Leadership in Design and Construction Education and Practice

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Doctor of Management in
Strategic Leadership

Leadership in Design
and Construction
Education and Practice

August 2016

Prepared for:

COLLEGE OF
ARCHITECTURE
AND THE BUILT
ENVIRONMENT

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EXECUTIVE SUMMARY

It has been conveyed that inspiration and creativity are the greatest strengths of architects. Those who possess them often demonstrate innovation and ability to transform diverse, often contradictory, information into a cohesive design. Yet, having architectural and design talent may suggest to some that they also have a broader skill set. Among the competencies that do not necessarily co-exist with inspiration and creativity are those associated with managing or leading a complex project or organization.

Leadership and many of the administrative and project management competencies needed to operate in the modern complex environment of the Architecture profession are largely absent from educational programs which specialize in producing architects and designers. Therefore, if architects must possess both talent and leadership competencies, what is to be done to support the growth, development and sustainability of the profession?

This challenge was presented to the College of Architecture and the Built Environment (CABE) by their Advancement Council, a community of working professionals who offered advice and support to the College. Specifically, CABE was asked to find a way to add to their academic curriculum new and appropriate education that would prepare their graduates for the leadership and management responsibilities which existed and were increasing within the professional environment of architecture and design. The premise of this challenge was that the current curriculum failed to adequately prepare students with the confidence and competence needed to be successful.

In response to this, the approach taken by the Doctor of Management in Strategic Leadership (DSL) Team in this phase of our project was to focus on identifying the characteristics within the architecture industry/professional that people should possess in terms of competencies, i.e., knowledge and skills that could be learned/developed, and in terms of traits that could be identified and supported in order to emerge as a “true leader.” Using participant interview methods from established professionals in the industry, we identified leadership themes that impact emergent behavior for CABE graduates.

At the time of this project, Philadelphia University was beginning the process of integrating with Thomas Jefferson University.
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FOREWORD

In Fall 2015, Dr. Larry Starr and Dr. John Pourdehnad from the Doctor of Management in Strategic Leadership (DSL) Program in the School of Continuing and Professional Studies (SCPS) engaged with Executive Dean Barbara Klinkhammer and Professor Kimberlee Douglas from the College of Architecture and the Built Environment (CABE) to discuss opportunities for CABE to partner with DSL in order to explore how a CABE leadership education curriculum could be introduced and developed, and what the components might look like. An agreement was made to move forward with a general process which began with a workshop on October 23, 2015 and subsequently led to the creation of the DSL CABE consulting team.

The mission of DSL is to develop strategic leaders who effectively navigate global contexts and environments by creatively integrating and bridging interdisciplinary knowledge and practice from academia and the workplace. The mission of CABE is to educate the next generation of design and construction professionals to create an equitable and sustainable future.

CABE is committed to professional education that produces civic minded, ethical, well rounded leaders in the architecture profession. The ability to work in and lead teams toward defined and shared purposes is essential in today’s job market. Using the University’s Nexus Learning approach as its foundation, leadership education is suggested for CABE students to familiarize themselves with fundamental leadership concepts and to learn how this translates into real world applications.
ABOUT THIS REPORT

This is a working document. The design described here is very tentative and subject to change. No part of it will be finalized until the whole is.

Suggested additions, deletions, or modifications are solicited from all who read this report. Those involved in the design process will consider the inputs received for incorporation into the next version of the design.

Regarding the workshop that was conducted on October 23, 2015, we present a summary that is not a literal transcription of what transpired. It is based on recollections of the facilitators augmented by their notes. They may very well have misinterpreted the will of the group. Nevertheless, this report is written in a positive mode in order to stimulate comments. Even where there was no resolution of differences among the designers, we have chosen to be fairly positive because we believe it will stimulate reactions and subsequent discussion. We are confident that any misinterpretations will be subject to scrutiny and correction; they are not likely to sneak through.
Systems and design thinking is a framework and a methodology that is simultaneously iterative, divergent, integrative, and visual. By utilizing sketches and diagrams, we present the interconnected relationships that might better inform our design and help us craft an optimistic narrative for future planning. Figure 1 presents a systems view of CABE and its stakeholders.
Systems thinking “focuses on the whole, not the parts, of a complex system. It concentrates on the interfaces and the boundaries of components, on their connections and arrangement, on the potential for holistic systems to achieve results that are greater than the sum of the parts (Kotelnikov).” “Systems thinking is a discipline for seeing wholes. It is a framework for seeing interrelationships rather than things, for seeing patterns of change rather than static snapshots (Senge).” Figure 2 presents a systems view of the CABE community in its environment.

