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Analyzing the University of Kentucky's Top 20 Business Plan

Kenny Blair
University of Kentucky

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Analyzing the University of Kentucky's *Top 20 Business Plan*

Kenny Blair

Capstone Project
Martin School of Public Policy and Administration
University of Kentucky

Spring 2013

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Executive Summary

The purpose of this study is to begin laying a foundation for assessing the degree of progress the University of Kentucky (UK) has made toward the goals defined in the *Top 20 Business Plan*. The plan was created to guide the university's efforts in becoming a top twenty public research institution by 2020 per a mandate by the Kentucky General Assembly.

Up to two strategies and/or policy suggestions were chosen for analysis for each of the four major domains outlined in the plan (undergraduate education, graduate education, faculty recognition, and research). Academic quality indicators were then developed for these strategies and policies and UK's standing was compared to its Top 20 Benchmark institutions.

Results of the assessment are presented and discussed for all indicators on which data was successfully collected. These results are broken into three sections. The first section shows trend charts over time for many of the indicators for both UK and the benchmark median to see if any changes have occurred after the plan was implemented. The second section analyzes UK's own numbers to see where it stands in comparison to the goals it set in the plan to be met by a particular date. In the third section a sample publication is introduced that includes graphics for all of the indicators for the most recent year in which data was available.

An analysis of the trends reveals that UK has made some improvements when looking at before and after the plan was introduced. Nonetheless, when these numbers are compared to the benchmark median, the university has made little to no progress in closing the gap and thus improving its Top 20 ranking. When comparing UK's progress against the goals set for itself in the *Top 20 Business Plan*, the outlook could definitely be better, as reaching most of its goals will require a sizeable effort by the university. While it can be argued that UK's *Top 20 Business Plan* is having an impact, it can also be stated that this impact has not been sizeable enough to make a difference when comparisons are made to the university's benchmark institutions, especially when the university is failing to reach many of the milestones it set for itself to reach by a certain date.

Accompanying this analysis is a sample publication that depicts graphically UK's most recent progress, illustrating how UK stacks up against the institutions that comprise the benchmark median.

Further study is needed, however, to verify the conclusions drawn from the results, as the analysis was limited due to the size and scope of the plan and provides only a narrow view of the university's efforts to reach Top 20 status.

Introduction

In a May 1997 Special Session, Kentucky Governor Paul Patton proposed and the Kentucky General Assembly approved House Bill 1 (HB 1), also referred to as the *Kentucky Postsecondary Education Improvement Act of 1997*. This legislation reformed the Commonwealth of Kentucky's system of public postsecondary education with the overarching policy goal of improving the system as a means to advance the state's economy and quality of life. By all national measures, Kentucky's citizens in 1997 were undereducated and trailed the nation in income and health. More specifically, Kentucky trailed the nation and its competitor states in the South and Midwest in educational attainment, especially the percentage of the population with baccalaureate and advanced degrees. A March 1997 report of the Task Force on Postsecondary Education concluded that the Commonwealth's postsecondary education system was unprepared to meet the demands of the 21st century's global economy ("Kentucky Council on Postsecondary Education").

Passage of this legislation led to the creation of *KRS 164.003 Legislative findings and goals for achievement by 2020*. Six goals were established, including the mandate that the University of Kentucky (UK) become a "major comprehensive research institution ranked nationally in the top twenty public universities" by 2020 ("Kentucky Revised Statutes"). The mandate was given to UK with no definition or clear understanding of how much achieving the goal would cost ("Transmittal Letter to Board of Trustees").

In response to the mandate, UK established the *Top 20 Task Force* and began assessing its programs. Eight years later in December 2005 the *Top 20 Business Plan* was unveiled. The plan sought to spell out clearly and specifically what it would cost in the long-term for UK to achieve Top-20 status by 2020 ("Transmittal Letter to Board of Trustees").

Purpose

The purpose of this study is to begin laying a foundation for assessing the degree of progress the University of Kentucky has made toward the goals defined in the *Top 20 Business Plan*. This analysis will span the four major domains outlined in the plan, including undergraduate education, graduate education, faculty recognition, and research. Consideration will not be given to the ranking model used or the gap analysis that was performed, as these tools were used to establish a baseline for the university in terms of rankings and determine the ground that must be made up for the university to improve in the standings.

Review of the Literature

For the purpose of this study, background information is given regarding measuring academic quality and university benchmarking.

Measuring Academic Quality

Demand and Relevance

The world-wide expansion of access to higher education has created an increasing national and global demand for consumer information on academic quality. Because a college education is a rare purchase and an increasingly important as well as expensive decision in one's life, students and their families are seeking information that will help them make informed choices in the selection of a university and/or an academic program (Dill and Soo, 2005). Beyond students and families, a methodological analysis of quality assessments and their critiques is relevant to many parties in higher education, including campus officials choosing among alternative assessment strategies, researchers devising new assessment instruments, and scholars or policymakers evaluating assessment results (Brooks, 2005).

Guidelines for Choosing Academic Quality Indicators

Any effort at creating an academic quality ranking system must grapple with the difficulty of trying to quantify the intangibles of a set of complex teaching, learning, resource, and research phenomena. As such, choosing indicators should be a non-arbitrary process guided by, among other things, an understanding of the strengths and limitations of the indicators being considered as well as their validity, reliability, and comparability for the schools or programs to be ranked (Clarke, 2002). Questions to consider include A. Does the indicator measure what it purports to measure? B. Does it do so in a consistent/error-free fashion? and C. Can it be interpreted in a similar way across different kinds of programs or institutions? (Linn, 1993).

Another way of thinking about the choice of indicators is in terms of inputs, processes, and outputs. All else being equal, process (ex. teaching quality) and output (ex. effectiveness of graduates in the workplace) measures are preferred since they are better indications of the quality of the instruction, preparation, and resources offered by an institution. Attention must be given, moreover, to the objective or subjective nature of the indicators themselves. Objective indicators are those not dependent on the person doing the counting (Clarke, 2002).

Finally, transparency and standardization are essential to the process. Openness in terms of how the indicators were chosen must be maintained, along with the approach taken to present the information in ranked format. Standardized procedures should be used to collect, store, analyze, and present the information, and access to the original data should be made available upon request (Clarke, 2002).

Major Categories of Academic Quality Indicators

When it comes to measuring academic quality, ranking efforts can be organized into three major categories: student achievements/experiences, faculty accomplishments/research, and institutional

academic resources/reputation (Clarke, 2002; Brooks, 2005). For each category, a listing of common indicators used is given.

Student Achievements / Experiences

Measures commonly used in this category can be grouped into the areas of program characteristics, program effectiveness, student satisfaction, and student outcomes (Brooks, 2005). Indicators include counts of degrees awarded, financial aid support, six-year graduation rates, student satisfaction survey findings, scores of incoming students on standardized tests (average SAT scores) and the proportion of students in the top 10% of their high school graduating class (Brooks, 2005; Lombardi et al., 2002).

Faculty Accomplishments / Research

Faculty research is an important component of university quality, but considerable difficulty exists in obtaining data that accurately reflect their accomplishments. Research productivity measures have frequently been developed from data tracking the amount of federal research grants awarded to or expended by universities (Goldberger et al., 1995; Lombardi et al., 2002). Counts of faculty journal publications or citations plus faculty awards, honors, and prizes have also been included in many assessments (Clarke, 2002; Graham & Diamond, 1997).

Institutional Academic Resources / Reputation

Indicators in this category include educational expenditures per student, student-to-faculty ratios, and library resources. The data for these indicators are easy to obtain and are a measure on which all institutions can be compared, but offer little or no information about how often and how beneficially students use these resources (Clarke, 2002). Reputational assessments also fall in this category, but are subject to criticism due to their subjectivity (Brooks, 2005).

Weighing the Indicators

Once the set of indicators for measuring academic quality has been chosen, a method must be selected for presenting the information in a ranked format. A popular method employed by the magazine *US News and World Report* is the weight-and-sum approach, which involves assigning a weight to each indicator according to its perceived importance and then using the weights to combine the indicator information into an overall score (Scriven, 1991). While the result of this process is one easy-to-digest number, critics have pointed out several problems, including the fact that the choice of weights is itself a value judgment and thus can vary depending on who is making the decision (Camilli and Firestone, 2000).

UK's Approach to the Process

For UK, the demand for constructing a system for measuring academic quality came in the form of a mandate from the Kentucky General Assembly. This mandate led to the formation of the *UK Top 20 Task Force* and a charge to the task force by UK President Lee T. Todd to “recommend criteria and measures that UK would employ in regularly assessing its progress toward achieving recognition as one of the nation’s 20 premier public research universities” (“Top 20 Task Force Report”).

Because there was no clear directive from the Kentucky General Assembly, the *Top 20 Task Force* was also given the task of defining what it meant to be a top twenty public research institution. This group found that while there is no universally accepted measure of university performance, there is broad agreement on the desirable attributes of measures used in university ranking models. As a result, the following nine characteristics of such measures were identified and given careful consideration – well-defined; already collected by some entity; possible to change; important and significant to society; widely used nationally; under institutional control; realistic; reflective of the diversity of UK's academic programs; and indicative of where the institution intends to go (“Top 20 Business Plan”).

Out of these characteristics nine measures of progress were established in four different domains. These domains (and measures) included undergraduate education (ACT/SAT scores, six-year graduation rates, and student-to-faculty ratios); graduate education (doctorates granted and postdoctoral appointments); faculty recognition (citations and awards); and research (federal and non-federal expenditures) (“Top 20 Business Plan”). As of spring 2012 there have been some changes to the progress measures – in the graduate education domain, master’s degrees awarded replaced doctorates granted and research and professional doctorates awarded replaced postdoctoral appointments; in the faculty recognition domain, publications replaced faculty awards.

