Institutional Racism in Scholarship Renewal (Research)

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Abstract:

Institutions that have open admissions are more likely to enroll students who can't complete a degree in the specified time. It is common practice in higher education to award scholarships for the expected time of a degree. Students are told that scholarships may or may not be extended if additional time is needed for study. A case is made that the effect of this policy on underrepresented minorities (URM) is institutional racism. URM students are admitted to engineering program on a conditional basis much more commonly than other students. Since engineering curricula are full and have little or no room for additional courses, that means that it will likely take more than the normal time to graduate. The stress of not knowing whether scholarships will be extended pressures students to drop out or select non-engineering majors. This same pressure affects other students but has a disproportionate effect on URM students. Besides URM students, other groups of diverse students are also more prone to stress and so could be similarly affected. Graduation data supports this as a factor. Scholarship renewal policies are compared for public and private four-year colleges, Historical Black Colleges and Universities (HBCUs) and Hispanic Serving Institutions (HSIs).

Introduction

The names of various types of racism often get interchangeable use [1]. The definitions used here will be specified to be clear. Systemic racism and institutional racism are similar concepts. In both, it is the policies or practices that leads to discrimination [2]. Systemic racism comes from societal practices, but institutional racism comes from organizational policy. The two concepts tend to get lumped together as structural racism.

The result of systemic or institutional racism is that people have different access to the benefits of society. An example of systemic racism is Jim Crow laws in the U.S. that were the government policies of segregation and disenfranchisement in the 19th and 20th centuries [3].

Jim Crow laws had racist and segregationist intent, but there does not need to be a racist intent for a practice to be systemic racism. Racial bigotry doesn't need to be present for racism in practice to exist [4]. With the definition used here of institutional racism, the only concern is the result of the practices. If a practice has the effect of discrimination, then it is systemic or institutional racism depending on if it is a social practice or corporate policy.

Racism in education has been present in various forms. Plessy v. Ferguson was the landmark case when the U.S. Supreme Court approved of "separate but equal" education [5]. This was standard practice from 1896 to 1954. Redlining was a practice that effectively kept educational inequality in place after 1954. Redlining create segregated housing by prohibiting benefits to all races beyond lines on a map, and therefore keep school districts segregated. Redlining continued until at least 1968 when the U.S. Fair Housing Act explicitly prohibited it [6]. Despite the Fair Housing Act, segregation in housing and education has increased since the 1960s [7]. Therefore, equivalent education has been provided, so it could be said the separate but equal educational policies are still in effect.

It would seem unnecessary to prove that separate education is not equal. However, an example will be provided. Per pupil funding varies widely across the U.S. [8]. Nearly half of school funding is generated at the local level. The majority of U.S. States impose limits on local property taxes [9]. Equal local property tax rates do not produce the same funds because of differing local property values. Therefore, school funding follows continuing patterns of racial segregation. Differential funding impacts the quality of education through such means as teacher pay and class size [10]. Therefore, student achievement can be influenced by continuing systemic racism.

Other forms of inequality are worth mentioning here to show that the issue under consideration is not the sole factor affecting URM students. One relevant issue is that URM students get lower scholarships than other students but scholarships are given to students who don't have financial need for them [11]. Additionally, URM students lack information about how to apply for scholarships so they don't have equal access [12].

Profile of vulnerable groups

Underrepresented minority students may have higher stress levels because of the effects of racism. Higher education is already stressful. Therefore, URM students are often unfairly disadvantaged by having higher stress levels.

Clark et. al. discuss the psychological, social and physiological effects on a person who experiences racism [13]. Their biopsychosocial model is that an environmental stimulus may become a perception of racism based on mediation of factors. Constitutional issues, such as skin tone, can influence whether an act is seen as racism. Sociodemographic (income level), and psychological and behavioral factors (previous exposure) are also moderators of perception. If a stimulus is perceived as racism, then a person will go through a coping response. This can cause psychological and physiological stress that impact health. Among the psychological responses is anxiety. Examples of the negative effects of stress on physiology are heart and immune system problems.

Education is stressful. People at the age of traditional students are more susceptible to stress problems [14]. Students are transitioning to a new time in their lives when they have more personal freedom and more expectations from them. Beginning college often requires a higher level of academic independence and effort than in high school.

The effect of stress is similar despite its cause. Cortisol levels are higher when stressed, so the effects of stress are additive. This means that URM students with pressures above what other students feel are more likely to have anxiety or become depressed. The makes it harder to complete an education.

Placement of vulnerable students into engineering

Colleges and Universities offering degrees in engineering have a range of admission selectivity. Many institutions require completion of the SAT or ACT for admission. However, due to COVID, in 2020-2021 more schools are allowing just high school grades to count for admission so that students don't need to sit close to others during long exams.

Admission to engineering programs may require higher SAT or ACT test scores than admission to the institution as a whole. However, a few institutions have open admissions for all students including for engineering. This means there is no test score limit.

Some institutions, such as University U admit students into a Pre-Engineering or similarly named program with lower test score requirements than direct admission to engineering programs. The assumption is that students will have to complete coursework before becoming a student with all benefits.

