

# **Do College Presidents Matter?**

*An Analysis of the Effects of College Presidents*

*on Retention and Graduation Rates*

Wesley Whistle

Capstone Project  
Martin School of Public Policy and Administration  
University of Kentucky  
Spring 2014

## **Table of Contents**

Executive Summary .....	2
Background .....	2
Literature Review.....	5
Research Design.....	12
Presidential Data .....	14
Model .....	16
Results.....	17
Limitations .....	19
Conclusions and Recommendations .....	21
Bibliography .....	23

## **Executive Summary**

Higher education is going through a transformative time. Effective leadership of these institutions is increasingly important. Public institutions are losing more government support from both the state and federal level. Colleges and universities are also facing higher standards from the federal government. When presidential search committees are looking for candidates for their college or university, they are seeking a leader who addresses these issues, as well as many others.

Addressing falling financial support requires increased attention to fundraising. Some accept that presidents are hired primarily for fundraising for the colleges and do not expect them to play a role in the daily operation of the college or university. Additionally, presidents need to be able to work with legislators, foundations, and other sources to receive funding and grants. While these are qualities are very important, my research focuses on the possibility that presidents can be influential on other academic variables.

Previous studies examined the presidential search process and analyzed the qualities of a candidate that colleges and universities seek. These studies also analyzed what makes a college president effective or ineffective. This study seeks to determine if the president impacts two variables; retention and graduation rates. It also seeks to determine whether the impact differs based on the tenure of the president and president's background—academic or other.

My research found that there is an effect of presidents on retention rates. I found that public universities tended to have lower retention rates, but this problem was reduced when the president was an academic president. I recommend further research into the area to include a larger sample with a diversification of presidential backgrounds so that it could be categorized into types of backgrounds. I also recommend looking at more variables to measure performance.

## **Background**

In a time when higher education is going through many different changes, quality leadership of these institutions is ever more important. When colleges and universities search for presidents, they seek many leadership qualities. While many colleges search for a president who is a capable fundraiser for the institution, leadership and political aptitude – among other qualities – are very important to this search. In the presidential search profile for Transylvania University in 2013, the university listed many other qualities describing the best candidate, including: a passion for education, strategic

thinking, finance and budget skills, effective communication, dynamic fundraising, and relationship building. The needs of each institution at a given time may greatly differ.

Higher education leaders are looking for ways to help their institution survive in a time of recession. For many they are restructuring budget models to create a more efficient institution, especially those public institutions with diminishing state funding. In addition, these schools are facing pressure from the state governments for better performance, as well as the possibility of new standards from the federal government to ensure they provide quality education. Students are faced with rising tuition prices and a sluggish job market upon graduation, leading some to question the value of a college degree. Because of these issues, higher education leaders need to be innovative and creative thinkers to address these uncertain circumstances.

Because the duties of a president vary, there is some question about what background best prepares a college president. Many presidents come from academia and have a strong background in teaching or research. They have risen through the ranks from professor to positions such as academic dean or provost. Some prefer this career path so the president will understand the needs of the faculty. Others favor a president with a strong background in fundraising and development because of fundraising's heightened importance to colleges and universities. Still others prefer a president with a political background for reputation building. Such a background allows a president to utilize his or her communication skills to cultivate relationships that will benefit the college or university. These skills are also important so presidents can more easily raise money and support. As college search committees look for new presidents to help their respective

institutions, it is important to understand if a certain type of president would be more or less effective.

Financial factors are very important to institutions of higher education, however, colleges' and universities' success is not only determined and evaluated by financial indicators. Some evaluate these schools through practical or academic factors. While some literature evaluates the performance of a university based on financial success, other factors include job placements, graduate school placement, retention rates, and graduation rates. Different people and different institutions will weigh these criteria differently.

The issue of this research is that as college and university boards search for presidents they are looking for the most effective president. While they typically may look for leaders who are proven fundraisers, this capstone will address the question of the effect of the president in college and universities on academic factors. This will be accomplished by looking at college presidents in the twenty small liberal arts colleges and eight public universities in Kentucky. While all colleges differ and have different needs in a president at a certain time, it would be beneficial for all search committees to know the impact of presidents on academic measures.

