Higher education under fire: implementing and assessing a culture change for sustainment

Paul Barrett, John Gaskins and James Haug
College of Business and Economics,
Longwood University, Farmville, Virginia, USA

Abstract

Purpose – Leadership development is a significant organizational investment and is considered a foundation for a culture change process. In a highly disruptive environment, higher education administrators are investigating the potential benefits of this investment. Specifically, while the great recession was underway in 2010, and with a backdrop of continuous enrollment decline, a business school in a public university in the USA utilized an experimental design to test a globally recognized business model for leadership development and its impacts on leadership effectiveness. The paper aims to discuss these issues.

Design/methodology/approach – The intervention included a two-day training session followed by a year-long process for cementing in learning, while examining ensuing leadership effectiveness. Potential control variables in the model included measures of four dimensions of leadership fitness which were defined as the physical, socio-emotional, spiritual and mental dimensions. When the leadership development intervention showed promising results the business school forged ahead to implement a culture change process based on the leadership development intervention to foster teamwork and innovation.

Findings – As a longitudinal implementation and assessment process, subsequent results of the culture change process spurred year over year increases in enrollments, student retention, student placement, along with consistently escalating faculty research and academic program rankings. The culture change process spread organically from the business school throughout the university as a whole with similar positive impacts.

Research limitations/implications – Implications, including an assertion that leadership development is a viable tool for higher education’s organizational sustainment are discussed.

Originality/value – Future research opportunities of institutional outcomes in higher education due to a systemic investment in annual culture enhancement are also discussed.

Keywords Leadership development, Leadership effectiveness, Organizational culture change, Higher education sustainment

Paper type Research paper

Introduction

In this light speed technology age, global organizational strategy moves at a pace often greater than organizations can develop leaders. This gap indicates a need to align leadership development with the organization’s mission and strategy (Canals, 2014). Higher education is itself more global today than ever, accepting and retaining international students for both diversity and sustained or increased enrollment factors. In addition, universities often provide international study-abroad experiences as part of their mission to offer learning opportunities related to global citizenship for their domestic students. Financially, government sponsored universities see their public revenue dropping each year, and all colleges and universities are experiencing facility and other operating costs escalating each year. These financial challenges are viewed as critical concerns by college presidents related to institutional sustainment (Price et al., 2016). Students and their families have been consistently asking about the value proposition of a college education. Will graduates ever be able to pay off their student debt, and is their investment in a college degree going to provide a financial and personal return on investment […] ever? These issues make it difficult to compete in higher education, and ever more relevant to establish and maintain
what Pounder (2001) referred to as new leadership. This sense of leadership as new indicates that organizational effectiveness, particularly in higher education, is directly linked to the ever evolving leaders in the organization. Leadership evolution flourishes within an organization that is a vibrant platform for leadership development (Brown, 1992).

The business world has been investing in leadership development with exuberance for decades. Related to the business world Fulmer and Goldsmith (2001) suggested that the largest and most profitable corporations had grown to view leadership development as a competitive advantage. But as technology constitutes rapid continuous disruption, the bar for attaining competitive advantage may have changed. Leadership development, as Johnson et al. (2012) advocated, needs to focus on goal setting and transfer of training. With this focus in mind, this study opted to test a globally recognized business model for leadership development in a setting for educators who are actively leading in a four year educational institution. Will the potent impacts of a decades-old, widely used business model for leadership development translate to similar positive outcomes in higher education? That was the question the initial phase of this research project attempted to answer. Moreover, the intervention in this study was intended to develop leadership skills of the educator leader/participants with the hope that a culture change process could be identified and implemented to foster teamwork and innovation to rise to the challenges in higher education. That hope materialized with a multi-year culture change process that ignited beneficial results that exceeded expectations.

**Literature review**

Leadership development, as Day (2001) pointed out, seems to have reached a real zenith where organizational resources are routinely furnished and the practice is viewed as a necessary path to competitive prowess. Leadership development can be characterized as an investment that bolsters the capability and resourcefulness of organizational leaders. It is part of an organization’s human resources strategy to attract, strengthen and protect its human capital (Lepak and Snell, 1999), while also expanding high performance teamwork, or what Brass and Krackhardt (1999) called social capital. What is a striking matter of contention between the business world and the higher education world is that while competencies for effective leadership are virtually the same, many universities have not established systems for leadership development for their faculty and administrative staff (Spendlove, 2007). This defies logic, in so far as universities began to teach sustainment theory and practice regularly over the last decade, and have indicated in surveys that they value becoming a sustainable university (Wright and Horst, 2013). However, they often leave out leadership development processes that are vital to remaining competitive and ensuring institutional survival.

