleges, Zhang’s data demonstrate much larger variation *within* institutions than *between* institutions. That is, the difference between the lowest earners and the highest earners from Zhang’s “high quality” colleges is much greater than the difference between the average graduate from that college and the average graduate from a non-

selective college.

In a recent study that compares what *Barron’s* calls the “most selective” schools to non-selective ones, Witteveen and Attewell (2017) find a similar relationship to that found by Zhang. Controlling for student major and enrollment in post-graduate studies (which can increase income), they find a 21% difference in earnings between the most selective and non-selective schools (again, schools that admit almost any student).

Additional studies look more narrowly at average SAT scores of an entire class of incoming students, rather than using *Barron’s* broader selectivity index. This allows us to better understand the differences between similarly selective schools. Seki (2014) finds a 3% increase in wages associated with a 118-point difference in average SAT scores of incoming students. Chalak and Kim (2017) find that a 100-point difference in average SAT scores of incoming students is associated with, at most, a 4.8% increase in earnings. These differences are statistically significant, but are small compared to the differences between the most selective and non-selective schools, and again are quite small compared to differences among graduates of individual schools.

### ***Is it the College, or is it the Student?***

Though the studies above show economic benefits to attending selective institutions, researchers have not found a simple and commonly agreed upon way

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<sup>9</sup> Zhang divides three groups of over 5,000 students (from three different sample years) based on the *Barron’s* selectivity index of the colleges they attend. *Barron’s* calculates selectivity using SAT scores, high school GPA and class rank, and acceptance rates, and has several tiers, which Zhang sorts into six categories: high quality public, high quality private, medium quality public, medium quality private, low quality public, and low quality private. The top group of “high quality” public and private institutions contains approximately 100 colleges.

to account for the fact that students self-select into selective colleges. Because students aren't randomly assigned to colleges, it's difficult to determine whether the benefits of attending a more selective college result from attending that college, or rather reflect the kinds of students who attend those colleges in the first place. Is the value added by the college or by the individual student?

Dale and Krueger, in a study completed first in 1999 and revisited twice since with similar findings, including most recently in 2014, investigated exactly this question (Dale and Krueger, 2002, 2014). They used the *College and Beyond* dataset, which surveyed students from 34 colleges, most of which are in the top three tiers of *Barron's* selectivity index (roughly 200 institutions), as well as a small set of non-selective schools. The average SAT scores of incoming students at colleges in the sample range from the 800s to nearly 1400.

Dale and Krueger formed matching groups of students who were accepted to similar (and often the same) selective institutions. Within these matched groups, which in the latest analysis of the data included 14,238 students, some students attended the more selective schools, while others turned down admission offers from selective schools and opted to attend less selective alternatives — for any number of reasons, including financial concerns, or because they wanted to stay closer to home. If selectivity is truly the driving force behind better wages, we would expect to find that

the students who attended the more selective schools outperformed their matched peers who chose to attend less selective schools.

Dale and Krueger found, instead, that selectivity had no effect on long-term earnings. The same students who were admitted into the selective schools but who chose to attend less selective schools did just as well financially later on in life. One important caveat: Dale and Krueger, among others, have found small benefits from attending more selective institutions for students who are the first in their generation to attend college and for traditionally underserved students.<sup>10</sup> For most students attending these selective universities, however, the research shows no difference in financial outcomes. Note that Dale and Krueger's findings

*Differences are driven by individual students, not by the quality of the student body as a whole or the institutions themselves.*

cannot be generalized beyond the selective schools in their study, but their research suggests that we should consider the possibility that even in studies that find differences in economic outcomes between selective and non-selective colleges, these differences are driven by *individual students*, not by the quality of the student body as a whole or the institutions themselves.

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<sup>10</sup> Roughly 1/10 of a standard deviation in income outcomes. Similarly, Chetty et al. (2017) find that college can be a major source of social mobility for low-income students, and that the most selective institutions in fact do not do a good job of enrolling the students who would benefit most from attending. For a comprehensive discussion of underrepresented populations in higher education, including admissions and outcomes, see Bowen and Bok's (2000) seminal book, *The Shape of the River*.