In order to maintain standardization of data, the *Top 20 Task Force* recommended monitoring data already collected by national organizations, such as the National Research Council, The Center, U.S. News, the National Survey of Student Engagement, the Association on University Technology Managers, the Integrated Postsecondary Education Data System (IPEDS), the Institute of International Education, and the Consortium for Student Retention Data Exchange. The group also recommended that all indicators be weighed equally to reflect the uniform priority of all the domains and measures established (“Top 20 Task Force Report”).

University Benchmarking

Introduction

The Rank Xerox Company, through its managing director David Kearns, was the first to define benchmarking theory as “a continuous process of measurement of its own products, services and practices in comparison with the toughest competitors or with the companies known as industry leaders” (Ilie, Maftai, and Colibasnu, 2011). In education, the benchmarking method defines both an initial diagnosis and a management tool focused on learning, collaboration, and leadership to achieve continuous improvement of the educational offer (Sârbu, Ilie, Enache and Dumitriu, 2009).

Types of Benchmarking

In the field of education, as in many other fields of activity, three main types of benchmarking have emerged:

- *Internal Benchmarking* – internal departments, offices, programs, faculties, etc. are assessed in order to identify the best practice of a given activity within the same university. Existing problems are also acknowledged and possibilities to overcome them analyzed with a reliance on the accumulated experience (Ilie, Maftei, and Colibasanu, 2011);
- *Competitive Benchmarking* – a continuous process allowing a university to evaluate itself in comparison with existing or potential competitor universities in the same field. This assessment is done in order to obtain information about programs, curricula, and administrative/teaching/research processes and compare them with the university's own results (Ilie, Maftei, and Colibasanu, 2011);
- *Generic or Functional Benchmarking* – a potential comparison partner is any university which has gained the reputation of being excellent within its evaluation (Sârbu, 2006).

Potential Benefits

University benchmarking in higher education is a critical tool for studying education among the universities because it allows for one university to benefit from the experience of another. Opportunities are created for universities and professors to share best practices and learn from the successes of others, creating a national (or world) laboratory for new ideas and collaboration (APEC/OECD, 2005).

UK's Approach to the Process

In the construct of the *Top 20 Business Plan*, UK uses competitive benchmarking and compares itself to doctoral research-intensive public universities in the U.S. that have federal research

expenditures of \$20 million or more per year. For the purpose of this analysis, competitive benchmarking is also used. The progress UK has made toward reaching the goals outlined in the *Top 20 Business Plan* will in part be determined using comparisons to UK's Top 20 Benchmark institutions. The following is a listing of these institutions:

- Pennsylvania State University
- Rutgers University - New Brunswick
- Texas A&M University
- The University of Texas at Austin
- University of California - Berkeley
- University of California - Davis
- University of California - Los Angeles
- University of California - San Diego
- University of Florida
- University of Illinois - Urbana-Champaign
- University of Maryland - College Park
- University of Michigan - Ann Arbor
- University of Minnesota - Twin Cities
- University of North Carolina - Chapel Hill
- University of Pittsburgh - Pittsburgh Campus
- University of Virginia
- University of Washington
- University of Wisconsin - Madison

Structuring the Analysis

It seems the best way to begin laying a foundation for assessing the degree of progress UK has made toward the goals defined in the *Top 20 Business Plan* is to develop academic quality indicators for some of the strategies and policies offered by the plan and compare UK's standing against its Top 20 Benchmark institutions.

Due to the scope and size of the plan, however, it is not feasible in this study to establish indicators for every recommendation given. As such, up to two strategies and/or policy suggestions have been chosen for analysis for each of the four major domains outlined in the plan (undergraduate education, graduate education, faculty recognition, and research).

For each item chosen, details of the strategy or policy will be given – the information presented is taken verbatim from the plan and is shown in *italics*. The various aspects of the strategy or policy will

then be discussed and potential **academic quality indicators** will be offered (please note that some of these indicators are a result of the discussion and are not explicitly stated in the plan).

Next, the results of the assessment will be presented and discussed for all indicators on which data was successfully collected. These results will be broken into three sections. The first section will show trend charts over time for many of the indicators for both UK and the benchmark median to see if any changes have occurred after the plan was implemented. The second section will analyze UK's own numbers to see where it stands in comparison to the goals it set in the plan to be met by a particular date. In the third section a sample publication will be introduced that includes graphics for all of the indicators for the most recent year in which data was available.

Detailing the Strategies/Policies and Identifying Indicators to Measure Their Progress

Undergraduate Education

Strategy/Policy #1

Details of the Recommendation(s)

Improve the quality and diversity of the undergraduate population by enhancing recruitment efforts and scholarship programs while increasing the average converted SAT score of entering freshmen from 1128 to at least 1193 by 2020.

A Discussion of the Aspects of the Recommendation(s)

The focus here is on the undergraduate population – how can UK improve both its quality and diversity? Authors of the plan suggest that in order to accomplish this goal UK must enhance its recruitment efforts and scholarships programs while increasing average converted SAT scores. While the process of tracking converted SAT scores is straightforward, a question to consider is – how does UK measure recruitment efforts and scholarship programs?

Indicator(s) Offered

When developing indicator(s) for the recommendation(s), the following item(s) were given consideration:

- Achieving a higher average converted SAT score.
- Improving the quality and diversity of the undergraduate population.
- Enhancing recruitment efforts and scholarship programs.

Here are the indicator(s) being offered:

Average Converted SAT Score

Justification for Use

Indicator is taken straight from the plan. Track to monitor the goal of achieving a score of 1193 by 2020.

Calculation / Data Source(s)

Use the following information provided by the UK Office of Institutional Effectiveness (IRPE):

1. Average ACT 25th to 75th percentile converted to a SAT score.
2. Average 25th to 75th percentile test scores on both the Critical Reading and Math portions of the SAT.
3. Use weight percent of students submitting ACT times average ACT score plus the weight percent of students submitting SAT times average SAT score.

Variables used in the calculation include the following:

- Percent of first-time degree/certificate-seeking students submitting SAT scores
- Percent of first-time degree/certificate-seeking students submitting ACT scores
- ACT Composite 25th percentile score
- ACT Composite 75th percentile score
- SAT Critical Reading 25th percentile score
- SAT Critical Reading 75th percentile score
- SAT Math 25th percentile score
- SAT Math 75th percentile score

Data used comes from IPEDS and UK IRPE.

Percentage of Minority Students

Justification for Use

Track to monitor the goal of improving the diversity of the undergraduate population. For the purpose of this analysis, minority is defined in terms of race and includes any students classified as not being white/Caucasian. While race is not a sole representation of diversity, data is readily available for this variable.

Calculation / Data Source(s)

Divide the total number of undergraduate students not classified as white/Caucasian by the total undergraduate population. Data used comes from IPEDS.

Percentage of Students Out-of-State

Justification for Use

Track to monitor the goal of enhancing recruitment efforts. This indicator can help gauge whether UK is getting its message out to and attracting students from outside of the state.

Calculation / Data Source(s)

Divide the total number of out-of-state undergraduate students by the total undergraduate population. Data used comes from IPEDS.

Acceptance Rate

Justification for Use

Track to monitor the goal of enhancing recruitment efforts. This indicator can help gauge whether UK is being selective in the number of students it accepts.

Calculation / Data Source(s)

Divide the total number of acceptances by the total number of applicants. Data used comes from IPEDS.

Yield Rate

Justification for Use

Track to monitor the goal of enhancing recruitment efforts. This indicator can help gauge whether UK is successful in bringing in the students it recruits.

Calculation / Data Source(s)

Divide the total number of enrollments by the total number of acceptances. Data used comes from IPEDS.

Percentage of Students Receiving Institutional Aid

Justification for Use

Track to monitor the goal of enhancing scholarship efforts. This indicator can help gauge whether UK is assisting its students with financial aid to offset the cost of attendance.

Calculation / Data Source(s)

No calculation required as the variable comes straight from IPEDS.

Strategy/Policy #2

Details of the Recommendation(s)

Add 500 regular, tenure-track faculty in the undergraduate colleges to support an undergraduate enrollment increase of 6,200 highly qualified students by 2020. This recommended increase in faculty is based on the number needed to reduce the current student-to-faculty ratio from 17.8:1 to 16.4:1 by 2020. The number of new students recommended was proposed by the Top 20 Task Force in 2002. In

addition, analyses of recent trends in UK's applicant pool suggest that UK has the potential to increase enrollment of highly qualified students, especially among nonresidents.

A Discussion of the Aspects of the Recommendation(s)

The focus here is on faculty – how can UK bring in more regular, tenure-track faculty to support an increase in undergraduate enrollment, thus reducing the student-to-faculty ratio? Authors of the plan suggest that in order to accomplish this goal UK must add both students and faculty. These students should be high quality, however, and nonresidents appear to be a target population for consideration.

Indicator(s) Offered

When developing indicator(s) for the recommendation(s), the following item(s) were given consideration:

- Hiring additional regular, tenure-track faculty.
- Increasing undergraduate enrollment.
- Lowering the student-to-faculty ratio.

Here are the indicator(s) being offered:

Number of Full-Time Instructional/Research/Public Service Faculty in the Undergraduate Colleges

Justification for Use

Indicator is taken straight from the plan. Track to monitor the goal of 500 additional hires.

Calculation / Data Source(s)

NOTE: While this indicator called for monitoring additional faculty hires in the undergraduate colleges, after consultation with representatives of the university, it was discovered that this variable is not tracked for purposes of the *Top 20 Business Plan*. Thus, this indicator was changed to total number of full time instructional/research/public service faculty.

No calculation required for the replacement indicator as the variable comes straight from IPEDS.

Undergraduate Enrollment

Justification for Use

Indicator is taken straight from the plan. Track to monitor the goal of an increase in 6,200 students by 2020.

Calculation / Data Source(s)

No calculation required as the variable comes straight from IPEDS.

Student-to-Faculty Ratio

Justification for Use

Indicator is taken straight from the plan. Track to monitor the goal of 16.4:1 by 2020.