**FIGURE 2 - SYSTEMS THINKING FOCUS**
DEFINITIONS

Language and Meaning

Administrator, Manager and Leader: An administrator is one who directs others in the pursuit of ends by the use of means, both of which are determined by a third party. A manager is one who directs others in the pursuit of ends by the use of means that he or she selects. A leader is one who induces and guides others in the voluntary pursuit of ends by the use of means that they, the followers, select or approve of if another chooses them.

Strategic Leadership: Strategic leadership manifests in individuals as the capacity to anticipate, envision, maintain flexibility, and empower others to voluntarily make effective decisions and to create strategic change as necessary.

Competency: From a systems thinking perspective, competency is considered a property of the individual that emerges from the interaction of knowledge, understanding, skills, cognitive ability and the experience. As is often the case in business, the word competency is used to describe a measurable behavior/ability and technical skill/attitude linked to success in the workplace.

Curriculum: Curriculum refers to the subjects covering a course of study or a planned sequence of instruction supported by distinct learning objectives for the purpose of achieving a learning outcome.

Active Learning: This is a process whereby learners engage in activities, such as reading, writing, discussion, or problem solving that promote analysis, synthesis, and evaluation of presented content.

Action Learning: This is a process that involves a small group working on real problems, taking action, and learning as individuals, as a team, and as an organization. It is accomplished within an organization and helps organizations develop creative, flexible and successful strategies to pressing problems.

Executive Education: A specialized program that provides opportunities for executives or emerging executives to develop new competencies such as skill or knowledge.
METHODOLOGIES AND TOOLS

**Systems Thinking:** We framed, i.e., applied a mindset, to this consulting project using systems thinking. Systems thinking is a way of thinking that requires seeing situations and information as a whole (or holistically) including the many different types of relationships between the many elements in a complex system. “Systems thinking is a sensibility...for the subtle interconnectedness that gives living systems their unique character (Kotelnikov).”

**Process Consulting:** This is the approach used by the DSL Team wherein consultants act as facilitators of the processes of a client in a meeting or in general consulting activities rather than taking the role of directors of the actual tasks. It is emphasized that process consultation is a kind of philosophy about and attitude toward the process of helping individuals, groups, and organizations...interested in organizational development (cf., Schein).

**Idealized Design:** This is an innovative problem solving and opportunity discovery design process that uses mental models and visual thinking to explore potential possibilities for how the future will look. It is an approach designed specifically to generate meaningful engagement, ideas, and insights in order to see multiple potentials for improvement. “One way of characterizing this approach is integrative thinking” (c.f., Kolo).

**Interviewing:** To gather additional insight from stakeholders, the DSL team formulated five survey questions regarding perceived competencies that might demonstrate leadership in the field of architecture. A qualitative analysis of the data is offered as a springboard to further research and possible praxis-oriented curriculum development.
SYNTHESIZING DATA INTO INFORMATION AND KNOWLEDGE

As process consultants for CABE, the DSL Team explored the data and information collected from the idealized design workshop held October 23, 2015. We organized the information to identify trends and emergent topics. To help focus the results and lead to recommendations, we identified frequently used terms which were important to the participants. The following specific processes were applied:

1. **Quantify the qualitative results** - This was accomplished by putting the text of the results into Wordle (www.wordle.com) which identifies the words that were often repeated (see Figure 3).

2. **Count the root words** – The words that were used most often appear larger in Wordle and these were counted in the text program. Microsoft Word and Excel have a search function that counts the number of times a string of text is used. This translates terms into quantifiable numbers.

3. **Make Affinity Groups** – We brought together terms that are similar. For instance, the term “teach” is interchangeable with the term “train.” These were be added together.

4. **Use Pareto charting** – A Pareto chart is a bar chart comparing the frequency a term or word, or an affinity group topic has been repeated. This step allowed for trends as well as unique aspects to be identified.

Once these steps were completed, we were able to compare and contrast results from the idealized design workshop and from the interviews (see next section of this report). Trends and unique aspects in results were able to be made clear. By creating this information, the recommendations could be linked to the input, and the results could be presented in the voice of the client allowing for ownership and trust.

The various research methods – interview, survey, idealized design session, and literature review - were all put through Wordle and for each a Pareto chart was made. We then applied a compare and contrast methodology to identify meaningful components identified. The topics that were repeated throughout were considered “trending” topics or best practices.