The outcome variables of this research will be retention and graduation rates as a measurement of academic performance. These variables will be used in an attempt to determine how a president affects the college's academic performance. This will be done by looking at an 8-year period and noting any change in a presidency of the colleges and universities in Kentucky. Using this data, I will determine if there is a change in the

performance of the college or university linked to the change in presidency. I will also look at how long presidents have been in place and attempt to determine if a president with a longer tenure causes the college or university to perform better or worse. Furthermore, I will attempt to estimate whether presidents with an academic background have a different effect on performance than those without such a background.

## **Literature Review**

One study suggests every presidential search begin with an institutional analysis to determine the needs as every institution is different and has differing priorities. Search committees should ask, “does it need an educator, a fundraiser, or a caretaker (Nason, 1980)?” Another work describes the beginning of the search process in a similar manner by stating the first step “is to appraise the institution’s present condition and future prospects so that the committee can determine the characteristics of the president they seek” (Birnbaum, *Presidential Searches and the Discovery of Organizational Goals*, 1988). In the same work, Robert Birnbaum gives suggestions to improve the process, including looking outside of higher education, suggesting that the “other” types of presidents can be effective administrators.

The article, “What Makes a Good College President” by Oliver C. Carmichael was written in 1947, but it provides a good description into what makes a good college president. The article explains what qualities a successful college president might have. For background, the article also explains that most college presidents in the past were recruited from either ministry or education. Over time, the base of applicants has been

broadened and more people have now entered into the field from many other backgrounds (Carmicheael, 1947). This has expanded to include politicians, business leaders, and fundraisers. Interestingly, the article says “more and more *men* from other walks of life have been chosen. (Carmicheael, 1947)” This line speaks to the fact that previously most universities were led by men, rather than women. However, there are still fewer women in these posts, especially at larger institutions.

Carmicheael asserts that the first essential quality to become an effective president is to have a sound philosophy of education. He explains that presidents should be invested in furthering the work of the college and the advancement of education as a whole. Presidents should also be familiar with the institutional structure and organization. Carmicheael’s work acknowledges it would be beneficial for a president to have some experience in areas such as curriculum or student affairs, but concedes it is not required. Carmicheael argues there are other skills which are beneficial for the job of a presidency. While this expertise in student affairs or curriculum is an asset, what is important is that the president cares about education and understands its function in society. This dedication to education allows the president to fully embody the mission of the college or university (Carmicheael, 1947).

Another quality is the ability to understand the financial situation of the institution. Every institution faces financial difficulties, and Carmicheael argues the president must be able to know his or her way around the budget. Carmicheael says if the institution is a public college or university, the president must be able to handle working the legislature and constantly be able to come up with new ideas on how to convey the

importance of funding state universities. Carmicheael also stresses the importance of fundraising and development for presidents of private institutions. In addition to development and fundraising, presidents of private colleges and universities must be willing and able to work with foundations and church organizations (Carmicheael, 1947). These organizations play a strong role in private colleges through donations and the administration, especially of religious institutions.

Carmicheael stresses that the most important task of a president is human relations. Presidents have to work with all the various stakeholders including faculty, students, legislators, alumni, donors, staff, and the surrounding community. Presidents live in what Carmicheael calls a glass house and the university or college is judged by almost every action of the president. Like a United States president or a governor of a state, college and university presidents are viewed under a microscope by the media and the stakeholders listed above. The greatest asset a president can have according to Carmicheael is a personality with “tact, a real liking for people, and an ability to appreciate the other fellow’s point of view and a ready adaptability to people and to situations” (Carmicheael, 1947). This is necessary to work with all stakeholders to compromise and make the stressful decisions.

Robert Birnbaum differs from Carmicheael in his literature. He acknowledges that board member approval is more important than faculty approval. In a “five-year longitudinal study of the interactions of trustees, administrators, and faculty in formal leadership positions and their effects on the functioning of thirty-two institutions selected to reflect diverse institutional types, programs, and structures” he found that assessments



varied by the constituent's role. He found that administrators and trustees approved of the presidents by over 30 percent more than the faculty. The findings also suggest that "most modal presidents who complete their terms of office with low faculty support were still able to manage their institutions effectively (Birnbaum, Will You Love Me in December as You Do in May? Why Experienced College Presidents Lose Faculty Support, 1992).

While Birnbaum stresses board member approval in an effective president, the work of Fisher, Tack, and Wheeler (1998) depicts the effective college president with certain qualities. Some of the qualities described include having a vision, visibility, and relating well to others. Fisher explains presidents must draw respect from others and be bold decision makers. The authors surveyed college presidents and looked at their effectiveness to compare the qualities of presidents to determine if there was a correlation between some characteristics and effectiveness. They breakdown the qualities of a president into three main categories: (1) management and leadership style, (2) social reference – meaning an ability to work well with people in a diplomatic way, and (3) indications of confidence. Their research concluded that these three categories together were all qualities of the most effective presidents they viewed (Fisher, Tack, & Wheeler, 1988).