Mayhew et al. (2016) agree with this conclusion in their synthesis of this economic outcome research. They write:

The estimated earnings effects of having a bachelor's degree from a selective institution may be inflated. Studies generally did not control for measures of individual ambition and other unobserved characteristics, which may influence students' pathways into selective colleges and universities, as well as their subsequent productivity and earnings. (p. 437)

The benefits of attending the most selective colleges seen in some of the studies above are challenged by researchers such as Dale and Krueger, who use this specific methodology to account for individual student differences. Those benefits, furthermore, are most pronounced when comparing selective colleges to non-selective ones, not when comparing selective colleges to each other.

Research on the economic outcomes of college tends not to investigate the mechanisms for why students do or do not make more money depending on the college they attend. The research on learning and selectivity shows little to no relationship between the two, so we cannot point to academic differences per se to explain if and how attending a selective institution may result in higher earnings. One popular belief is that going to a highly selective school is not necessarily about *learning* more, it's about gaining access to a network

of America's elite.<sup>11</sup> Does attending a college that offers access to large percentages of students from upper and upper-middle class backgrounds provide a "network effect" that results in better job prospects and, thus, an increase in earnings over time? This is a difficult question to answer and one not directly addressed in current research. The research we've discussed suggests that, even if network effects may be a driving force

*While some employers might check the name on your college transcript, most care far more about your track record in the field, basic communication and problem-solving skills, and the attitude and work ethic you bring to the table.*

between differences in earnings outcomes between colleges, that effect is much smaller than differences driven by experiences within individual colleges.

### **Selectivity in Summary**

Job satisfaction, general well-being, learning, and income are all important outcomes of college. Research shows no relationship between selectivity and learning, job satisfaction, or general well-being. There may be, at best, modest financial benefits to be gained from attending more selective colleges, but the research

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<sup>11</sup> Selective admissions historically arose as a way to reinforce social class for the early-20th century New England elite (Karabel, 2006; Wechsler, 2014), and today, the highest ranked institutions still enroll a disproportionately large percentage of students from upper and upper-middle class backgrounds (Leonhardt, 2018).



is mixed and much more nuanced when it comes to the long-term financial benefits of attending a more selective school, once student characteristics are taken into account. Notably, there is little variability among selective colleges, and within-college effects (such as academic major and individual student effort) far outweigh between-college effects (Mayhew et al., 2016).

Most rankings tell you primarily how famous a school is. As the studies above suggest, selectivity and prestige are not a one-way ticket to financial success, let alone a happy and fulfilling life. While some employers might check the name on your college transcript, most care far more about your track record in the field, basic communication and problem-solving skills, and the attitude and work ethic you bring to the table (NACE, 2017).

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## WHAT MATTERS? ENGAGEMENT.

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We've been focusing on the differences between colleges, but we continue to see that variability within colleges is more important for a range of student outcomes. The reason for this is that there is so much variability in students themselves. In this section we shift our focus away from college-level outcomes and towards students and their individual outcomes.

In our reading of the research on student outcomes — learning, financial, and otherwise — this theme arises: the students who benefit the most from college are those who are most engaged in their academics and campus communities, taking advantage of the opportunities and resources their particular institution provides. Engagement is the key.

Mayhew et al. summarize the research on engagement in higher education by saying, "It appears that what students do in college is far more important than the type of institution they attend" (Mayhew et al., 2016, p.38; See also: Astin, 1997; Bruni, 2016; Pascarella and Terenzini, 1991, 2005). They add, "Students learn more when actively engaged in the learning process" (Mayhew et al., 2016, p. 60).

Specifically, effort put into coursework results in

increased subject-matter competence and general knowledge (Berger, 2002; Rocconi, 2011). Engagement with coursework also increases curiosity, creativity, and initiative (Pike et al., 2012). Unsurprisingly, the more students study, and the more intentional their use of study skills, the better students do in their courses (Arum and Roska, 2011; Johnson and Kuennen, 2004; Stump et al., 2011). Outside of the classroom, engagement in campus community, clubs, .....