Common leadership development practices include a number of options such as training, mentoring, coaching, job roles and assignments, project-based learning, and cross-function networking. This study incorporated leadership development in the training modality, utilizing a training program that has been implemented in organizations of all types around the world. The training in the study was based on the book *The 7 Habits of Highly Effective People* by Stephen R. Covey (2004). This 7 Habits technology has been associated with positive organizational behavior (Luthans, 2002), particularly for the emergence of employee engagement (Bakker and Schaufeli, 2008). Further, as Korac-Kakabadse et al. (2002) noted, the 7 Habits is especially useful in addressing the spiritual dimension of leadership praxis, and when practiced widely throughout an organization, it could be a factor in an organizational environment that fosters any single stakeholder’s spiritual development. Moreover, while a huge number of studies indicate the 7 Habits technology has had a positive impact on leadership development and leadership effectiveness in business, the literature does not reveal any
empirical studies reporting these types of results in higher education. The initial experimental field study in this research project attempted to address this important information gap and inform the field accordingly.

Leadership effectiveness
Fiedler and Chemers (1967) first discussed the theory of leadership effectiveness and later provided important details of the construct (Fiedler et al., 1976). In the decades since their seminal work, a fuller understanding of leadership effectiveness has emerged. A variety of frameworks prevail that explain leadership effectiveness, and these schemas can be classified into one of three conventions: trait, behavioral or situational theories (House and Podsakoff, 1994). For this study, leadership effectiveness was considered a function of the leader’s ability to exhibit a variety of behaviors positively influencing their immediate stakeholders in a culture change process to achieve organizational goals.

To understand the effectiveness of leadership as an “ensuing” factor in the model tested in this research, both quantitative and qualitative dimensions were activated and served as measures representing actual data collected in an empirical fashion. In this study, the measure implemented for leadership effectiveness was the Franklin Covey (FC) Benchmark 360 process. In essence, the Benchmark 360 provided information highlighting factors of leadership effectiveness that can be aggregated into three main categories: self-management, work management and health management.

The Benchmark 360 is one of several leading multi-factor assessment tools available and used in organizations world-wide for understanding leadership effectiveness (Thach, 2002). As Church and Rotolo (2013) pointed out, the use of such benchmark instruments is often considered to be a recent innovation over the last decade or so. However, the researchers note that the core theory and processes involved in benchmark assessments were employed decades ago by industrial-organizational psychologists. What is perhaps noteworthy in the last decade is the thinking that the role of a leader in the digital, global economy is more complex than ever. Subsequently, multi-source ratings from various constituencies in a 360-degree process are now considered essential to understand a leader’s competencies (Brutus et al., 1998). However, as Hoption (2016) advised, ratings tools like 360-degree instruments yield more relevant data when they are administered to reflect the cumulative experience followers have with a leader, rather than only key instances of leadership. In this study, the timeline for administering the Benchmark 360 was over one full year, collecting data relative to the overall experience with leaders.

In this study, the three main assessment categories are used as an aggregate index to measure changes in leadership effectiveness over time, and specifically to measure effectiveness differences between two test groups. In addition, the study adhered to the Penny (2003) assertion that the 360-degree assessment should provide an equivalent measure between different types of raters, and an equivalent method of delivery. To achieve this consistency of measure and delivery, all study participants provided the FC Benchmark 360 data electronically immediately before the leadership development intervention, and one year post intervention. Additionally, it should be noted that the FC Benchmark 360, used by many practitioners, takes into consideration some of the constructs presented in Figure 1. For example, the data collected with the Benchmark 360 helped to determine if and how principles of leadership fitness, as control variables, ultimately might have had any effect on the impact of the leadership development intervention on leadership effectiveness.

Leadership and culture change process
As Barratt-Pugh et al. (2013) pointed out, leaders and managers play an instrumental role in any organizational culture change process. They are the models of behavior associated with the desired culture change. Further, as Schein (2010) asserted, leaders embed and transmit
culture to others throughout the organization as facilitators more than supervisors. Kellis and Ran (2015) supported the Schein concept, indicating that leadership effectiveness in a culture change process was predominantly focused on relationship-based distributed leadership. The administrators in the host university in this study considered distributed leadership a crucial platform for their culture change process. In fact, distributive leadership was ingrained in the leadership development intervention in the host school via Habit 6 (of the 7 Habits) known as “Synergy.” Leaders were trained to believe that a constant flow of ideas from all employees would create the ground floor up buy-in for any actionable idea. The feedback of faculty and staff that they were feeling valued and part of the process became its own positive force for the culture change process.

Latta (2015) argued that culture change processes include simultaneous dynamics of facilitation and resistance. Leaders who recognize that resistance to culture change is part of a healthy phase of skepticism will be ready and able to manage through to a higher phase of organizational culture transformation and its associated benefits. In addition, as Latta indicated, the leaders in the host business school saw the resistance to change, and the facilitation of change as co-inhabitants in the change process, not opposing forces. This too was a derivative of the leadership development intervention related to Habit 5 (of the 7 Habits), known as “Seek first to understand, then be understood.” This habit in the leadership development intervention encouraged faculty and staff to engage in crucial conversations without pre-judging others opinions or suggestions. It also kindled alternative options discussions that led to innovations in curriculum and research.