Results suggested that the idealized design session, the surveys, the interviews, and the literature review offered many of the same topics. Conversely, some items were not often repeated and could be considered unique topics. These became important because these may be distinguishing factors of the proposed program. Tying these trending topics together with the unique aspects of the program gave us the basis for the recommendations.
The research comparison chart (Figure 3) links the results used for the needed synthesis. The “trending” topics or best practices from the various methods (e.g., idealized design, survey, interview, and literature review) are compared with the “unique” topics although in this summary we mention only a few. We show in Figure 3 the tally of the topics from a Pareto chart and using a polynomial trend line, we determined the “trending” versus “unique” topics.
After identifying the trending versus unique topics, we were able to create in TABLE 1 showing the various topics.

### TABLE 1 - RESEARCH COMPARISON CHART

<table>
<thead>
<tr>
<th>Trend</th>
<th>Idealized Design</th>
<th>Literature Review</th>
<th>Interviews/ Surveys</th>
</tr>
</thead>
<tbody>
<tr>
<td>lead</td>
<td>Leadership</td>
<td>architect</td>
<td>leadership</td>
</tr>
<tr>
<td>ability</td>
<td>Skill</td>
<td>understand</td>
<td>ability</td>
</tr>
<tr>
<td>committed</td>
<td>Think/er</td>
<td>business/firm</td>
<td>work</td>
</tr>
<tr>
<td>skill</td>
<td>Ability</td>
<td>manage</td>
<td>strategy</td>
</tr>
<tr>
<td>relate</td>
<td>Balance</td>
<td>work</td>
<td>people</td>
</tr>
<tr>
<td>personal</td>
<td>Designer</td>
<td>learn</td>
<td>team</td>
</tr>
<tr>
<td>culture</td>
<td>Strategic</td>
<td>program</td>
<td>firms</td>
</tr>
<tr>
<td>recognize</td>
<td>Ideas</td>
<td>development</td>
<td>software</td>
</tr>
<tr>
<td>real</td>
<td>Motivator</td>
<td>organize</td>
<td>communicate</td>
</tr>
<tr>
<td>work</td>
<td>Project</td>
<td>achieve</td>
<td>know</td>
</tr>
<tr>
<td>style</td>
<td>Understood/ing</td>
<td>executive</td>
<td>answer</td>
</tr>
<tr>
<td>effective</td>
<td>Listener</td>
<td>know/fledge</td>
<td>good</td>
</tr>
<tr>
<td>impact</td>
<td>course/class</td>
<td>mode</td>
<td>architect</td>
</tr>
<tr>
<td>decision-making</td>
<td>experience</td>
<td>student</td>
<td>learn</td>
</tr>
<tr>
<td>general</td>
<td>research</td>
<td>innovation</td>
<td>together</td>
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<td>plan</td>
<td>solutions</td>
<td>industry</td>
<td>internship</td>
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<td>cover</td>
<td>people</td>
<td>discuss</td>
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<td>teach</td>
<td>objectives</td>
<td>mentor</td>
<td>relate</td>
</tr>
<tr>
<td>industry/ies</td>
<td>response/ible</td>
<td>role</td>
<td>goals</td>
</tr>
<tr>
<td>thing</td>
<td>consult</td>
<td>unique</td>
<td>ethical</td>
</tr>
</tbody>
</table>

**UNIQUE COMPONENTS**

| discover | Collaborator | shadow | best | ethical |
| self-awareness | Communicator | talent | choice | problem |
| values | Empathy | want | clear | think |
| beliefs | Facilitator | aspects | community | organization |
| identity | Foresight | aspects | comprehensive | good listener |
| reflective | Inspirational | assumption | data | charge |
| critical | Management | content | define | confident |
| influence | Visionary | context | dimension | fraternity |
| think | Decisive | focus | direction | manage |
| range | Ethical | future | diverse | organize |
| motivate | Global | emerge | motivate | quality |
| job | People | job | findings | curriculum |
| perspective | Synthesize | levels | growing | good |
| accountability | Trustworthy | politics | individual | quality |
| social justice | Trustworthy | stories | intelligence | school |
| change | strength | judge | trustworthy | |
| conflict resolution | sure | matrix | expose | |
CABE Faculty Survey

On July 10, 2016 and July 24, 2016 the DSL Team sent email with a survey link to 27 CABE faculty members. The email contained the following information and request:

We are from the CABE leadership training project team. We are Process Consultation Partners from the Doctorate in Strategic Leadership program at Philadelphia University working with the CABE Leadership Training Project. We have been tasked with identifying the most effective learning experience CABE can deliver to its design students to develop the necessary leadership skills for the architecture and design industry. We have interviewed industry leaders, conducted an idealized design event, conducted best practice research, and now we would like the input from those actually delivering the training to students.