Calculation / Data Source(s)

No calculation required as the variable comes straight from UK IRPE.

Graduate Education

Strategy/Policy #1

Details of the Recommendation(s)

With additional faculty to support undergraduate education and increase research productivity, add 750 new graduate/first professional students by 2020.

A Discussion of the Aspects of the Recommendation(s)

The focus here is on the graduate population – how can UK bring in more graduate/first professional students? Authors of the plan suggest that UK has to implement the strategies outlined for undergraduate education in order for this strategy to be successful.

Indicator(s) Offered

When developing indicator(s) for the recommendation(s), the following item(s) were given consideration:

- Increasing the number of new graduate/first professional students.

Here are the indicator(s) being offered:

Number of Graduate/First Professional Students

Justification for Use

Indicator is taken straight from the plan. Track to monitor the goal of 750 additions by 2020.

Calculation / Data Source(s)

No calculation required as the variable comes straight from IPEDS.

Faculty Recognition

Strategy/Policy #1

Details of the Recommendation(s)

Offer the strongest support possible in salaries, benefits, technology, facilities, and other programs and services. UK must provide competitive starting salaries and increase the average instructional faculty salary to the benchmark median by 2012 to attract and retain a diverse, highly productive, and achievement oriented faculty.

A Discussion of the Aspects of the Recommendation(s)

The focus here is on faculty – how can UK offer a benefits package that attracts and retains diverse, highly productive, and achievement oriented faculty? Authors of the plan suggest that UK has to focus on offering competitive salaries. While the process of tracking faculty salaries is straightforward, a question to consider is – how does UK gauge the strength of its benefits, technology offerings, and

facilities? Moreover, what criteria must faculty meet to be deemed as possessing achievement oriented qualities and performing at a highly productive level?

Indicator(s) Offered

When developing indicator(s) for the recommendation(s), the following item(s) were given consideration:

- Offering competitive starting salaries.
- Monitoring salary growth to keep it in line with the benchmark median.
- Offering an attractive benefits package.

Here are the indicator(s) being offered:

Average Salary of Full Time Instructional/Research/Public Service Faculty

Justification for Use

Indicator is taken straight from the plan. Track to monitor the goal of increasing this figure to the benchmark median by 2012.

Calculation / Data Source(s)

No calculation required as the variable comes straight from IPEDS.

Benchmark Median Salary

Justification for Use

Indicator is taken straight from the plan. Track to see if UK's average salary reaches this figure by 2012.

Calculation / Data Source(s)

Capture the average salary information for each of the Top 20 Benchmark institutions. Then calculate the median of this set of numbers. Data used comes from IPEDS.

Research

Strategy/Policy #1

Details of the Recommendation(s)

Add 125 full-time regular or research faculty in the graduate/first professional colleges to enhance graduate education and research productivity. This recommended increase is based on the number needed in addition to the 500 new faculty in the undergraduate colleges to increase research expenditures to \$476 million by 2012 and \$768 million by 2020.

A Discussion of the Aspects of the Recommendation(s)

The focus here is on faculty – how can UK grow the number of full-time regular or research faculty in the graduate/first professional colleges? Authors of the plan suggest that UK has to increase this number to enhance graduate education and research productivity, which in turn should boost research expenditures.

Indicator(s) Offered

When developing indicator(s) for the recommendation(s), the following item(s) were given consideration:

- Increasing the number of full-time regular or research faculty in the graduate/first professional colleges.
- Increasing research expenditures.

Here are the indicator(s) being offered:

Number of Full Time Instructional/Research/Public Service Faculty in the Graduate/First Professional Colleges

Justification for Use

Indicator is taken straight from the plan. Track to monitor the goal of 125 new hires.

Calculation / Data Source(s)

NOTE: While this indicator called for monitoring additional faculty hires in the graduate/first professional colleges, after consultation with representatives of the university, it was discovered that this variable is not tracked for purposes of the *Top 20 Business Plan*. Thus, this indicator was changed to total number of full time instructional/research/public service faculty.

No calculation required for the replacement indicator as the variable comes straight from IPEDS.

Research Expenditures

Justification for Use

Indicator is taken straight from the plan. Track to monitor the goal of increasing this figure to \$476 million by 2012 and \$768 million by 2020.

Calculation / Data Source(s)

No calculation required as the variable comes straight from IPEDS.

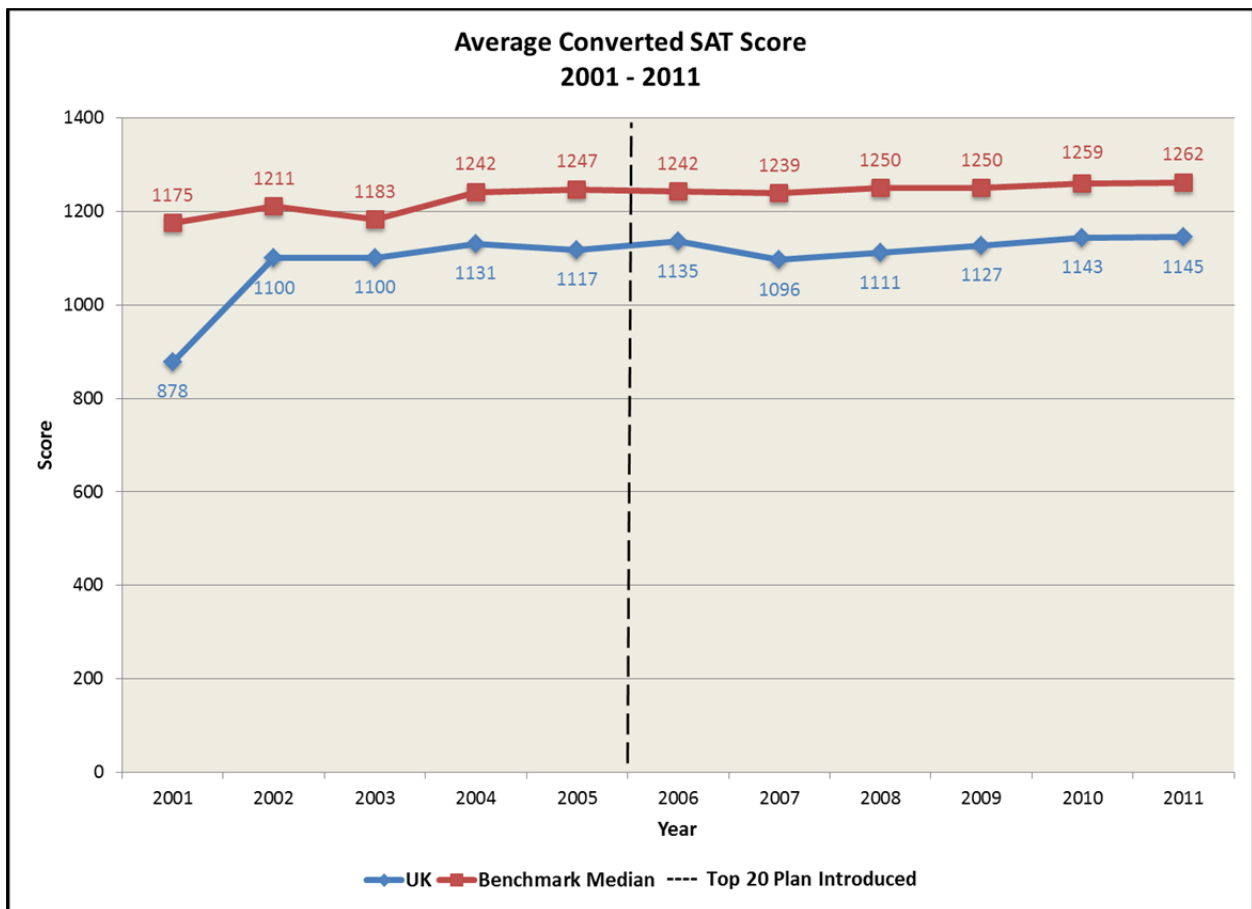
Interpreting the Results

Section 1: Looking at Trends Over Time for UK and Its Top 20 Benchmarks

In this section, trends over time will be looked at for many of the indicators for both UK and the benchmark median to see if any changes have occurred after the plan was implemented.