**Leadership fitness as a control factor**

Leadership fitness was considered a potential control factor in this study. It addresses the biological and psychological factors that contribute to a leader’s ability to effectively lead an organization. For example, Rosen (2014) highlighted the physical, emotional and intellectual components of fitness and discussed a case study at Novartis AG where leadership development includes various healthy capacity building activities. Pearce (2007) said that fitness was now part of a road map for twenty-first century leadership development, and the Lovelace et al. (2007) study on work stress as it relates to fitness, and the Smith’s (2011) study on resilience and spirituality in policing, support this notion. Our review of the literature on leadership fitness begins with an examination of the representative research on the physical dimension, and proceeds to work through the other dimensions.

**Physical dimension**

McDowell-Larsen et al. (2002) discovered that regular exercise routinely empowers leaders to manage work-related stress in their daily schedules. Further, exercise enhances one’s self-image, reduces the likelihood of disease and provides a way to improve effectiveness. Because enhanced fitness could have a positive relationship to effectiveness, organizations

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**Figure 1.**

The effects of leadership development on leadership effectiveness while understanding the four dimensions of leadership fitness as a set of control variables.
devote time, energy and funds in promoting wellness among employees. With the globalization of the economy and rising complexity of international leadership, a greater number of interruptions and higher stress levels invade a leader’s daily life and fitness. As Martin (2007) proposed, the angst built into modern leadership encourages leaders to engage in every available option to sustain a platform of physical health. In other words, challenging times require higher, sustained energy levels.

Kur and Bunning (2002) propose that today’s leaders attempt to maintain a work/life balance, identifying weak spots, ready to identify any obstacles to fitness that can be removed. Exercise physiology studies corroborate this notion showing that when leaders integrate exercise into their lives in some manner, there is a positive impact on leadership performance (Goldsby and Neck, 2001; McDowell-Larsen, 2003). As Goldsby and Neck contend, the preferred approach for achieving wellness via physical exercise is through a mental framework that embodies the benefits of challenging work. When leaders embrace their physical health as much as they do their financial and career health, most of them achieve conditions leading to exceptional physical fitness. This implies that as people pursue the physical benefits of fitness, they are likely to incorporate the skills of effective leadership, such as goal achievement, follow-through and accountability.

Socio-emotional dimension
Researchers have regarded emotions and emotional control as related to leadership effectiveness since Eichler (1934) reported a correlation between leadership and emotional self-control, followed by Drake (1944) who discovered a significant correlation between leadership and emotional constancy.

The study of the socio-emotional dimension, including emotional intelligence (EI), and how it relates to the overall effectiveness of a leader has become a captivating topic in the broader field of management (Rosete and Ciarrochi, 2005). In a study by Mavroveli et al. (2009), the researchers came to the conclusion that the construct of trait EI is largely independent of cognitive ability, but strongly predictive of emotional and social criteria. According to Petrides (2011), trait EI theory maintains that certain emotion profiles will be advantageous in some contexts, but not in others. More recently, research into the link between EI and leadership effectiveness has become narrower in focus with researchers starting to examine the different EI dimensions for leadership criteria. Walter et al. (2011) provided a review of empirical studies and framed the differing views about the relevance of EI. They concluded that even though the scholarly literature does not support hyperbolic claims regarding EI’s relevance for leadership processes, evidence does suggest that EI has potential to help scholars better understand leadership emergence, specific leadership behaviors and leader effectiveness.

Spiritual dimension
There is a flourishing interest in spirituality in the leadership and organizational literature, but as Markow and Klenke (2005) point out, there is no widely accepted definition of the term. In a review of 140 articles on workplace spirituality and how spirituality supports organizational performance, Karakas (2010) found more than 70 definitions of spirituality at work. For example, spirituality has been defined by Mitroff and Denton (1999) as the basic feeling of being connected with one’s complete self, while Guillory (2000) asserted that spirituality is simply our inner consciousness. In his meta-analysis review, Karakas synthesized the literature and discussed how it offered three different perspectives on how spirituality benefits employees: spirituality enhances employees’ overall well-being and quality of life; spirituality provides employees a sense of meaning and purpose at work; and spirituality provides employees a sense of interconnectedness and community. He proposes
that the interchange between these three perspectives can provide a more inclusive understanding of how spirituality leads to effectiveness and better performance in organizations. Moreover, spirituality in this study followed this Karakas perspective, particularly as it aligned with the assertion that spirituality is feeling coherently united with one's whole self.