Fischer et al explain that management and leadership style involves valuing the respect of others, believing in work ethic, and taking risks. The authors argue leaders with management and leadership style should support creative dissonance and organizational flexibility. Social reference is crucial to the job of a president, but this also includes the understanding that being liked is a nonissue. Effective presidents also

understand collegial relationships are not the top priority. Confidence includes the belief in the institution as a facilitator of dreams. When interviewing presidents, the authors found that those presidents who were most effective acknowledge that decision making is not an easy task. They are aware of the difficult decisions, but it is not easy for them (Fisher, Tack, & Wheeler, 1988). The confidence addressed by Fisher, Tack, and Wheeler speaks to Birnbaum's study that showed while it may be good for faculty relations for them to have confidence in the president; it does not affect their effectiveness.

There is one study in the United Kingdom that hypothesized that research universities should be led by top scholars. In Amanda Goodall's work, "*Socrates in the Boardroom*", she argues that for research universities to be successful, academic scholars who have been cited should be appointed as their leaders. Her claim is better scholars make better leaders (Goodall, 2009). Because anecdotal evidence may suggest otherwise, it should be approached with great caution. Goodall's claim is not that all academics are good leaders, but that a good academic leader is better than a nonacademic leader. This is the same as when selecting a group of 100 lawyers, nurses, chefs, or advertising executives, all of them will not be considered great leaders. Goodall suggests that leadership and management skills are learned through experience and the propensity to manage is approximately evenly distributed across the professions. She instead argues that because these are academic and research institutions, they should be led by such leaders as long as they are skilled leaders, just not any academic leader.

The argument for Goodall's work came from a time when Cambridge and Oxford choose different types of presidents and she thought it would make a difference. Goodall claimed that the world needs outstanding research universities and it matters who leads them. "There appears to be a positive externality effect on economic growth from the amounts of money governments invest in public or research university research. (Goodall, 2009, p. 2)" The externalities happen through spillover effects from the university research because the creativity or knowledge of the organization spread outward. To test her theory, Goodall conducted a longitudinal study of 55 universities to determine if academic presidents could have an impact on university performance. The measurement for performance was the level of scholarship produced controlling for other factors that impact performance, including: university income, age of leaders, and academic disciplines. The study relied on time lags to help determine if the presidents *caused* an improvement. Her findings were that presidents who were scholars produced better performance in research institutions (Goodall, 2009).

This may be just because research presidents value research. There are many other ways to measure performance. Another study looked at performance of universities based on retention and graduation rates. The study analyzed the relationship between institutional selectivity and institutional expenditures. In this study, Gansemer-Topf and Schuh used these variables to determine that there is a relationship between organization behavior and retention and graduation rates (Gansemer-Topf & Schuh, 2006). The authors cite Berger's theory that organizational behavior can influence student persistence (Berger, 2001-2002).

They concluded “colleges and universities exhibit patterns of behavior (specifically by how they allocate resources)” (Gansemer-Topf & Schuh, 2006). Berger argues these behaviors have important consequences on both graduation and retention (Berger, 2001-2002, p. 19). There was a direct relationship found between expenditures and retention and graduation rates. However, there were exceptions for low selectivity schools. Expenditures did not have a direct effect on graduation rates in these schools (Gansemer-Topf & Schuh, 2006). This implies that leaders can control expenditures to impact these rates.

From this literature, it is apparent many different skills are sought when searching for a college or university president. Fundraising, human relations, a dedication to education, and an ability to deal with the budgeting and financial decisions are all important to the college or university. Other literature has found that academic presidents are needed in research universities, so there may be a question if there are still positive impacts on other types of universities. The literature also indicates that many variables can be used to measure the performance of a higher education institution. Still, many universities differ in what type of president best suits the school, which begs the question, “What makes the best president?”

## Research Design

There are three research questions:

RQ1) Do presidents have an impact on graduation or retention rates?

RQ2) Does length of tenure of a president impact graduation or retention rates?

RQ3) Does the professional background of a president have an impact on graduation or retention rates?