Undergraduate Education

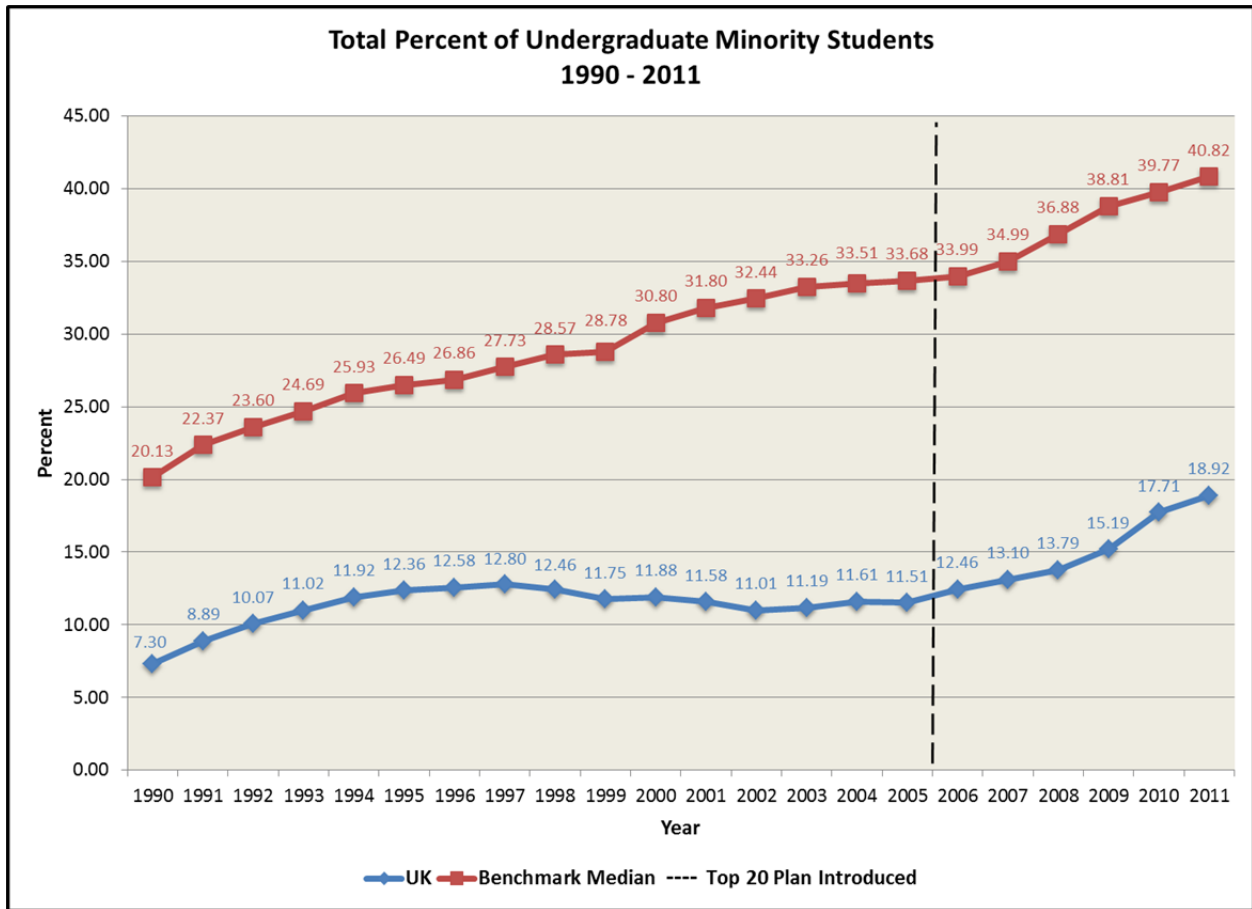
Figure 1-A. Average Converted SAT Score



Sources: UK IRPE/IPEDS

Figure 1-A represents the average converted SAT scores indicator for both UK and the benchmark median. Despite a sizeable drop in 2007, the university has been able to grow this number close to 30 points since the introduction of the plan. Even with this increase, however, and although the gap is slowly closing, UK remains well below the benchmark median, coming in at over 100 points less as of 2011.

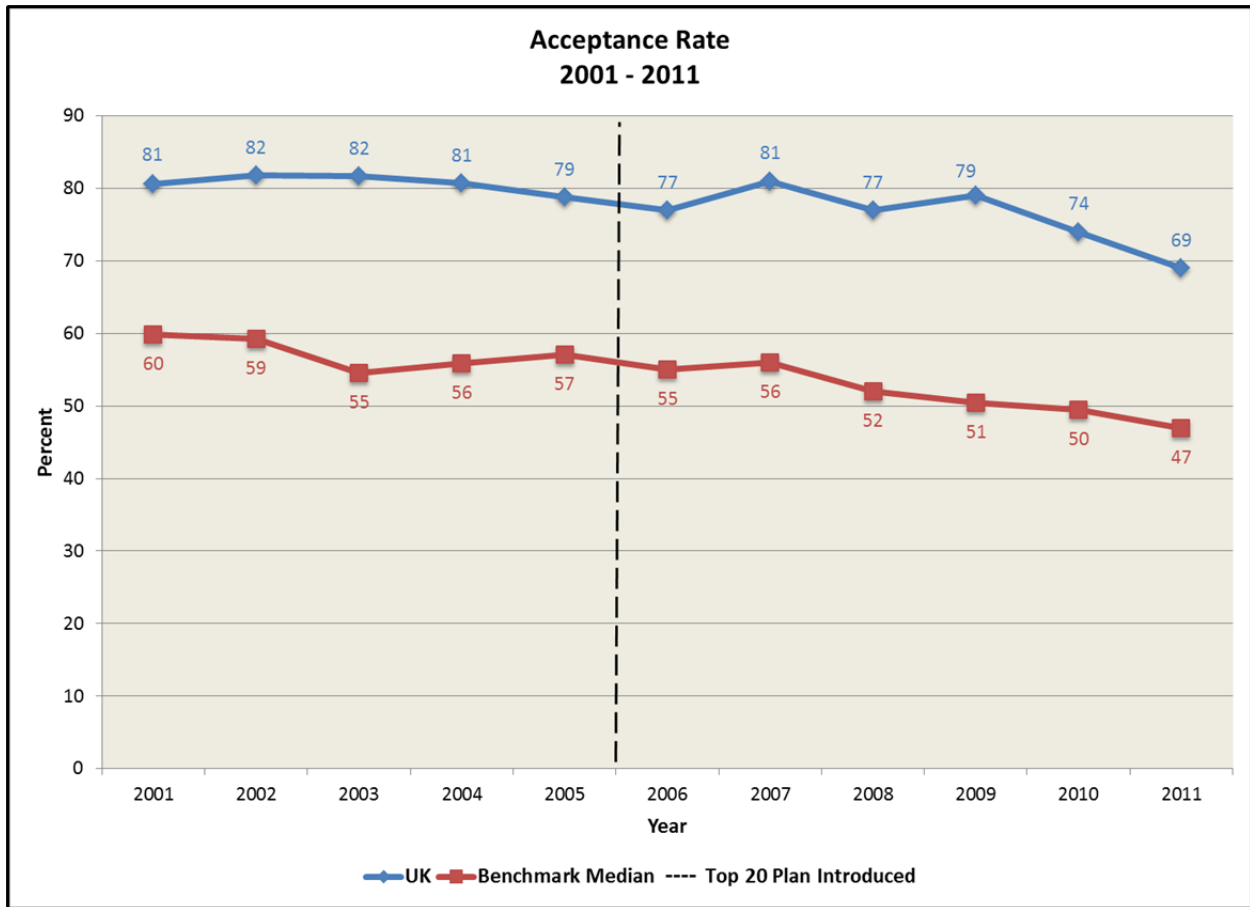
Figure 1-B. Total Percent of Undergraduate Minority Students



Source: IPEDS

Information pertaining to minority enrollment can be found in Figure 1-B. Since the introduction of the plan UK has continued to grow more and more racially diverse, with the minority population rising over seven percent from 2005-11 to comprise almost one-fifth of the undergraduate population. This growth rate of seven percent is in line with the rate at which the minority population has grown for the benchmark median for the same time period. Nonetheless, the university has failed to substantially close the divide in terms of total percentage, as the benchmark median of 40.82% as of 2011 is more than double that of UK's 18.92%.

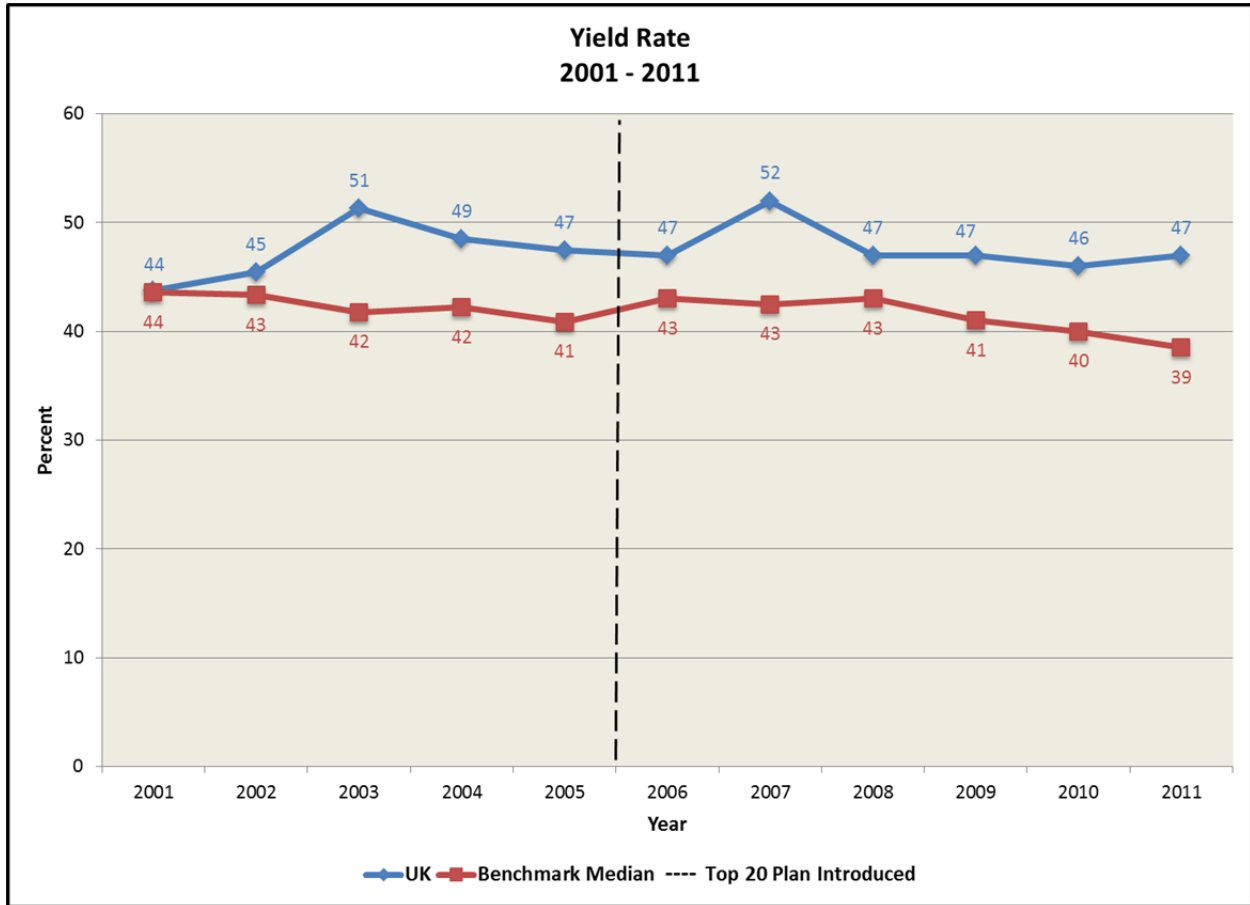
Figure 1-C. Acceptance Rate



Source: IPEDS

As shown in Figure 1-C, despite upticks in both 2007 and 2009, as of 2011 the acceptance rate at UK has fallen a full ten percentage points since the plan was introduced. This drop is in line with that of the benchmark median, which also fell by the same percentage during this period. UK’s acceptance rate still remains high compared to the benchmark median, however, as the university admits over two-thirds of its applicants while fewer than half of the students who apply are accepted at institutions that comprise the benchmark median.