**Mental dimension**

For some time researchers have been investigating the effects of long-term cognitive stimulation in maintaining the mental prowess in adults of all ages (Masunaga and Horn, 2001; Meinz, 2000; Meinz and Salthouse, 1998). This type of research highlights the importance of the mental dimension in leadership fitness. Further, it exemplifies the justification to examine comparisons amongst highly experienced or expert individuals (i.e. leaders) related to the effects of a lifetime spent in committed quest of cognitive stimulation. Sadly, the study of the effects of cognitive stimulation provides little evidence of the impact on total mental skills, referred to as the transfer of cognitive functioning. Leadership research, therefore, has so far provided little basis for concluding that general cognitive stimulation will have broad effects across many different types of cognitive traits. This study sought to address this deficit by examining cognitive performance as part of the mental dimension in leadership fitness with a leadership development intervention designed specifically to encourage participants to enhance overall cognitive stimulation. The intervention advocates cognitive stimulation in a manner occurring over a much longer period of time, sustained for continuous maintenance and improvement in cognitive skills with potential effects generalizing out to overall leadership fitness.

**Research model and hypotheses**

Based on the literature, this study undertook the following research questions:

**RQ1.** In a period of constraints and disruptive changes in the academy, could leadership development in a higher education institution impact leadership effectiveness?

Further, the study examined if and how enhanced leadership effectiveness could address and mitigate such constraints and challenges within a culture change process. With this framework the study postulated the following hypotheses:

**H1.** The leadership development intervention will have an effect on the dependent variable of leadership effectiveness.

**H2.** Enhanced leadership effectiveness will be instrumental in a culture change process to foster teamwork and innovation for organizational goal achievement.

Figure 1 summarizes the relationship between the independent variable of leadership development and the dependent variable of leadership effectiveness, with four dimensions of leadership fitness (physical dimension, socio-emotional dimension, spiritual dimension and mental dimension) as a set of control variables. Specifically, leadership development acts as an intervention on leadership effectiveness, and as Canals (2014) pointed out, it can align a leader’s skills with the organization’s goals and plans to reach those goals. The control factor of leadership fitness in the study was a composition of the four variables of physical, emotional, spiritual and intellectual dimensions of a leader. The study looked at leadership fitness to understand if and how these characteristics influenced a leader’s disposition in the leadership development intervention. How the independent variable, dependent variable and control variables were operationalized are discussed in detail in the methodology section immediately below.
Phase 1 Experimental field study – methodology

Sample

The president, provost and cabinet vice presidents of the higher education institution sponsoring this research cooperated in the screening and selection of the members of an initial pool of more than 50 eligible supervisors for participation in the study. The chief responsibilities of supervisors in the institution include a wide range of academic and administrative duties. To fulfill these areas of responsibility, the supervisors must hire, train and supervise direct report staff that work both in a large central facility and a geographically diverse number of remote locations. Participants from this pool were then randomly assigned to the experimental and control groups. Code numbers were assigned to each participant to enable tracking of activities and measurements, and to maintain confidentiality.

Measures

All of the variables representing the dependent and control variables were operationalized utilizing previously validated and reliable measures. The dependent variable of leadership effectiveness was operationalized by having the Benchmark 360 instrument electronically completed by employees who report to the participant, are colleagues with the participant and are the supervisor for the participant. These Benchmark 360 assessments were completed immediately before the leadership development intervention, and one year after the leadership development intervention. The control variables were operationalized asking participants to complete a nursing faculty hands on assessment of physical health, the Trait Emotional Intelligence Questionnaire, the Shipley-2 IQ instrument and the Assessment of Spirituality and Religious Sentiments (ASPIRES) instrument. These control variables measures were completed immediately before the leadership development intervention and one year after the leadership development intervention. The key independent variable in this study was the leadership development intervention. Each variable is discussed in greater detail below.

Leadership development intervention

As part of the research process, this study employed an experimental design whereby a randomly selected group of supervisors was exposed to a leadership development intervention. A control group of randomly selected supervisors was not exposed to the intervention. The leadership development intervention ensured that the procedures were applied consistently and uniformly across participants, and that the intervention facilitators conformed to the norms and procedures related to the developer’s training program, consistent with their established professional standards in the industry.

The intervention was comprised of a two-step leadership development engagement, and was delivered as follows: an initial phase of a two-day face-to-face session with the experimental group; and a second phase involving follow-up e-mail contacts to experimental group participants for a voluntary one-hour monthly review sessions during the test period. The purpose of these follow-up contacts was to review progress and cement in the learned behavior adopted in the initial face-to-face leadership development two-day session. Data collection was organized as a pre and post-test mechanism. Moreover, no other type of leadership development process took place at the university other than the intervention in the study during the test period for the study.