To answer these questions, information was gathered on the college presidents of all twenty private and eight public higher education institutions in Kentucky. The names and the years of the tenure of the president were collected for the analysis by researching websites and contacting the colleges and universities. From that point, the year in which there is a change in the presidency in each institution was noted. In this, I also looked at the tenure (time in office) of the presidents to determine if there is an impact based on the length of the tenure of the president.

Then by using the names of each president, I researched the background of each president to determine the type of president he or she is. This is coded as *Academic* or *Other*. While this is somewhat subjective, I looked at what has been the largest portion of their career. Academic presidents are those with a doctorate and who have had a largely academic career, such as professors and researchers. They also may have worked in K-12 education and moved into higher education. This will also include those presidents who were deans of colleges, provosts, and department heads. Presidents with a doctorate who did not work in academia or education will be categorized into the “Other” classification.

“*Other*” can include many different backgrounds. Some presidents are those that have come to the position from development or alumni affairs positions. Other presidents have been a business leader who had a career in the private sector. In this category, I also include those that have worked in student life as a dean of students or dean of student life or another similar position that was not academically based. Another category is political presidents who held elected office, a politically appointed position, or political work for an elected official. This category would also include those presidents who worked in government affairs in universities or elsewhere.

The next step was to gather data of these institutions that was used to in an attempt to determine success of a college. To define what success is for the college, two variables were used: retention rates and graduation rates. While the research showed financial measures are important, I believe it is also important to understand the impact of presidents on the academic success of the students. These variables were also chosen because they are two of the variables most looked at by both the state and federal government.

These rates were collected from the federal government by contacting the Integrated Postsecondary Education Data System, ensuring all calculations were consistent. For example, the graduation rate was a six-year graduation rate that is reported to the federal government. Along with these variables, the enrollment of the school was also used to control for the size of the school. This is simply the number of undergraduate students attending the school. Table 1 below shows a list of the variables used for the data analysis and a description of each variable.

Table 1 – Description of Variables	
Variable	Description
<b>retention</b>	Retention Rate of the College or University
<b>grad</b>	Graduation Rate of the College or University
<b>lag_enroll</b>	Enrollment Numbers Lagged One Academic Year
<b>academic</b>	The Background of the President – Academic or Other
<b>tenure</b>	Length of Time the President was in Office
<b>year</b>	Academic Year
<b>public</b>	Describing Whether the College or University is Public or Private
<b>public_acad</b>	Academic President at a public university
<b>private_acad</b>	Academic President at a private university

## Presidential Data

When gathering the information on college presidents, a 25 year period was originally research before the discovery that the retention and graduation rates were only available for a limited time. Over the 25 year time period from 1988-2013, exactly 100 presidents presided over Kentucky public and private liberal arts institutions. In this, I found very interesting information, which is depicted below in Table 2.

Table 2			
Kentucky College Presidents (1988-2013)			
	Total	Public	Private
<b>Presidents Overall</b>	<b>100</b>	<b>31</b>	<b>69</b>
<b>Academic</b>	<b>67</b>	<b>25</b>	<b>42</b>
<b>Other</b>	<b>33</b>	<b>6</b>	<b>27</b>
<b>Women</b>	<b>16</b>	<b>2</b>	<b>14</b>

<b>Presidents at the Time of Research</b>			
<b>Academic</b>	<b>20</b>	<b>6</b>	<b>14</b>
<b>Other</b>	<b>8</b>	<b>2</b>	<b>6</b>
<b>Women</b>	<b>4</b>	<b>1</b>	<b>3</b>

Of the 100 presidents, 31 of them were from public institutions – seven of those from the two research universities, the University of Kentucky and the University of Louisville. 25 of the public university presidents were ones who had a career in academia, while the others came from other backgrounds. In the private colleges, 42 came from an academic background. At the time of the research, there were 20 academic presidents, six from the public institutions and 14 from the private. The other presidents came from another background.

Diversity is lacking in the all college and universities. Of the 100 total presidents in the 25 year time span, only 16 have been women. Public universities have even worse numbers as only two women have been presidents, both from the same regional Historically Black University. Women have not led either of the large research universities. The percent of women in these positions is slightly higher at the time of this research, but only minimally. In Kentucky, there are currently only four female presidents, all but one residing over private institutions. Although this research did not look at race or ethnicity in the past, it is important to note that of the 28 presidents currently in Kentucky colleges and universities there is only one African American



president. This same president is the only woman at a public university, the Historically Black University.