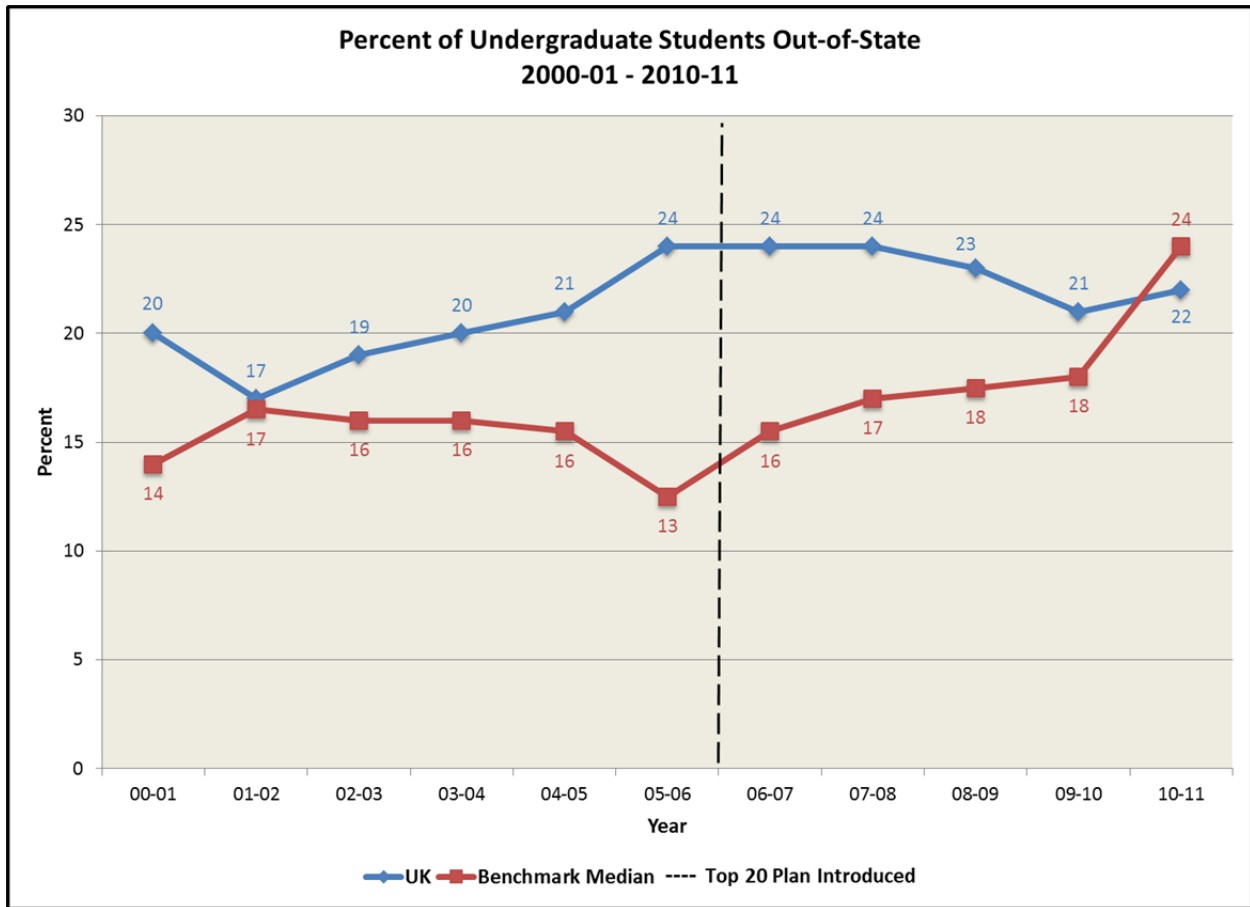
Figure 1-D. Yield Rate



Source: IPEDS

The yield rate is the subject of Figure 1-D. With the exception of 2007, this figure has not changed much for UK since the plan was introduced and as of 2011 remains at 47%, the same level it was in 2005. The same for the most part can be said of the benchmark median, as its yield rate remained steady from 2006-2008 and has since dropped four percentage points to 39% in 2011. UK actually has a higher yield rate, enrolling close to half the students it accepts, which is eight percentage points greater than the benchmark median.

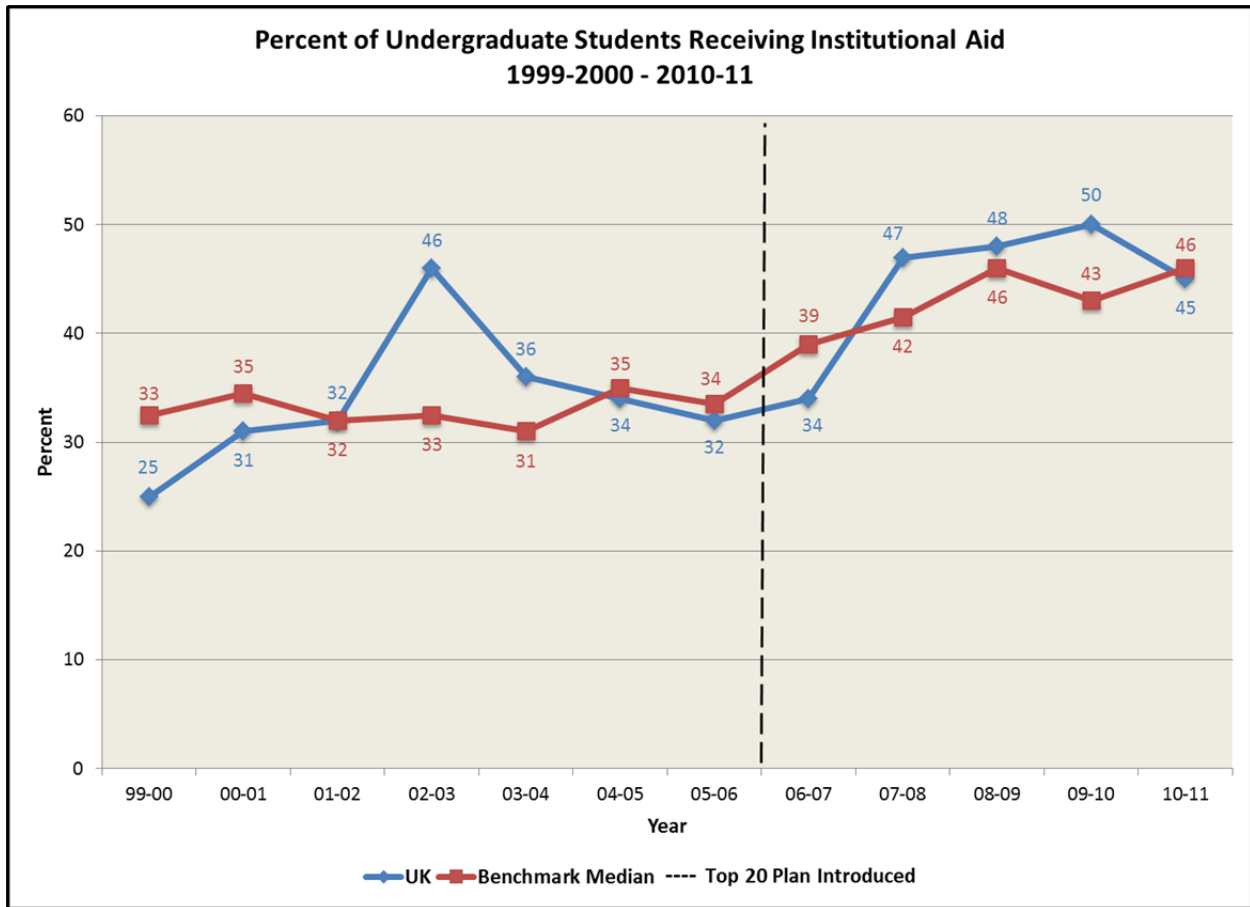
Figure 1-E. Percent of Undergraduate Students Out-of-State



Source: IPEDS

Highlighted in Figure 1-E are percentages related to out-of-state demographics. After remaining constant for the two years following the introduction of the plan, the number has since dropped to 22% for UK as of 2010-11. In the same time period this percentage almost doubled for the benchmark median, and in 2010-11, surpassed UK for the first time in at least 10 years.