Some institutions don't admit students into engineering programs directly. All students need to apply to an engineering program after at least one year of study.

At many universities, placement tests are given to students to determine which course they are ready for. Placement test results can be modified by factors such as courses taken in high school and the grades in those courses. Placement tests are most commonly given in the areas of mathematics, English/reading, chemistry and languages. The most common tools used for placement in mathematics are the COMPASS, ACCUPLACER, and subject tests on the ACT and SAT [15]. In English/reading, the ASSET test is additionally used. In addition, some institutions have their own tests.

There is no consensus in what constitutes adequate preparation since test cut scores vary 100% between institutions [15]. However, there is a trend in cut scores with type of institution that private four-year institutions have higher thresholds.

Standardized testing has a number of flaws [16]. Specifically, test questions can require cultural understanding that doesn't match the experiences of URM students [17]. Therefore, scores for URM students may appear lower than their abilities.

Educational funding disparities mean that schools serving URM students have fewer credentialed teachers [10]. This can be one of many factors that result in URM students placing lower on average than the median student on admission and placement tests [18].

The result can be that URM students are more likely to be admitted to pre-engineering programs or institutions with open enrollment. The assumption is that they will need to take remedial courses before taking courses required for an engineering major.

Ten ABET accredited programs were evaluated to see whether a student unprepared for the regular course plan could finish in four years. Random civil engineering programs were selected since the author was familiar with the curriculum. Twenty percent had no room for additional three-credit courses without overloading. The majority of programs had room for one course without becoming overloaded, and a couple programs had room for more than one course. However, this doesn't mean that in any of these programs a student could catch up. All programs required calculus in the first semester, but many students may not be ready for that. Shifting calculus to a later term causes a cascade of course plan changes. Revised four-year course plans for unprepared students were not shown by any of the ten institutions, and based on the author's experience, being unprepared very likely results in late graduation by all students.

Funding/Scholarship processes

Students fund their education through government aid programs, scholarships, family support, and by working. The main focus of this paper is on renewal of institutional grants. However, renewal of governmental aid will be briefly discussed.

Federal financial aid is the most common form of direct aid to the student in the United States. In addition, state governments support state universities, and some provide direct aid to students, and community colleges are commonly supported by districts, counties or cities in the United States.

Some federal programs are specifically limited, such as the maximum of six years for the Pell Grant [19]. However, the federal government empowers each institution to set limits based on satisfactory academic progress (SAP) for financial aid.

Data was collected on 30 four-year institutions in the U.S. Ten each were Historical Black Colleges and Universities (HBCUs) and Hispanic Serving Institutions (HSIs) or random.

A review of 30 institutions shows that they all set the limit of SAP to 150% of degree length. This is not the same as SAP for continuing in the program since institutions may put other limits on how long students may attempt a degree, nor is the same as a scholarship duration.

Funding through an institution is from named scholarships and institutional grants. Named scholarships may have renewal criteria defined by the donor or others. Institutional grants are the main scholarship given by many institutions. However, institutional grants may not be offered at every institution. A survey of 30 four-year colleges and universities shows that all offered institutional grants but they varied from 6% to 66% of the total cost of attendance for on-campus living arrangements. Private institutions cost more on average but gave larger institutional grants compared to public institutions, 31% versus 25% of total cost, respectively. There were no significant relationships found between the institutional grants and whether it was HBCU, HSI or Primarily White Institutions (PWI), but the small differences might be significant with a larger sample.

Institutional grants are largely determined ad hoc. Colleges and universities have multiple objectives. A primary objective of any organization is financial solvency. The level of the grant influences student choice. For every $1000 increase in grant aid, students will vary their institution choice by 1.6% [20]. However, low-income students are three times as sensitive to grant aid as high-income students. Therefore, institutions can attract more students by offering more aid. Each institution makes a judgement of how much net income they will get based on varying the grant.

Institutions may award grants based on test scores, GPA, need, and on other goals such as promoting diversity. In-practice, each institution has a written or unwritten policy of how much to award, and it may be publicly shown to students, but actual aid can vary based on negotiation.

Renewal policies were investigated for institutional grants at public and private four-year colleges, that were HBCUs, HSIs or PWI. Policies on duration of renewal of grants were not

always clearly specified on the institutions' web page. It is known from University U that the grant terms are specified in the financial aid award letter to the students. For one institution with vague information on-line, the author called the financial aid office, but when the staff couldn't answer the question, that route of information gathering was discontinued.

Roughly half of the institutions had clear renewal policies on-line. Those all limited grant extension to four years or less. A possible exception is the State of Illinois limits state grants to 135 credit hours. That works out to slightly more than four years based on the average student load.

University T is a minority-serving institution. It is HSI and it would seem to meet requirements of being an HBCU. University T states that institutional grants are normally extended as long as satisfactory academic progress is made. This was counted as a vague renewal clause. The University didn't define "normal." Vague or subjective renewal terms leave open the possibility of bias, and therefore do not relieve student stress.

Some public institutions, such as University C, had explicit renewal terms. The main institutional grant at the University was listed as restricted to 2 years because of state funding.