The actual framework of the intervention was the two-day delivery of the FC 7 Habits of Highly Effective People Signature program. Only FC certified facilitators and FC copyrighted 7 Habits materials and technology components were utilized in this effort. The follow-up monthly review sessions also comprised only of FC certified facilitators and FC materials. While there are many case studies on the 7 Habits technology and its impact on
divergent organizational types, this research project is likely the first empirical experimental
design to study the effects of the 7 Habits program. An agreement with the manufacturer
was executed prior to the study launch, and neither the institution sponsoring the study, nor
the researchers, received any monetary benefit as a result of the research.

Control variables
Related to the physical dimension of leadership fitness, nursing faculty members at the host
institution were consulted for measures that were based on best practices, and which could
be collected from experimental study participants. The following four data points were
used: blood pressure; pulse; pulse oxygen saturation; and body mass index (BMI). The pulse
oxygen saturation measures the amount of oxygen that is bound to hemoglobin molecules,
and the BMI is based on a website calculator provided by the Centers for Disease Control
and Prevention in Atlanta, GA.

The Trait Emotional Intelligence Questionnaire (TEIQue) was chosen to operationalize the
Trait EI construct related to the socio-emotional dimension in leadership fitness. Petrides
(2011) suggests that the TEIQue is preferred over other EI questionnaires for three reasons:
first, it offers a direct route to the underlying theory of trait EI; second, it provides
comprehensive coverage of the trait EI sampling domain; and third, it has greater predictive
validity. The TEIQue short form was used in the present study, and is based on the full form.
The 30-item questionnaire includes two items from each of the 15 facets of the TEIQue.

In the study, the ASPIRES was adopted and administered to participants to examine the
spiritual dimension of leadership fitness and its relationship as a control variable to
leadership effectiveness. The ASPIRES was developed by Ralph Piedmont as a
nondenominational measure that is relevant for working with individuals across a wide
range of faith traditions, as well as appropriate for use with non-religious or agnostic
persons (Piedmont, 2012). The ASPIRES measures two different aspects of spirituality,
religious sentiments and spiritual transcendence (ST). Bartlett et al. (2003) employed the ST
scales with chronic arthritis sufferers. They found that the total ST score was a significant
predictor of positive affect and general health (as measured by the SF-36), even after
controlling for age, disease activity, physical function, and depressive symptoms. Overall,
the developing literature on the ASPIRES scales shows them to be useful predictive
constructs across diverse populations, and as a robust predictor of psychosocial outcomes
related to psychological growth, well-being, and coping ability.

The Shipley-2 (Shipley et al., 2009) was the instrument of choice for the study and is a
brief, group-administered measure of cognitive functioning. The test has been standardized
for use with individuals ranging from 7 to 89 years of age. The Shipley-2 provides a measure
of crystallized cognitive ability gained through formal education and life experience, as well
as a measure of fluid cognitive ability, or the capacity to apply logic and solve problems and
learn. Scores from these two subtests are combined to create a composite intelligence score.
Further, Shipley et al. (2009) assessed the reliability and validity of the Shipley-2 by
examining a normative sample comprised of 2,826 subjects. The test demonstrated good to
excellent internal consistency reliability and related to evidence of its validity, the Shipley-2
has been found to discriminate between individuals with and without cognitive deficiencies.

Procedure
Participants in the initial experiment to test a leadership development intervention on
leadership effectiveness were public university supervisors who agreed to voluntarily
participate in the research. The purpose of the research was explained in writing to the
participants as part of an e-mail to all prospective participants, who were free to withdraw at
any time without penalty. A listing of 52 supervisors as potential candidates for the
study was provided by the university’s human resources department to the research team.
Four candidates dropped from the list due to various work or personal conflicts, bringing the total to 48. Participants were randomly assigned to the control group or the experimental group. Members of the experimental group participated in the full two day face-to-face group coaching session, as well as the follow-up e-mail and face-to-face review contacts. Control group participants were not exposed to the intervention or follow up contacts until after the study was completed. Both the experimental group \((n = 21)\) and control group \((n = 27)\) of supervisors were measured on all of the variables immediately prior to the leadership development intervention, and again approximately eight months later to determine any pre-test/post-test differences. Demographic information was also collected from each participant, and confidentiality was maintained throughout the data collection through the use of a coding system. Completion of the test data collection took the participants approximately 30 min in both the pre and post-test sessions. Once all data were received, analyses were conducted.

Phase 1 Experimental field study – results

Unfortunately, records for 13 (62 percent) of the 21 participants in the training intervention treatment group were incomplete, primarily due to departure from the University, or failure to complete the 360 Degree Assessment after the intervention. Records for 16 (59 percent) of the 27 participants in the control group were also incomplete. Dropping the participants with incomplete records resulted in a final sample size of eight for the treatment group and 11 for the control group. Despite the small sample sizes, the results strongly supported the \(H1\) proposition that leadership effectiveness was significantly improved through the 7 Habits leadership development training intervention.