## Model

To estimate the effect of the president, a fixed effects regression model was used with the president, the lagged enrollment, the type of president, the school, and the year as explanatory variables. The dependent variables were the retention rates and graduation rates. The effect on these two rates was calculated separately.

The model for the effect of presidents on retention rates was:

$$\begin{aligned} \gamma_{retention} = & \beta_0 + X_{lag\ enrollment} + X_{school} + X_{academic} + X_{tenure} + X_{year} + X_{public} \\ & + X_{public\ academic} + \mu + \varepsilon \end{aligned}$$

The model for the effect of presidents on graduation rates was:

$$\begin{aligned} \gamma_{graduation} = & \beta_0 + X_{lag\ enrollment} + X_{school} + X_{academic} + X_{tenure} + X_{year} + X_{public} \\ & + X_{public\ academic} + \mu + \varepsilon \end{aligned}$$

These models were done using  $\gamma_{retention}$  and  $\gamma_{graduation}$  as dependent variables to determine the effect of presidents on retention and graduation rates.

$\gamma_{retention}$  represents the percentage of students who return to the university or college from the previous year.  $\gamma_{graduation}$  represents the six-year graduation rate, which is the percent of students who graduate within a six-year time frame.  $X_{lag\ enrollment}$  was used to represent the enrollment number that was lagged for the previous year so that results in one year are not predicated at the same rate; enrollment and retention are closely related. The lag in enrollment is done because the retention of each year is directly related to the

previous year's enrollment.  $X_{school}$  indicates the particular school and  $X_{academic}$  indicates if the president is an academic president.  $X_{tenure}$  represents the length of time the president has been in his or her position.  $X_{year}$  is the year and  $X_{public}$  indicates if the college or university is private or public.  $X_{public\ academic}$  describes if the president is an academic president at a public university.  $\mu$  is used to represent the control of the fixed effects for the individual president and  $\varepsilon$  is the error term.

## Results

The data shows that public institutions tend to have lower retention rates than private schools. However, this problem is reduced slightly when there is an academic president at the public institution. The coefficient of 2.96 shows that there is a 2.96 percent increase in retention (which is large relative to the changes that are observed over short periods) if the president of the public university is an academic president. So the data of Table 3 indicates that presidents do have an effect.

The data shows an increase in enrollment numbers in almost every college and university year to year. The year variable is used to control for events of a single year such as the economy, changes in education systems, or other factors. The results of the data also show a time trend of retention rates decreasing throughout the years (the coefficient of 2006 is negative though it is not statistically significant). This is not what one would expect to see as colleges and universities are working to keep students. One may question if the students are getting worse. The decrease in retention could be result

of lower admission standards and more students attending college who would not have enrolled previously.

Table 3 – Effect of Presidents on Retention and Graduation Rates						
	Retention			Graduation		
Robust	Coefficient	Significance	Standard Error	Coefficient	Significance	Standard Error
Enrollment	0.0014	***	0.005	0.0015		0.015
Academic President at All Universities	-5.2500	***	0.002	0.7505		0.742
Tenure	0.2754		0.125	0.1564		0.257
Public	-19.1961	***	0.8	-19.1750		16.0
Academic Presidents at Public Universities	2.9623	***	0.005	0.3335		0.925
Academic Presidents at Private Universities	-5.2505	***	0.002	0.7505		0.742
Year						
2005	0.2224		0.806	-0.2765		0.682
2006	-0.4980		0.662	-1.2456		0.324
2007	0.9743		0.345	-2.3408	*	0.082
2008	0.4941		0.65	-1.2847		0.299
2009	1.8680	*	0.065	0.5782		0.631
2010	1.4692	*	0.091	0.3597		0.87
2011	0.6535		0.373	-1.4005		0.171
Significance Level: * = p<0.10 ** = p<0.05 *** = p<0.01						

The results indicate that graduation is mainly a fixed characteristic of colleges and difficult to change, while retention is affected by various factors, such as enrollment and public/private classification. This suggests that retention can possibly be changed, or improved, with targeted efforts, while graduation rates are more difficult to improve. The university matters for reasons of selectivity, which can easily affect both graduation and retention rates.

## **Limitations**

While there is interesting information in this research, there are several limitations to it. Unfortunately, when contacting the federal government I was only able to obtain retention and graduation rates from 2004 to 2012. I found the information on the presidents dating back for 30 years, but could not use it due to the lack of other data. This limits the findings because in many circumstances the presidential tenure is longer than the data available for retention and graduation rates. This short time span limits the number of presidents due to lengthy tenure in many institutions. Because of the limited number of presidents, it also limits the different types of presidents. In this study, academic presidents are much more prevalent. If this study included a larger sample, it could possibly better depict the nonacademic presidents. The larger sample could possibly break the nonacademic presidents into more specific categories, which may or may not show other effects.