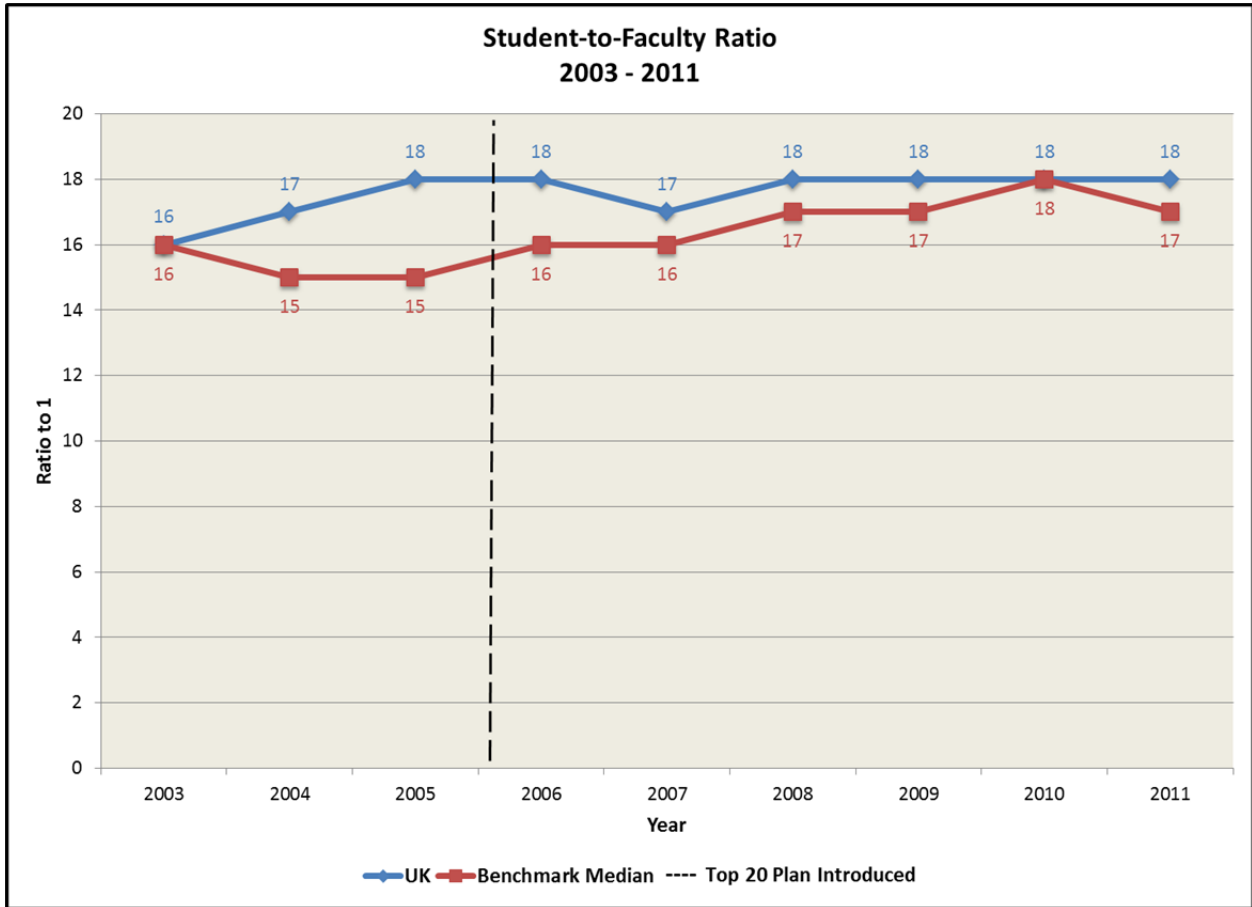
Figure 1-F. Percent of Undergraduate Students Receiving Institutional Aid



Source: IPEDS

Institutional aid is the indicator captured in Figure 1-F. UK saw the percentage of aid it gives grow eighteen percentage points (32-50%) from 2005-06 to 2009-10 before dropping back to 45% in 2010-11. In 2007-08 UK's percentage topped that of the benchmark median for the first time since the plan was introduced, and remained there until 2009-10. As of 2010-11 UK has fallen behind the benchmark median, but only by one percentage point at 46-45%.

Figure 1-G. Student-to-Faculty Ratio

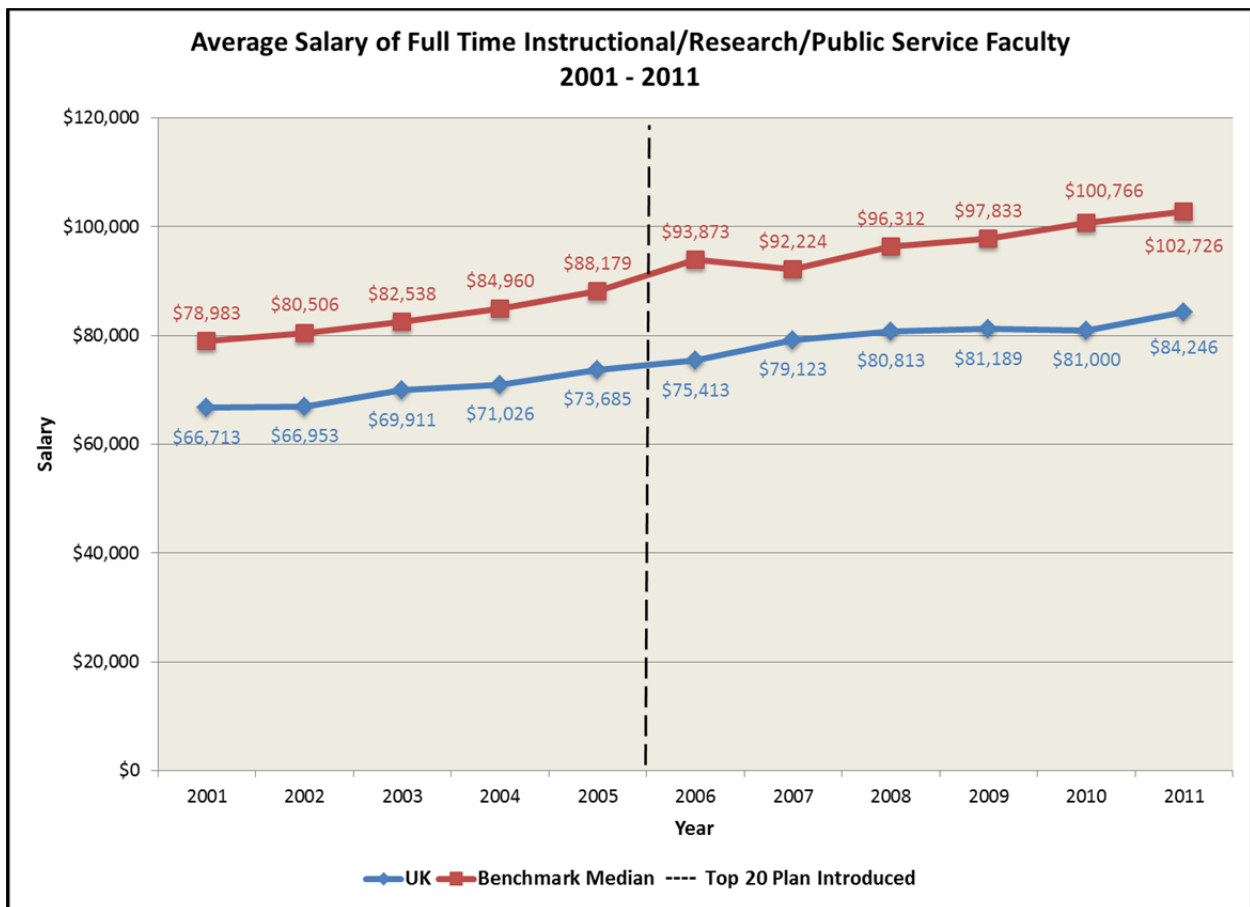


Source: UK IRPE

Figure 1-G represents the student-to-faculty ratio for both UK and the benchmark median. This number has largely remained unchanged for UK since the plan was introduced and as of 2011 sits at 18:1. During the same time period this number has slowly grown for the benchmark median, moving from 15:1 – 17:1. By holding this ratio steady, UK has been able to slowly close the gap between itself and the benchmark median.

Faculty Recognition

Figure 1-H. Average Salary of Full Time Instructional/Research/Public Service Faculty