Between groups \(t\)-test results

Because of the culminating small sample set, independent-samples \(t\)-tests (equal variance not assumed) were conducted to evaluate the hypotheses that the control group and the treatment group mean scores on the scales used to evaluate physical health, EI, spirituality, intelligence and leadership effectiveness (Covey 360) could have been different before the training. Differences between groups before the training were all non-significant at both the 95 and 90 percent confidence levels in all cases (Table I), indicating that the treatment and control groups were equivalent to each other in regards to all measured traits prior to the treatment group receiving the training.

Independent-samples \(t\)-test (equal variance not assumed) of posttest scores for leadership effectiveness (Covey 360) was significant, \(t\) (15) = 2.25, \(p = 0.04\), which was consistent with the research \(H1\) hypothesis (Table II). The treatment group \((M = 91.5, SD = 3.34)\) scored higher on average than did the control group \((M = 86.0, SD = 7.09)\). The 95% confidence interval for the difference in means was 0.30 to 10.70. The standardized effect size index \(d\) was 1.02, and the \(\eta^2\) index \((\eta^2)\) indicated that 23 percent of the variance of the leadership effectiveness score was accounted for by whether the participant was in the treatment, or the control group.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Mean difference</th>
<th>SE difference</th>
<th>(t)</th>
<th>df</th>
<th>(p)</th>
</tr>
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<tbody>
<tr>
<td>BMI</td>
<td>-0.075</td>
<td>3.152</td>
<td>-0.024</td>
<td>13.7</td>
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<td>Emotional IQ</td>
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<td>8.370</td>
<td>-0.388</td>
<td>9.5</td>
<td>0.706</td>
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<tr>
<td>Spirituality</td>
<td>7.27</td>
<td>4.789</td>
<td>1.519</td>
<td>16.5</td>
<td>0.148</td>
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<tr>
<td>Shipley score</td>
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<td>4.606</td>
<td>-0.118</td>
<td>8.9</td>
<td>0.908</td>
</tr>
<tr>
<td>Covey 360</td>
<td>-0.14</td>
<td>2.286</td>
<td>-0.060</td>
<td>16.8</td>
<td>0.953</td>
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</table>

Table I. Between group scores pretest (treatment – control)
The results of the experiment (Figure 2) indicated that the research H1, whereby a leadership development intervention (7 Habits training process) would impact leadership effectiveness (measured by a 360 instrument), was strongly supported. The treatment and control groups were similar on all measures at the beginning of the experiment, and the control group’s mean scores were the same at the end of the experiment as they were at the beginning. The mean scores of the treatment group on the leadership effectiveness scale, however, were higher after the training, and also were significantly higher than were those of the control group that did not receive the training during the study.

Further, the results indicated that the treatment and control participants’ leadership fitness dimensions were stable throughout the study. Consequently, it appears that there were no control variable effects related to leadership fitness and how the treatment intervention impacted leadership effectiveness.

Phase 2 culture change process
The business school faculty and staff at the host university developed and voted into its bylaws a value statement that included seven (7) values. These values included integrity,

<table>
<thead>
<tr>
<th>Scale</th>
<th>Mean difference</th>
<th>SE difference</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
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<tr>
<td>BMI</td>
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<td>−0.287</td>
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<td>Emotional IQ</td>
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<td>Spirituality</td>
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<td>Shipley score</td>
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<td>0.247</td>
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<tr>
<td>Covey 360</td>
<td>5.50</td>
<td>2.441</td>
<td>2.254</td>
<td>15</td>
<td>0.04**</td>
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Note: **Significant at 95 percent confidence level

Table II.
Between group scores posttest (treatment – control)
accountability, respect, communication, win-win thinking, teamwork and growth. With positive feedback from the leadership development participants, and the empirical data from the Phase 1 experimental field study indicating the training had positively impacted leadership effectiveness, the Phase 2 culture change process was officially launched. Specifically, the faculty and staff discussed and voted in a strategy to operationalize the business school’s value statement with the leadership development intervention on a regular and consistent basis. This included the following activities: every faculty member and staff in the business school completed the 7 Habits of highly effective people training; every freshman received 7 Habits training in their introduction to college life credit course; every MBA student received 7 Habits training in their on campus residency; 7 Values and 7 Habits banners and wall displays were deployed to inhabit every hallway, every classroom and every bathroom in the business school building; and faculty-staff meetings and courses for students were infused with 7 Habits language and techniques to cement in learning opportunities and to encourage faculty, staff and students to embrace the seven values of the business school. The focus of these efforts was to instill a culture of collaboration (teamwork) and creative cooperation (innovation). In essence everyone was encouraged to see themselves as a leader and understand that their voice counted, and that they could make an important, creative impact on their situation and the situation of others. The results of this culture change process that emerged year over year is discussed below.