Another limitation is in the sample because there are many different types and sizes of institutions in a smaller sample. While there are many observations, I concede

that every institution is different, especially in a sample such as the one I have used. Each type of institution will vary in the type of president they seek and the needs of the school. A liberal arts college will greatly differ from a large research institution, just as both would differ from a larger regional institution. Schools like the University of Kentucky, Western Kentucky University, and Kentucky Wesleyan College are quite different in history, structure, and culture. However, note that the fixed effects control for this to the extent that such specific features are constant. Other universities would have different fixed effects, but the estimation might still have external validity concerning marginal impacts of presidents. In this sample there are only two large research institutions, while there are six regional institutions and twenty liberal arts colleges. If there were a much larger sample to include more large institutions, this would be a good factor for the analysis.

Many might argue presidents have other more important impacts on the institutions. Presidents may not impact graduation and retention rates because academic deans and provosts should have more of an impact on these as this is more of their day-to-day role. There may be better ways to measure the impact of presidents on colleges and universities, especially if presidents are not tasked with working to impact these numbers.

Retention and graduation rates can both be impacted by other sources. The president may not be the only factor impacting each of these rates. The selectivity of the school could have a major impact on each of these rates, as some of the literature has suggested. One can easily presume that a school with a higher average incoming ACT

score would have higher graduation and retention rates if they are selecting higher performing students.

## **Conclusion and Recommendations**

The findings of my research are mixed. This research suggests that presidents do matter when looking at retention rates. Public universities have some problems with graduation rates and retention and seek ways to improve in these areas. This research suggests an academic president can have some benefit at least in retention in public universities. This is only one aspect of a president's job, and fund raising may be considered more important by the board and presidential search committee. These institutions may be looking for a president who can raise more funds, lead in a time of change, or have another more important role. Nevertheless, this research suggests total attachment to the president as a fundraiser or reputation builder can come at a cost to some academic factors.

In order to address the limitations of this research I recommend three improvements. First, I would gather a much larger sample to compare the effect based on the size and type of institution. The sample would need to include more large research universities, more regional public universities, and even more liberal arts intuitions. Also by increasing the sample one is more likely to obtain more diversification of professional background of presidents. Secondly, I would try to gather more variables to measure the effect of a president. Some of these variables may include change in endowment and change in number of donors or size of donations. I would also want to control for

characteristics of the students, because those would presumably make a difference on the retention and graduation rates.

I recommend doing further research on the issue. With a larger sample, one may be able to see if specific categories of presidential backgrounds (i.e. political, development, business, etc.) have an effect on the performance of the institution. Also, I recommend looking at other variables as measures of performance such as financial measures, enrollment numbers, among others.

## **Bibliography**

- Berger, J. B. (2001-2002). Understanding the organizational nature of student persistence: Empirically-based recommendations for practice. *Journal of College Student Retention* .
- Birnbaum, R. (1988). Presidential Searches and the Discovery of Organizational Goals. *Journal of Higher Education* , 489-509.
- Birnbaum, R. (1992). Will You Love Me in December as You Do in May? Why Experienced College Presidents Lose Faculty Support. *The Journal of Higher Education* , 1-25.
- Carmicheael, O. C. (1947). What Makes a Good College President. *Bulletin of the American Asspciation of University Professors* , 681-687.
- D'Amico, A. (2014, March 10). NCES Postsecondary, Adult & Career Education. (W. Whistle, Interviewer)
- Fisher, J. L., Tack, M. W., & Wheeler, K. J. (1988). *The Effective College President* . New York, NY: Macmillan Publishing Company.
- Gansemer-Topf, A. M., & Schuh, J. H. (2006). Institutional Selectivity and Institutional Expenditures: Examining Organizational Factors. *Research in Higher Education* , 47 (6), 613-642.
- Goodall, A. H. (2009). *Socrates in the Boardroom: Why Research Universities Should Be Led by Top Scholars*. Princeton, New Jersey: Princeton University Press.
- Nason, J. W. (1980). *Presidential Search: A guide to the Process of Selecting & Appointing College & University Presidents*. Washington, D.C.: The Association of Governing Boards of Universities and Colleges.