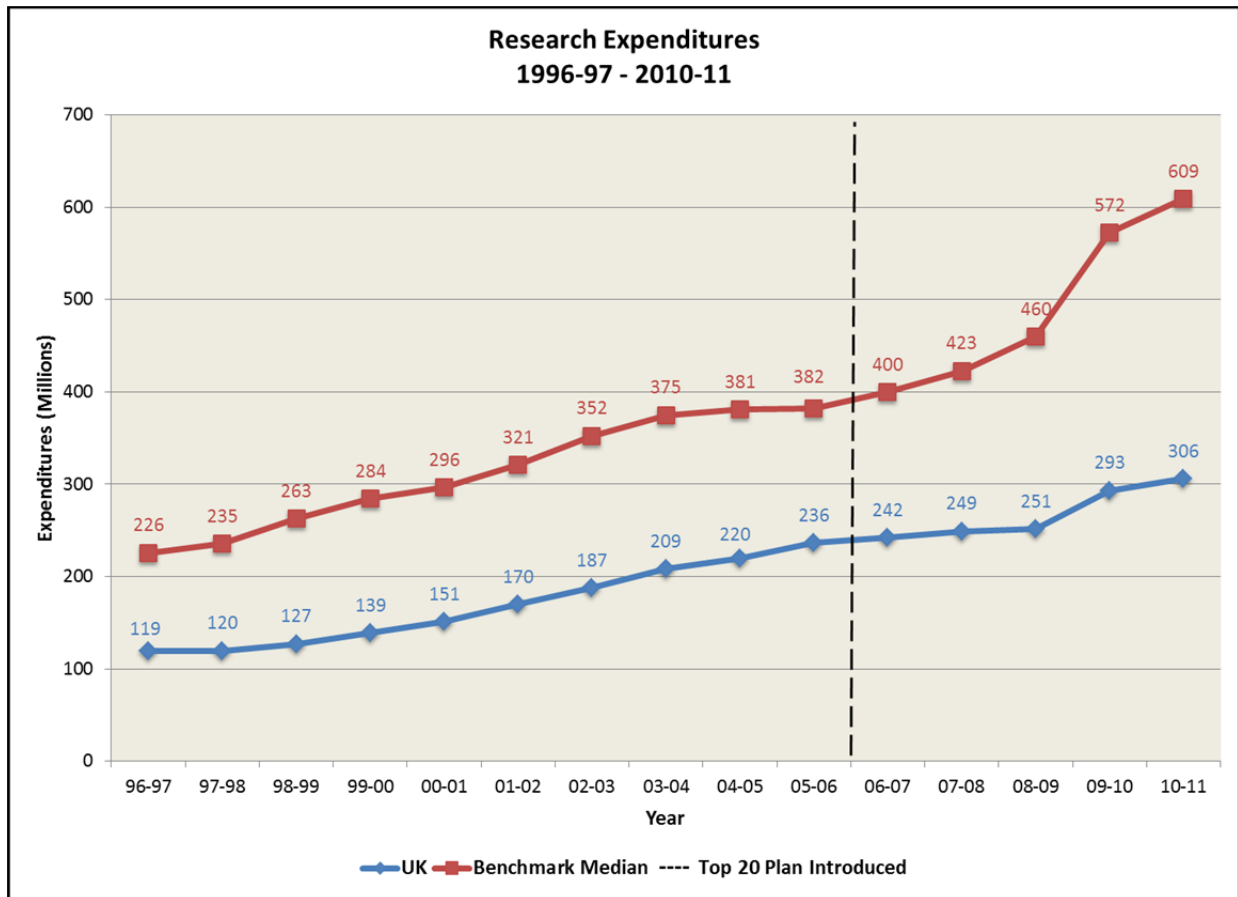


Source: IPEDS

Faculty salaries are denoted in Figure 1-H. While UK has been able to grow its average salary by over \$10,000 (as of 2011) since the plan was introduced, the university is falling further and further behind the benchmark median, which surpassed the \$100,000 mark in 2010. The gap between UK and the benchmark median has grown from around \$15,000 in 2005 to over \$18,000 in 2011.

Research

Figure 1-I. Research Expenditures



Source: IPEDS

Research expenditures are at the center of Figure 1-I. Since the plan was introduced in 2005-06, UK has steadily grown this number and as of 2010-11 it sits at \$306 million. That’s an increase at right at \$70 million. These figures pale in comparison, however, to the benchmark median. In the same period research expenditures for the benchmark median have shot up by over \$225 million and as of 2010-11 are almost double that of UK’s at \$609 million.

Summary

An analysis of the trends reveals that UK has made some improvements when looking at before and after the plan was introduced. Average converted ACT scores are up by about 30 points. The

minority undergraduate population has grown by 7% to comprise about one-fifth of the student body. The acceptance rate is down by around 10% while the yield rate has remained constant. Average faculty salaries and research expenditures have also grown by around \$10,000 and \$70 million.

Nonetheless, when these numbers are compared to the benchmark median, the university has made little to no progress in closing the gap and thus improving its Top 20 ranking. The average converted ACT score gap has only narrowed by 13 points since the plan was introduced. While UK’s total percent of undergraduate minority students has improved, it is still less than half that of the benchmark. The overall difference in acceptance and yield rates have not changed much at all, while the percentage of undergraduate students out-of-state actually worsened by 13%. Institutional aid and student-to-faculty ratios have remained flat, while the gaps for average faculty salaries and research expenditures have widened by \$3,000 and \$157 million.

While it can be argued that UK’s *Top 20 Business Plan* is having an impact, it can also be stated that this impact has not been sizeable enough to make a difference when comparisons are made to the university’s benchmark institutions.

Section 2: Comparing UK to Its Top 20 Goals

In this section, UK’s own numbers will be presented and discussed to see where it stands in comparison to the goals it set in the plan to be met by a particular date.

Undergraduate Education

Table 2-A. Average Converted SAT Score

CATEGORY	TARGET/YEAR	YEAR						
		2005	2006	2007	2008	2009	2010	2011
Average Converted SAT Score	1193 / 2020	1117	1135	1096	1111	1127	1143	1145

Sources: UK IRPE/IPEDS

Table 2-A represents the indicator average converted SAT scores. This number rose by close to 20 points in 2006 before falling close to 40 points the following year. This number rebounded in 2009

and has since climbed to 1145, which is about 50 points shy of the 1193 target set for 2020. This goal is within reach for UK, considering the recent years of sustained increases, but growth must continue at a pace that is much larger than what has occurred the last few years.

Table 2-B. Faculty and Enrollment Numbers

CATEGORY	TARGET/YEAR	YEAR						
		2005	2006	2007	2008	2009	2010	2011
Total # of Full Time Instructional / Research / Public Service Faculty	625 Hires / 2020	1,211	1,233	1,251	1,245	1,276	1,313	1,344
Total # of Students	6,200 Increase / 2020	18,702	19,292	18,770	18,942	19,183	19,927	20,099
Student-to-Faculty Ratio	16.4 to 1 / 2020	17.6 to 1	17.9 to 1	17.4 to 1	17.8 to 1	17.7 to 1	17.7 to 1	17.5 to 1

Sources: UK IRPE/IPEDS

Information pertaining to faculty and enrollment numbers can be found in Table 2-B. Please note that while one of the recommendations called for monitoring additional faculty hires in the undergraduate colleges, after consultation with representatives of the university, it was discovered that this variable is not tracked for purposes of the *Top 20 Business Plan*. Thus, what is presented above is the total number of full time instructional/research/public service faculty. The goal for the university to achieve by 2020 has thus changed to 625 hires (includes both undergraduate and graduate faculty).

When looking at the numbers, the university has added over 130 faculty in six years. While it is possible to reach the goal of 625 additional hires by 2020, growth must continue at a must faster rate. Moreover, in terms of the total number of students, the university hit the 20,000 mark for the first time in 2011. Progress is being made in this area, but the goal of adding 6,200 students and reaching 24,692 by 2020 is questionable considering that the university has only increased the undergraduate student body by less than 1,500 in the last six years.

Despite an uptick in both the total number of full-time faculty and students, the student-to-faculty ratio has remained fixed around the 17.5 to 1 mark. In looking at past trends, the university has its work cut out for it when it comes to reaching the goal of 16.4 to 1 by 2020.

Graduate Education

Table 2-C. Enrollment Numbers

CATEGORY	TARGET/YEAR	YEAR							
		2004	2005	2006	2007	2008	2009	2010	2011
Total # of Graduate/First Professional Students	8,002 / 2020	7,252	6,970	7,090	7,086	7,112	7,112	7,181	7,127

Source: IPEDS

As shown in Table 2-C, the total number of graduate/first professional students dropped in the year following the plan's release and in subsequent years has failed to return to the baseline amount of 7,252 students. If UK is to grow this number to the goal of 8,002 students by 2020, a serious push will need to be made to retain current students while adding large amounts of new ones.

Faculty Recognition

Table 2-D. Faculty Salaries

CATEGORY	TARGET/YEAR	YEAR						
		2005	2006	2007	2008	2009	2010	2011
Average Salary	Benchmark Median / 2012	\$73,685	\$75,413	\$79,123	\$80,813	\$81,189	\$81,000	\$84,246
Benchmark Median Salary	N/A	\$88,179	\$93,873	\$92,224	\$96,312	\$97,833	\$100,766	\$102,726

Source: IPEDS

Faculty salaries are the subject of Table 2-D. Please note that while one of the recommendations called for monitoring starting salaries for incoming faculty, after consultation with representatives of the university, it was discovered that this variable is not tracked for purposes of the *Top 20 Business Plan*. The university should begin capturing this data.

With the exception of a slight drop in 2010, the average salary rose slightly each year from 2005 to 2011. Despite this increase, the university has failed to make much traction in its goal to reach the benchmark median, which surpassed the \$100,000 mark in 2010. Over the last five years, UK has failed to reach the 90 percent mark in terms of the median. If UK is serious about attracting and retaining a diverse, highly productive, and achievement oriented faculty it must reverse this trend and become more competitive with its faculty salaries.

Research

Table 2-E. Faculty and Research Expenditures

CATEGORY	TARGET/YEAR	YEAR						
		05-06	06-07	07-08	08-09	09-10	10-11	11-12
Total # of Full Time Instructional / Research / Public Service Faculty	625 Hires / 2020	1,211	1,233	1,251	1,245	1,276	1,313	1,344
Research Expenditures (Millions)	476 / 2012 768 / 2020	236	242	249	251	293	306	

Sources: IPEDS

Highlighted in Table 2-E are faculty and research expenditures. As stated previously, after consultation with representatives of the university, it was discovered that the total number of faculty in the graduate/first professional colleges is not tracked for purposes of the *Top 20 Business Plan*. Thus, what is presented above is the total number of full time instructional/research/public service faculty. The goal for the university to achieve by 2020 has thus changed to 625 hires (includes both undergraduate and graduate faculty). When looking at the numbers, the university has added over 130 faculty in six years. While it is possible to reach the goal of 625 additional hires by 2020, growth must continue at a must faster rate.

Despite steady progress being made each year from 2005-06 to 2010-11, the university was far from its goal of reaching \$476 million in research expenditures by 2012. Attention should be given by UK on how to strengthen research productivity with its finite resources and current faculty levels.

Summary

When comparing UK's progress against the goals set for itself in the *Top 20 Business Plan*, the outlook could definitely be better. Perhaps the milestone the university is closest to reaching is in regards to the average converted SAT score. UK is 50 points shy of its target of 1193 by 2020 and past trends have shown that this gap can be closed in a relatively short amount of time.

Reaching the other goals, however, will require a sizeable effort by UK. While the university has added both undergraduate students and faculty, the rate of growth for both of these indicators is not on par with achieving the aspired marks of 6,200 additional students and 625 hires by 2020. The situation is worse for all of the other indicators. The student-to-faculty ratio has remained around the 17.5 to 1 mark and is over a full point away from the goal of 16.4 to 1 by 2020. The total graduate population has actually dropped since the plan was introduced, while the average faculty salary is nowhere near the benchmark median. Finally, research expenditures missed the mark of \$476 million by 2012 by over \$150 million.