Phase 2 culture change process – results

The results of the culture change process indicated that the research $H2$, whereby an increase in leadership effectiveness would be an instrumental framework to foster teamwork and innovation for sustained organizational goal achievement was strongly supported. For example, beginning in 2012, two years into the culture change process, enrollment in both undergraduate and graduate programs began to increase. The increases in enrollment continued year over year during the five years covered within this research study. These enrollment gains are distinctive as the preponderance of business schools in the USA were experiencing enrollment declines year over year during this same period of time. Such enrollment declines in business schools began at the outset of the 2007/2008 great recession and were unrelenting through 2016. Table III depicts the enrollment gains in the host business school.

Table IV shows the gains in student retention and student placement. Student placement is defined as graduating seniors who have secured a job in their field, or been accepted into the graduate program of their choice within 90 days post commencement.

<table>
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<tr>
<th>Table III. Enrollment gains</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
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<tbody>
<tr>
<td>Undergraduate</td>
<td>592</td>
<td>497</td>
<td>498</td>
<td>546</td>
<td>577</td>
<td>591</td>
<td>595</td>
</tr>
<tr>
<td>MBA</td>
<td>11</td>
<td>15</td>
<td>18</td>
<td>26</td>
<td>37</td>
<td>41</td>
<td>43</td>
</tr>
</tbody>
</table>

Note: *Enrolled students at residency

<table>
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<tr>
<th>Table IV. Retention gains and placement gains</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retention* (%)</td>
<td>55.1</td>
<td>58.2</td>
<td>64.4</td>
<td>66.5</td>
<td>68.9</td>
<td>70.2</td>
<td>71.3</td>
</tr>
<tr>
<td>Placement* (%)</td>
<td>74.5</td>
<td>78.4</td>
<td>79.1</td>
<td>80.7</td>
<td>81.6</td>
<td>82.3</td>
<td>85.0</td>
</tr>
</tbody>
</table>

Notes: *Four year retention rate; *job in their field or acceptance in a graduate program within 90 days post commencement
In terms of teamwork and innovation, the faculty in the host business school initiated a combination curriculum/marketing research project during the culture change process. The research lasted approximately one year, and it led to a vote by the faculty to put two long standing academic programs into storage, and design and stand up two distinctive, market driven academic programs. The new academic offerings included a cyber-security curriculum, which was the first in the State of Virginia and one of the first such academic curriculums in the USA. With this innovative offering the host business school established a beachhead for enrollment gains and reputation in the field. The second academic program involved logistics and supply chain management, and this new offering saw enrollment gains climb briskly from a start-up of zero students to 95 students in five years.

The host business school is an academic college in the third oldest public university in the State of Virginia, USA. During the culture change process the business school stood up the first academic research centers in the university’s storied history. The Cyber Security Center was one of the first recognized as a Center of Excellence in Digital Forensics by the USA Department of Defense. This center has been perpetually funded by the state since its inception.

During the culture change process, the host business school also initiated and led on the formation of a multi-public university logistics research center in the State of Virginia. The state has perpetually funded this research center with all four public university members provided budgets that fund faculty positions, research efforts and curriculum development in this high demand field.

Also during the culture change process, the host business school led the other academic colleges in the host university on the research and development of an interdisciplinary new academic offering in Environmental Science that resides in the College of Arts and Sciences. In addition, this effort led to the establishment of a new Center for Environmental Science with a virtual lab and educational retreat center at an off campus Chesapeake Bay tributary site. Enrollment and reputational gains for the university as a whole demonstrate the business school’s commitment to be part of a campus-wide collaboration related to innovative initiatives.

Another key result is that the host business school had never previously been recognized in any national or international academic ranking list. During the culture change process, the host business school saw four continuous years of having its online hybrid MBA ranked in the US News and World Report Top 100 MBA list. Similarly, the real estate faculty in the host business school also emerged during the culture change process as a recognized top international research faculty for their intellectual contributions to the field. This faculty research team was last ranked by the Journal of Real Estate Literature at number 14 in the world in real estate research. This ranking is based on the number of articles published in the top three peer-reviewed real estate journals in the field.

Limitations and future research
One of the main limitations of the phase 1 experimental study was the small sample. However, while a larger sample size could be expected to support the main hypothesis even more strongly, especially in light of the very large values for the effect size indices, results of using the training in small group settings might be expected to be highly sensitive to the group’s members’ characteristics. This is the results that were experienced in this study. In addition, this study could be replicated using other interventions, and even other measures for leadership effectiveness to check for an artifact resulting from the treatment and measurement scale coming from a similar source. Finally, the field of leadership, both in higher education and business organizations, would stand to gain important knowledge with future empirical studies examining the interplay amongst the constructs of leadership fitness, leadership development and leadership effectiveness. These three constructs form a
higher level chicken and the egg question. Which comes first, or rather which one restricts or enhances the others? While this study was unable to provide a clear understanding if, and how such interplay operates, competitive advantage will go to the organizations that figure this out.