*The students who benefit the most from college are those who are most engaged in their academics and campus communities, taking advantage of the opportunities and resources their particular institution provides. Engagement is the key.*

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and extracurricular activities is associated with a range of positive outcomes, from cognitive development to identity formation and psychosocial development to moral and ethical development to persistence to improved grades (Trowler and Trowler, 2010).<sup>12</sup>

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<sup>12</sup>In the previous section we discussed the importance of controlling for background characteristics when considering the long-term financial effects of attending particular colleges. While many of the studies in this section on engagement explicitly measure and make methodological or analytical adjustments based on student background characteristics, it's worth noting that the unit of analysis in most of these studies is individual students, and not institutions. That is, these studies ask how student behavior and activity in college impact certain knowledge, skills, abilities, or characteristics, not how the college attended impacts the students' outcomes. As a result, background characteristics are less relevant to these research questions and results, and furthermore are built into the sampling and methods.

The Gallup-Purdue studies mentioned above show a strong connection between certain forms of engagement in college and future job satisfaction and well-being. They report six key college experiences that have an impact on how fulfilled employees feel at work and whether they are thriving in life after college:

- 1. TAKING A COURSE** with a professor who makes learning exciting.
- 2. WORKING WITH PROFESSORS** who care about students personally.
- 3. FINDING A MENTOR** who encourages students to pursue personal goals.
- 4. WORKING ON A PROJECT** across several semesters.
- 5. PARTICIPATING IN AN INTERNSHIP** that applies classroom learning.
- 6. BEING ACTIVE IN EXTRACURRICULAR ACTIVITIES.**

*(Gallup Inc., 2014)*

And yet, as important as these experiences seem to be, very few college graduates say that they experienced them. Only 14% of graduates strongly agreed they were supported by professors who cared, made them excited about learning, and encouraged their dreams. Only 6% of graduates strongly agreed they had a meaningful internship or job, worked on a long-term project, and were actively involved in extra-curricular activities. And only 3% experienced all six factors (Gallup Inc., 2014).

Chambliss and Takacs (2018) similarly find that the relationships students cultivate in college — especially with professors as mentors — are highly related to their learning, satisfaction with the college experience, and post-graduate success.

Considering that these college experiences are tied to future workplace engagement as well as health and thriving, and that these experiences take place in a wide variety of colleges, regardless of size, location, or selectivity, the implications seem clear: A good “fit” is a college where a student will be engaged — in class and out — by what the college has to offer.

For some students, deciding where to go to college may depend on academic factors, such as access to cutting-edge researchers in a beloved field with opportunities to be involved in graduate-level work, or a well-established professional preparation program. For others, the decision might be influenced by location: a college close to home, or far away, in a small town or in a big city. Or it might have to do with extracurricular

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*A good “fit” is a college where a student will be engaged — in class and out — by what the college has to offer.*

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programming: a robust student activities program, intramural sports, or the arts. The decision might include cultural opportunities: a university with a strong international languages program, a culturally diverse student body, and a track record of successful study-abroad exchanges. The presence or absence of a

Greek system or a large Division 1 athletics program might be important factors for some students. Perhaps religious denomination, institutional size, or comprehensive support for those with learning differences may sway the decision. And of course, financial aid and cost are key factors as well.

This is hardly an exhaustive set of criteria, but it suggests that students should look at much more meaningful characteristics than selectivity and rankings when thinking about where they want to go to college. Rather than choosing a school based primarily on a flawed scoring system, students should ask whether they will be engaged at the college in ways that will allow them to form strong relationships with professors and mentors, apply their learning via internships and long-term projects, and find a sense of community.



