

Quality Assurance in Higher Education: The U.S. Experience

Mohamed Esseghir, Ph.D.

Principal Research Scientist

The Dow Chemical Company

400 Arcola Road, Collegeville, PA 19426 – USA

esseghm@dow.com

Abstract

This four-part series of brief communications provide an overview of quality assurance in higher education in the United States. First, the U.S. post-secondary education is introduced, its historical evolution, reporting structure, overseeing responsibilities, and financing mechanisms for both its public and private institutions. The admission process and the criteria used for accurate assessment of a student's capabilities for best placement and to maximize chances of success are then discussed. The communication then presents quality assurance in the U.S. system in which the primary focus of the federal government and its agencies is to ensure whether an institution or program is of sufficient quality to qualify for federal funds. Quality assurance itself relies on professional, non-governmental accrediting organizations specialized in various fields of higher education. Finally, the essential elements of the accreditation process, its methods of assessment, and implementation are presented.

Part 2

In Part 1 of this series, an overview of the U.S. system of higher education was provided, a system built on decentralization with shared power over education given to states and local authorities as well as to individual higher education institutions. In addition, the U.S. system of higher education relies on various public and private institutions with distinct missions and acceptance standards and where public and private institutions enjoy more autonomy and are more internally self-governing. In this part, focus will be on educational options available to US students, enrollment trends and cost of higher education.

Enrollment Trends in Public versus Private

Judging only by the number of institutions in operation over the years as described in Part 1 is not enough to understand the full picture. For a more complete understanding of the educational offerings available to student in the U.S., it is best to examine available enrollment data. This includes the historical data on U.S. college enrollment statistics for public and private colleges from 1965 to 2014 and projections up to 2025 [1].

It is important to note that despite the growing number of private institutions, student enrollment is much higher in public institutions. In fact the ratio has been about 3.5 historically, then levelling off to just below 3.0 over the past 20 years. It is forecasted to remain at this level for the next decade as shown in Figure 3.

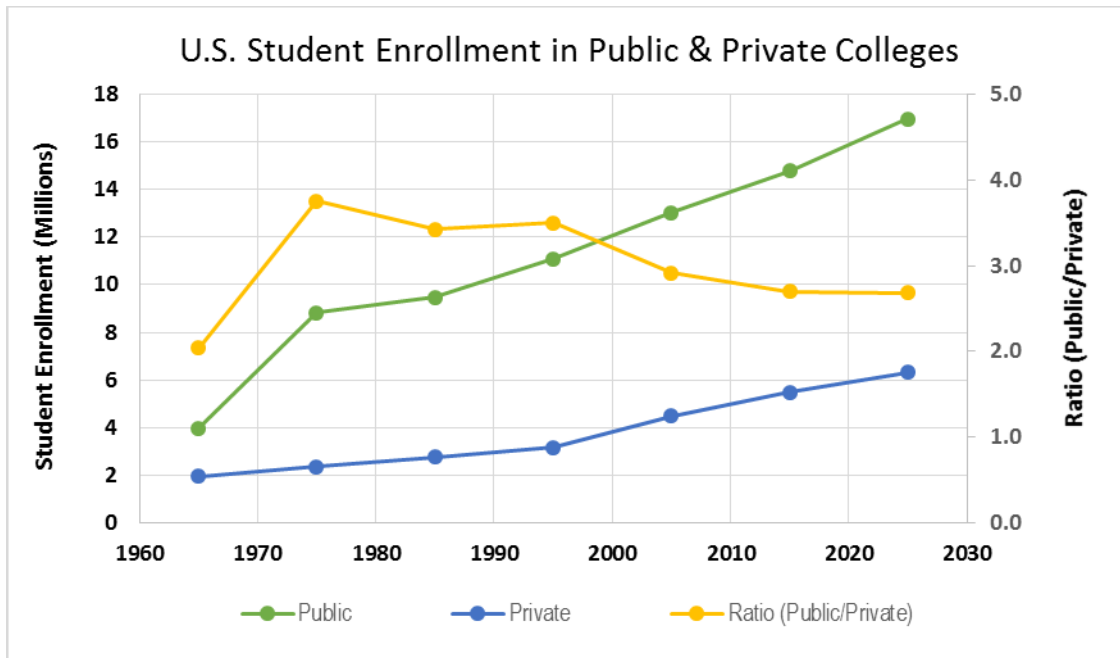


Figure 3: U.S. Student Enrollment in Public and Private Colleges (2015 & 2025 are forecast figures)

The Cost of Higher Education

A key driving force behind higher student enrollment in public institutions is cost and affordability of public education. To illustrate this, we take three institutions in the same state of New Jersey. The first is Mercer County Community College (a two-year community college), Rutgers (the State University – New Brunswick Campus) and Princeton University (private). The data in Table 1 is for 2020-2021 as can be found in [2] (use college search feature). As shown in Table 1, for in-state, and specifically in-district residents, the community college yearly tuition and fees amounts to less than \$5,000 compared to the state university, which is about \$16,000. The tuition of the private university is significantly higher totaling \$56,000 without room and board. However, the reader should note these are the publicly listed or “sticker” prices. The net price that a student usually pays is the listed price less scholarships, grants, and financial aid. In this regard, there are significant differences between what students pay depending on family income, particularly at elite private universities where almost no one pays full price. Even at the high end of the income spectrum, the net price is significantly less than the sticker price. By contrast, in public schools, the net price often meets the sticker price at the high end [10]. It should also be noted that private institutions do not distinguish between in-state or out of state residents in terms of tuition prices, i.e. their mission and reach are beyond their geographical location. The data on the composition of the student body for Princeton University confirm this fact.