Renewal terms may be less important at institutions where the grant is only 6% of the total cost versus 66%. However, no correlation was found between the grant level and clarity of its renewal terms.

It appears that at University U, scholarship extensions are always granted despite stating they are limited to four years. However, this is based on limited observations. This does not reduce the stress the students have about renewal. This will be discussed below.

For private institutions there are no external restrictions on renewal of institutional grants, and institutions rely largely on budgetary rationales in determining the overall average institutional grant. Public institutions may have external constraints since institutional grants may be specified externally. However, no rationale was documented for why private institutions largely limit institutional grants to four years in a four-year program. However, some possibilities will be discussed. College ratings are a function of the six-year graduation rate, so institutions have a motivation to encourage students to graduate quickly [21]. Is the collective knowledge of colleges that pressuring the students to graduate quickly will improve their ratings? Alternatively, do they think that they will get more tuition revenue from students who stay beyond the four years? Is policy based on old concepts of punishment for non-performance? Does internal budgeting process restrict it? For example, are financial aid offices given a strict budget, and so feel constrained that they can only dispense the resources they allot?

Results

When students are required to start in lower level courses a possible effect on them is that they are consciously or unconsciously labeled as deficient. Expectations can influence student performance through self-fulfilling prophecy [22]. However, Gillborn [23] argues that education of teachers in critical race theory can lessen stereotyped reactions.

Nationally, it is seen that when URM students are placed in a program that exceeds their abilities, their retention rate is lower [24]. Pre-engineering programs can be set up to match student abilities, because they can allow for extra time to reach the necessary level of skill. Therefore, lower retention doesn't necessarily have to apply to pre-engineering programs.

Graduation rates for African Americans and Hispanics are about half and two-thirds of the rate for White students, respectively [25]. This doesn't distinguish between students who were prepared or unprepared for entry-level courses. Regardless, lower graduation is a serious problem.

At University U, 23% of new freshmen are admitted into a pre-engineering program. These students need to take at least one additional math course. Over a five-year period from 2016 to 2020, the pre-engineering program was 56% underrepresented minority students compared to 27% of other engineering freshmen. If the pre-engineering program were its own institution, it would qualify as HBCU and HSI.

Investigation of the graduation rate is limited to new students arriving in 2016 because it is the only year where data is available for those who would graduate by 2020. In 2016, only five students entered the pre-engineering program. The normal is 8 to 10 students. Also, there was low racial diversity that year since only one student was URM. Four years later, none of the students had graduated. However, one graduated by the end of the summer, and three additional students are still making progress towards graduating at a rate to finish in five to six years. Only one dropped.

The pre-engineering program at University U has twice the rate of URM students, but those students aren't guaranteed scholarships towards graduation. It is expected that this trend holds up nationally. At most universities, adequate scholarships are given to students in programs dominated by non-minorities, but not guaranteed to URM students in nearly identical programs. Therefore, this is institutional racism. The stress of worry about scholarship extensions disproportionately affects URM students. Regardless of the intent, the policies make it harder for stressed students to complete their degrees. It is unjust to admit students to programs that they are not prepared for and to entice them with scholarships that will not be sufficient to cover the planned length of study considering remedial work.

Students who study engineering but are not in pre-engineering are more likely to graduate in four years. Those students may not worry as much about scholarship extension beyond four years because they don't expect that they will have to spend that much time to finish regardless of whether that turns out to be true.

Remedies

There is a wide body of literature about student retention [21]. For example, improvement of the learning environment increases learning and helps students graduate on-time. Regardless, those initiatives don't reduce the differential stress current scholarship extension practices, and therefore, don't end institutional racism.

Bridge programs exist that provide scholarships for students who are not prepared for admission at the expected level. It is possible to apply this more widely. At University U, the pre-science programs have funding from the National Institutes of Health for funding for inner city students, who are largely URM, to be paid to do research as undergraduate students. However, no guarantees are given to students that their scholarships will extend if necessary.

A possible remedy is to simply stop telling students their institutional grants are limited. Alternatively, students who are admitted to programs that would take more than four years could be told a more reasonable limit on their scholarship. A possible explanation for not doing this is the effect on budgets because the question will arise about how to pay for those scholarships. However, it was shown that institutional grant awards are financial decisions made to maximized income. Therefore, it was already decided by the institution that awarding a certain level of institutional scholarship to a student, that the institutions would have a net gain. Institutional grants aren't 'real money' but markdowns of tuition, and no money needs to be found to pay for them. If financial aid offices are constrained by internal budgeted amounts of aid and that is pressuring them to limit grants to four years, then those institutions need alternative budgeting processes that allow for just methods of awarding funds.

Conclusions

The practice of publishing limits on student scholarships such as internal grants pressures students. Nationwide, less than half of new students graduate in four years. About one-third of graduating students take more than four years [25]. This has an immediate effect on students who need remedial work because they see that they will take more time to graduate. Regardless of the intent, URM students are disproportionately stressed over funding because of this policy. It is likely a factor in URM student retention. Therefore, it is institutional racism.

If institutions value URM students, then they will have to come up with solutions for an unjust situation. Alternative policies were proposed. However, the rationale for why institutions threaten to cut institutional grants is ambiguous.

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