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## CONCLUSION

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There are over 4,500 accredited degree-granting colleges in the United States, allowing students a wide variety of choices for their education. Attempting to disentangle the different variables, inputs, and outcomes is not easy, and though this paper summarizes several high-quality studies that attempt to account for a number of variables — including some difficult-to-measure characteristics of individual students — more research needs to be done to help students and families make wise college choices. Consider this: The top-ranked 5% of colleges — according to rankings that are, as we have discussed, problematic — include over 200 institutions. Most college applicants and their families cannot name 200 colleges, and yet the differences between the top of the list and the 200th on the list — in terms of all the outcomes discussed in this paper — are minimal. Regardless of whether a student attends a college ranked in the top 5% or one ranked much lower, the research strongly suggests that engagement in college, how a student spends his or her time, matters much more in the long run than the college a student

attends.

There is no question that the college admissions process can be stressful. Low acceptance rates and sensational stories of students applying to 20 or more schools belie the reality that anyone who wants to — who is willing to spend the time and make the financial investment (more affordable in the case of most community colleges) — can go to college in the United States. The reality is, higher education in the United States is uniquely, exceptionally strong (Labaree, 2017). We hope that this paper encourages students and families to look beyond rankings and selectivity in the college search process, and instead seek a good fit, a school where students can engage and participate fully in academic and social life in order to thrive both during the college years and beyond.

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## REFERENCES

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- Arum, R., & Roksa, J. (2011). *Academically Adrift: Limited Learning on College Campuses*. Chicago, IL: University of Chicago Press.
- Astin, A. W. (1997). *What Matters in College?: Four Critical Years Revisited*. San Francisco, CA: Jossey-Bass.
- Astin, H. S., & Antonio, A. L. (2004). The impact of college on character development. *New Directions for Institutional Research*, 2004(122), 55-64.
- Barron's College Division. (2018). *Profiles of American Colleges 2019*. Barron's Educational Series.
- Berger, J. B. (2002). The influence of the organizational structures of colleges and universities on college student learning. *Peabody Journal of Education*, 77(3), 40-59.
- Bowen, W. G. and Bok, D. (2000). *The Shape of the River*. Princeton, NJ: Princeton University Press.
- Bruni, F. (2016). *Where You Go Is Not Who You'll Be: An Antidote to the College Admissions Mania*. New York, NY: Grand Central Publishing.
- Carey, K. (2017, August 27). A different kind of college ranking. *Washington Monthly*, September/October 2017. Retrieved from <https://washingtonmonthly.com/magazine/septemberoctober-2017/introduction-a-different-kind-of-college-ranking-9/>
- Chalakov, K., & Kim, D. (2017). *Measurement Error Without Exclusion: The Returns to College Selectivity and Characteristics*. Rochester, NY: Social Science Research Network.
- Chambliss, D. F., & Takacs, C. G. (2018). *How College Works* (Reprint edition). Harvard University Press.
- Chetty, R., Friedman, J. N., Saez, E., Turner, N., & Yagan, D. (2017). *Mobility Report Cards: The Role of Colleges in Intergenerational Mobility*. National Bureau of Economic Research.
- Dale, S. B., & Krueger, A. B. (2002). Estimating the payoff to attending a more selective college: An application of selection on observables and unobservables. *The Quarterly Journal of Economics*, 117(4), 1491-1527.
- Dale, S. B., & Krueger, A. B. (2014). Estimating the Effects of College Characteristics over the Career Using Administrative Earnings Data. *Journal of Human Resources*, 49(2), 323-358.
- Gallup Inc. (2014). Gallup-Purdue Index Report 2014. Retrieved from <http://news.gallup.com/reports/197141/gallup-purdue-index-report-2014.aspx>