2021-2022 Academic Year			Student Population			
	Tuition & Fees per year *	In-State/District	Out of State	Undergraduates	Graduates	Total
Community College	\$6000/\$4728	\$8,328	6,205	0	6,205	Majority County Residents
State University	\$15,804	\$33,005	36,152	14,652	50,804	~83 Sate Residents
Private University	\$56,010	\$56,010	5,321	3,157	8,478	16% State Residents
(*) Meals, Housing etc. not included						

Table 1: 2021-2022 Tuition/Fees, Student Population and Composition: Two-Year College (Mercer County), Four-Year Public Institution (Rutgers – New Brunswick) and 4-Year Private Institution (Princeton).

Other differences between public and private institutions are in their size and in the number of degrees they typically offer. While private colleges tend to be relatively small, to accommodate the higher enrollment, public institutions for higher education in the U.S. are generally much larger and are constantly working to increase capacity. Students who want a wide choice of majors are more likely to find it at public universities. In a single large public university, undergraduates will be enrolled in academic programs ranging from traditional liberal arts to highly specialized technical fields. On the other hand, the majority of schools with a particular academic focus are private schools. Some private colleges may emphasize the liberal arts or the fine arts, for instance, while others focus on engineering and computer science. In terms of class size, private colleges typically have smaller class sizes than public colleges, although it should be pointed out that many public colleges offer smaller classes [3]. Private and public colleges also tend to have different demographics and ratios. For example, in-state students applying to their public universities are admitted in far greater numbers and pay lower tuition than students applying from out-of-state. By contrast, state residency is not crucial at private colleges, and many of these schools aim for greater geographical diversity among their student body. Students are always advised to first identify their goals and consider costs, class size, culture, and environment before choosing between a public university and a private school [4].

A growing trend in the U.S. is the proliferation of on-line education. It has been reported recently that in the past few years, more students enrolled in online courses and more employers accepted online degrees from job candidates [5]. A recent report also shows continued growth in the on-line education sector with 5.8 million students enrolled in at least one distance learning course in the fall of 2014, up 3.9% from the previous fall. In comparison to the previous year, that figure rose by 3.7 percent, which marked the slowest rate in more than a decade. However, despite the positive growth, the report also points out that the survey found that fewer academic leaders in 2015 felt that online learning is critical to their long-term strategy [6]. Large public universities offer competitive on-line degree-programs, amongst those topping the list are well known institutions such as Pennsylvania State University—World Campus, Temple University, the University of Oklahoma and Arizona State University. Many of these trends have been significantly disrupted by the recent pandemic, where on-line education became the norm.

References

1. <https://www.statista.com/statistics/183995/us-college-enrollment-and-projections-in-public-and-private-institutions/>
2. <https://www.scholarships.com/colleges/rutgers-university-new-brunswick> State Role I - Primary & Secondary Education, U.S. Department of Education; <https://www2.ed.gov/about/offices/list/ous/international/usnei/us/elsec.doc>
3. Should you choose a public or private college? J. Fortenbury; USA Today, October 28, 2013, State Role II - Tertiary Education, U.S. Department of Education; <https://www2.ed.gov/about/offices/list/ous/international/usnei/us/postsec.doc>
4. Public University vs. Private College, Peterson, September 2015 <https://www.petersons.com/college-search/public-university-vs-private.aspx>
5. Online Education Trends to Watch in 2017, By Jordan Friedman, U.S. News & World Report, January, 2017; <http://www.usnews.com/higher-education/online-education/articles/2017-01-05/5-online-education-trends-to-expect-in-2017>
6. Study: Enrollment in Online Learning Up, Except at For-Profits; J. Friedman; U.S. News & World Report, February 9, 2016; <http://www.usnews.com/education/online-education/articles/2016-02-09/study-enrollment-in-online-learning-up-except-at-for-profits>

About the Author



Dr. Mohamed Esseghir is a Principal Research Scientist with The Dow Chemical Company and has more than 30 years of experience in polymer research, including blends, reactive modification, rheology, compound formulation and new process development. He is currently responsible for new material research for the Telecommunications segment in Dow's Wire & Cable R&D. Dr. Esseghir has served on the board of the Polymer Processing Institute (PPI) and is currently on the Committee of the International Cable & Connectivity Symposium (IWCS). He holds a Bachelor of Science in Chemical Engineering from the Algerian Petroleum Institute and Master of Science and Doctorate in Mechanical & Aerospace Engineering from Rutgers University. Following post-doctoral work at the Polymer Processing Institute at Stevens Institute of Technology, Dr. Esseghir began his career with Union Carbides' Polyolefin Research in 1997, then joined Dow Wire & Cable R&D in 2007. Dr. Esseghir holds 55 granted patents and has authored over 40 publications and two book chapters. He is currently President of the Board of Noor-Ul-Iman School, a PreK - 12th Grade accredited, private Islamic School in New Jersey, he is also a founding Board member of the International Network of Algerian Scientists (INAS).