As stated earlier, while it can be argued that UK's *Top 20 Business Plan* is having an impact, it can also be stated that this impact has not been sizeable enough to make a difference, especially when the university is failing to reach many of the milestones it set for itself to reach by a certain date.

Section 3: Sample Publication – UK's Most Recent Progress

Accompanying this analysis is a sample publication that depicts graphically UK's most recent progress, illustrating how UK stacks up against the institutions that comprise the benchmark median. Graphics for the most recent year in which data were available have been constructed for many of the academic quality indicators that have been identified based upon the strategies and policies offered in the *Top 20 Business Plan*. For each indicator, UK's most recent progress as a percentage of the benchmark median is shown. Also included are the high water mark, which denotes the highest percentage UK had achieved relative to the benchmark median, and the low water mark, which

indicates the lowest percentage. All of the values could be either less or greater than 100%, depending on the indicator being represented and UK's standing.

Improving the Analysis for Future Study

As stated earlier, due to the scope and size of the plan, indicators were not established for every recommendation given. Future studies could expand upon the number of strategies and policies discussed and explore each in more detail. Comparisons could also be made against institutions currently ranked in the Top 20 to potentially uncover any approaches UK might be able to undertake to improve its standing. Finally, a closer look needs to be given to the financial aspect of the plan and how funding (or the lack thereof) has an impact on the university's efforts to reach its goals.

Conclusion

The goal of this study was to begin laying a foundation for assessing the degree of progress the University of Kentucky has made toward the goals defined in the *Top 20 Business Plan*. The plan was created to guide the university's efforts in becoming a top twenty public research institution by 2020 per a mandate by the Kentucky General Assembly.

Up to two strategies and/or policy suggestions were chosen for analysis for each of the four major domains outlined in the plan (undergraduate education, graduate education, faculty recognition, and research).

Results of the analysis revealed that UK has made some improvements when looking at before and after the plan was introduced. Nonetheless, when these numbers are compared to the benchmark median, the university has made little to no progress in closing the gap and thus improving its Top 20 ranking. When comparing UK's progress against the goals set for itself in the *Top 20 Business Plan*, the outlook could definitely be better, as reaching most of its goals will require a sizeable effort by the

university. While it can be argued that UK's *Top 20 Business Plan* is having an impact, it can also be stated that this impact has not been sizeable enough to make a difference when comparisons are made to the university's benchmark institutions, especially when the university is failing to reach many of the milestones it set for itself to reach by a certain date.

Further study is needed, however, to verify the conclusions drawn from the results, as the analysis was limited due to the size and scope of the plan and provides only a narrow view of the university's efforts to reach Top 20 status.

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Acknowledgements

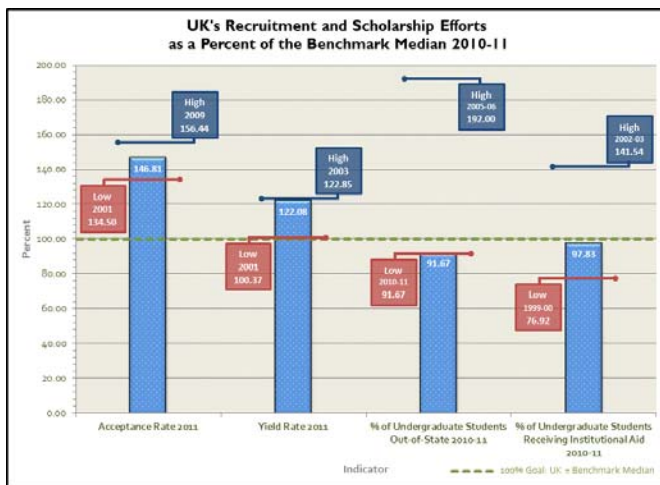
This study would not have been possible without the assistance of Dr. Edward Jennings, Dr. Eugenia Toma, and Dr. Virginia Wilson, faculty members in the Martin School of Public Policy & Administration. Much gratitude is owed to all of these individuals for assisting with the assessment.

Tracking Top 20: The University of Kentucky's Most Recent Progress

Introduction

This publication is designed to be a graphical representation of how UK stacks up against the institutions that comprise the benchmark median¹. Graphics for the most recent year in which data were available have been constructed for many of the academic quality indicators² that have been identified based upon the strategies and policies offered in the *Top 20 Business Plan*³.

Figure B. UK's Recruitment and Scholarship Efforts as a Percent of the Benchmark Median



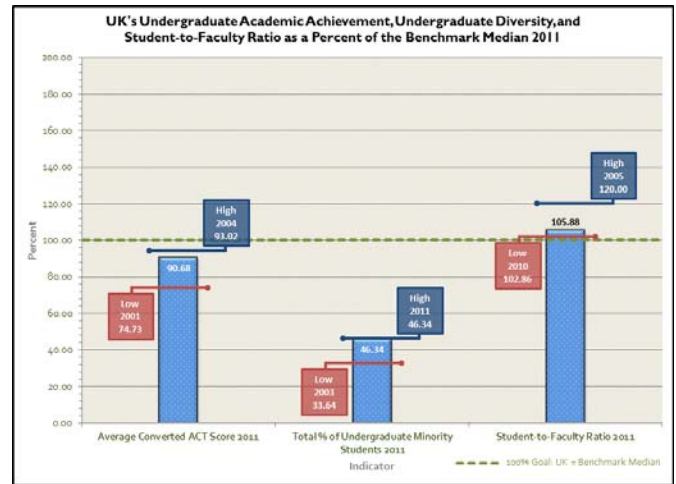
Sources: UK IRPE/IPEDS.

Both of these lines are labeled with the actual percentage and the year it occurred. All of the values could be either less or greater than 100%, depending on the indicator being represented and UK's standing⁴.

Analyzing the Results: An Example

For example, in Figure A, UK's average converted SAT score for 2011 was 90.68% of the benchmark median. The high watermark occurred in 2004 at 93.02%, while the low watermark of 74.73% happened back in 2001. Thus, in 2011, UK's average converted SAT score as a percent of the benchmark median was less than it was before the plan was introduced.

Figure A. UK's Undergraduate Academic Achievement, Undergraduate Diversity, and Student-to-Faculty Ratio as a Percent of the Benchmark Median

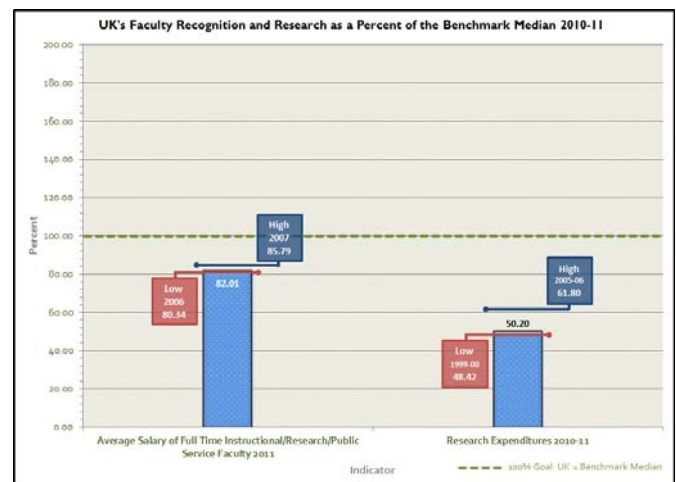


Sources: UK IRPE/IPEDS

Interpreting Each Figure

For each figure, UK's most recent progress as a percentage of the benchmark median is symbolized by a **blue bar** and is labeled in white or black lettering with the actual percentage. Also included in the diagram are two other variables. The high watermark, represented by a **dark blue line**, denotes the highest percentage UK had achieved relative to the benchmark median, while the low watermark, represented by a **red line**, denotes the lowest percentage.

Figure C. UK's Faculty Recognition and Research as a Percent of the Benchmark Median



Source: IPEDS

Tracking Top 20: The University of Kentucky's Most Recent Progress

Notes

¹ The benchmark median is calculated by taking the median of the set of numbers for each indicator for the benchmark institutions. Institutions that make up the benchmark median include the following:

- Pennsylvania State University
- Rutgers University - New Brunswick
- Texas A&M University
- The University of Texas at Austin
- University of California - Berkeley
- University of California - Davis
- University of California - Los Angeles
- University of California - San Diego
- University of Florida
- University of Illinois - Urbana-Champaign
- University of Maryland - College Park
- University of Michigan - Ann Arbor
- University of Minnesota - Twin Cities
- University of North Carolina - Chapel Hill
- University of Pittsburgh - Pittsburgh Campus
- University of Virginia
- University of Washington
- University of Wisconsin - Madison

² Academic quality indicators were chosen based upon a discussion of the strategies and policies offered for each of the four major domains outlined in the *Top 20 Business Plan* (undergraduate education, graduate education, faculty recognition, and research). Indicators chosen for analysis include the following:

- Average Converted SAT Score
- Total Percent of Undergraduate Minority Students
- Acceptance Rate
- Yield Rate
- Percent of Undergraduate Students Out-of-State
- Percent of Undergraduate Students Receiving Institutional Aid
- Student-to-Faculty Ratio
- Average Salary of Full Time Instructional/Research/Public Service Faculty
- Research Expenditures

³ The *Top 20 Business Plan* was created to guide the university's efforts in becoming a top twenty public research institution by 2020 per a mandate by the Kentucky General Assembly.

⁴ A goal percentage of 100% means that UK is on the same level as the benchmark median. This number could be more or less depending on the indicator being represented and UK's standing. An example of the number being higher occurs for the indicator *Acceptance Rate*, which indicates UK admits more students that apply than the benchmark median. An example of the number being lower occurs for the indicator *Research Expenditures*, which illustrates that UK brings in millions less in research dollars than the benchmark median.