A useful follow-up study to this one would incorporate a longitudinal design that follows a greater volume sample set of higher education institutions who systematically invest in annual leadership development as a foundation for culture change processes. Data to be examined would still include the impact of leadership development on leadership effectiveness, but also look at institutional outcomes over a longer timeframe. It is wise to note that higher education institutions have significantly different cultures and processes than corporations, governments and other non-profit organizations. Consequently, it is logical to think that higher education needs different measures to understand effectiveness in leadership and culture change. However, there are similarities that may have been lurking perhaps just outside of our awareness that could be useful in future research. While business focuses on revenue, the college equivalency is a focus on enrollment which is often a major financial driver. Similarly, business strives for customer satisfaction which is considered an antecedent to revenue, and colleges strive for student success and retention that correlates with the college’s revenue. In a future research project, in addition to enrollment and retention gains, the question needs to be asked, are institutions experiencing gains in fund raising and other culture indices like students’ satisfaction with their undergraduate and graduate experience? Even in this analysis a greater balance between quantitative and qualitative in-depth measures related to the leader participants, like participant identity via an academic freedom lens, could enhance the understanding of the results of a culture change. Future research could also investigate the other long term effects of innovation in program offerings and basic education costs, particularly as they induce cost reduction for students, therefore mitigating the burden of student debt. Overall, a longitudinal study could begin to compare long term outcomes between institutions that do and do not invest in annual leadership development as part of a culture change process.

Discussion
The findings in this two-phase research project highlighted the fact that business schools around the world are at a crossroads. Gone are the days when business schools could be all things to all students. In this study the leadership development intervention enhanced the leadership skills of the participants who are administrators in the host institution and who then facilitated a culture change process that emboldened the host business school to try a different approach on a macro level related to continuous improvement. In this effort a couple highly distinctive academic offerings with an emphasis on a higher quality student experience emerged that could, and did, create a differentiating set of results from the rest of the business school pack. It should be noted that higher education organizational cultures, particularly with their shared governance and academic freedom, move through organizational change processes in very different ways compared to non-academic organizations. In this light, the leadership development intervention was framed in the study to preserve academic freedom and decision making related to curriculum. For example, the 7 Habits technology was utilized to encourage the gathering and discussing of varied perspectives from faculty across disciplines. As the body of the faculty and staff as a whole experienced the advantages of multiple voices sharing information without bias or judgment, a synergistic effect materialized in a higher volume of creative options being put on the table for consideration. Once the new academic offerings from this collaboration were stood up and began to positively impact enrollment for the college as a whole, a positive energy emanated and kindled a desire to tackle other stony issues, like budgets and funding. New centers were envisioned, stood up and funding secured perpetually for these academic priorities. In a success begets success
fashion, collaboration between the business school faculty and faculty in the different colleges at the host university began to emerge. A new academic offering and research center with funding resulted, and was hosted in one of the other academic colleges, demonstrating culture change influence across campus. While not completely new, this was a distinctive type of collaboration that has been experienced more regularly since the culture change process began. Universities everywhere could benefit from a similar culture change process model that utilizes leadership development as a catalyst for teamwork and innovation. An important objective is to replace the typical silos that create bottlenecks in the academy, and ignite the interdisciplinary collaboration that can breathe life into innovative high demand academic offerings. One of the 7 Habits of Highly Effective People is Think Win-Win. At universities, this signals the long standing slogan [...] a rising tide raises all boats. If it is beneficial for any functional unit at the university, it will ultimately be beneficial for all the functional units at the university.

Conclusion
As an experimental field study, our research validated the usefulness of a model of leadership development to enhance leadership effectiveness. The host organization for this study was a business school at a public institution of higher education, and higher education continues to experience its own version of disruption and critical challenges. With ongoing, rapid changes that are both political and economic, organizational leaders in higher education need every lever they can pull to lead effectively. This study demonstrated that an investment in leadership development as part of a culture change process for teamwork and innovation remains a viable tool in their tool chest to survive and thrive. For example, when the culture change in the host business school brought progress on a number of important measures like enrollment, retention student placement, and desperately needed funding, the faculty and staff in the business school reached out to colleagues across campus. More such progress unfolded, and then the host business school faculty and staff proactively connected with colleagues at universities across the state for even more progress on these important measures. Higher education is under fire, and as a first step in a process of strategic improvement, leadership development can be a call to rescue.

References


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Corresponding author
Paul Barrett can be contacted at: barrettpt@longwood.edu