- Hazelkorn, E. (2015). *Rankings and the reshaping of higher education: the battle for world-class excellence* (2nd edition). Palgrave Macmillan UK.
- Heil, S., Reisel, L., & Attewell, P. (2014). College Selectivity and Degree Completion. *American Educational Research Journal*.
- Integrated Postsecondary Education Data System. U.S. Department of Education. Institute of Education Sciences, National Center for Education Statistics. Retrived August 7, 2018 from <https://nces.ed.gov/ipeds/>
- Johnson, M., & Kuennen, E. (2004). Delaying developmental mathematics: The characteristics and costs. *Journal of Developmental Education*, 28(2), 24.
- Karabel, J. (2006). *The Chosen: The Hidden History of Admission and Exclusion at Harvard, Yale, and Princeton* (Reprint edition). Boston, MA: Mariner Books.
- Labaree, D. F. (2017). *A Perfect Mess: The Unlikely Ascendancy of American Higher Education*. Chicago, IL: University of Chicago Press.
- Leonhardt, D. (2018, January 20). America's Great Working-Class Colleges. *The New York Times*. Retrieved from <https://www.nytimes.com/2017/01/18/opinion/sunday/americas-great-working-class-colleges.html>
- Liu, X., Thomas, S., & Zhang, L. (2010). College quality, earnings, and job satisfaction: Evidence from recent college graduates. *Journal of Labor Research*, 31(2), 183-201.
- Long, M. C. (2008). College quality and early adult outcomes. *Economics of Education Review*, 27(5), 588-602.
- Lott II, J. L. (2013). Predictors of civic values: Understanding student-level and institutional-level effects. *Journal of College Student Development*, 54(1), 1-16.
- Mayhew, M. J., Rockenbach, A. N., Bowman, N. A., Seifert, T. A. D., Wolniak, G. C., Pascarella, E. T., & Terenzini, P. T. (2016). *How College Affects Students: 21st Century Evidence that Higher Education Works* (1 edition). San Francisco, CA: Jossey-Bass.
- Niche. (n.d.) *Methodology for Niche College Rankings*. Retrieved August 7, 2018 from <https://www.niche.com/colleges/rankings/methodology/>
- National Association of Colleges and Employers. (2017). *Job Outlook 2017*.
- Pascarella, E. T., & Terenzini, P. T. (1991). *How college affects students: findings and insights from twenty years of research*. San Francisco, CA: Jossey-Bass.
- Pascarella, E. T., & Terenzini, P. T. (2005). *How college affects students* (Vol. 2). San Francisco, CA: Jossey-Bass.

- Pike, G. R., Smart, J. C., & Ethington, C. A. (2012). The mediating effects of student engagement on the relationships between academic disciplines and learning outcomes: An extension of Holland's theory. *Research in Higher Education*, 53(5), 550-575.
- Rocconi, L. M. (2011). The impact of learning communities on first year students' growth and development in college. *Research in Higher Education*, 52(2), 178-193.
- Rothwell, J. (2015, October 29). Using earnings data to rank colleges: A value-added approach updated with College Scorecard data. *Brookings Institution*. Retrieved from <https://www.brookings.edu/research/using-earnings-data-to-rank-colleges-a-value-added-approach-updated-with-college-scorecard-data/>
- Seki, M. (2014). *Heterogeneous Returns to College Selectivity and the Value of Graduate Degree Attainment* (SSRN Scholarly Paper No. ID 2520978). Rochester, NY: Social Science Research Network.
- Stevens, M. L. (2007). *Creating a Class: College Admissions and the Education of Elites*. Harvard University Press.
- Stump, G. S., Hilpert, J. C., Husman, J., Chung, W., & Kim, W. (2011). Collaborative learning in engineering students: Gender and achievement. *Journal of Engineering Education*, 100(3), 475-497.
- The Princeton Review. (n.d.). *The Princeton Review's College Ratings*. Retrieved August 7, 2018 from <https://www.princetonreview.com/college-rankings/college-ratings>
- Trowler, P., & Trowler, V. (2010). *Student engagement evidence summary*. The Higher Education Academy.
- U.S. News and World Report. (n.d.) *Best Colleges Ranking Criteria and Weights*. Retrieved August 7, 2018 from <https://www.usnews.com/education/best-colleges/articles/ranking-criteria-and-weights>
- Wechsler, H. S. (2014). *The qualified student: A history of selective college admission in America*. Transaction Publishers.
- Witteveen, D., & Attewell, P. (2017). The earnings payoff from attending a selective college. *Social Science Research*, 66, 154-169.
- Zhang, L. (2008). The way to wealth and the way to leisure: The impact of college education on graduates' earnings and hours of work. *Research in Higher Education*, 49(3), 199-213.
- Zhang, L. (2012). *Does quality pay?* Routledge.