Attached is a 5 question survey. Some questions are directed towards employers; we did not change the language for you as faculty because we wanted to retain the integrity of the survey which is used for other professionals. Your responses are very important to identify the types of components that need to be added to Philadelphia University’s leadership education experiences.

Your prompt participation in this survey will allow us to present our findings and help determine the next steps in developing a learning experience for your students.

Thank you and we hope to hear from you soon.

Survey Questions

The following questions were asked:

Q1. What (qualities) do you look for in a new hire (to your design firm)?
Q2. What skills and characteristics are necessary for someone you would consider for promotion?
Q3. How did you learn leadership in your field?
Q4. Where did you learn leadership in your field?
Q5. What are the five (5) most important leadership characteristics of the leaders in your industry?

Results

Of the 27 members of the CABE faculty who received the survey, 6 opened the document and 5 responded (response rate = 19.2%). The Qualtrics survey program was used to aggregate the results. The Wordle from the survey results is presented in Figure 4 and the Pareto Chart from the survey results is presented in Figure 5. The low response rate may be due to: the timing of the survey (end of the summer session), vacation, lack of interest, perceived low value of the project, and other reasons. This small number of responses may create sample bias and representation error.

The above noted, the results suggest faculty perceptions are similar to the common themes in the leadership research. Faculty noted that leadership was related to ability, teams, and learning through experience. Organization, being a good listener and having ethical training are some unique topics mentioned.
FIGURE 4 - FACULTY SURVEY WORDLE

FIGURE 5 - FACULTY SURVEY PARETO CHART

CABE Survey

<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>leader</td>
</tr>
<tr>
<td>ability</td>
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<tr>
<td>work</td>
</tr>
<tr>
<td>skills</td>
</tr>
<tr>
<td>people</td>
</tr>
<tr>
<td>team</td>
</tr>
<tr>
<td>firms</td>
</tr>
<tr>
<td>problem</td>
</tr>
<tr>
<td>think</td>
</tr>
<tr>
<td>ethical</td>
</tr>
<tr>
<td>organization</td>
</tr>
<tr>
<td>good</td>
</tr>
<tr>
<td>listener</td>
</tr>
</tbody>
</table>
SUMMARY

The intent of this report is to examine the concept of leadership education and to make preliminary recommendations for how CABE can close the gap between the leadership needs of practicing professionals and the education available to their students.

Indeed, there are two related gaps. One is between the needs of leaders in the architecture industry to develop leadership skills among their (new) employees and the current reality of leadership in their practices. The other is between the understanding of leadership education within CABE and the understanding of this in professional practice. Our research argues that these gaps not only concern a general lack of shared and operational understanding of “leadership,” but also a lack of education by both faculty and industry leaders on how to educate and develop leadership capacities and competencies of aspiring or current architects.

For example, it would be helpful for more architects and faculty to understand the distinction between leadership and management. While the two concepts are vital and coexist within an organization, they are separate entities with a long history and with varying definitions and meanings. One consideration, for example, is that a manager confers authority on individuals whereas the influence that a leader conveys is earned. People volunteer/choose to follow a leader because of the positive influence that person has on the purposes and interests of followers; something they wish to share in and sustain.

From our preliminary evaluation, it has surfaced that “successful leaders” in the architecture profession exhibit the following:

- They communicate project and organizational values and direction by providing a clear and concise vision
- They provide an encouraging environment to allow members of the firm to learn, stay challenged, and advance in their career objectives
- They establish high standards while retaining and promoting an ethical and moral compass
- They create a climate to balance the firm’s professional, cultural and business goals

Although successful leaders in the architecture profession do not all share the same profile with respect to these characteristics, they do ensure that others in the firm clearly understand where the organization is headed (vision) and more importantly, how each member of the team can contribute to that vision and what part they actually do contribute.

As these leadership characteristics are not and seem not to have been directly taught in any known architecture programs, it begs the question: How do successful leadership develop them? The answer is not an either-or question. Some seem to have developed their capacities and performance naturally, perhaps because of genetic propensity or due to individual social learning experiences. But others, regardless of heredity, demonstrate the ability to learn/develop many elements of leadership knowledge and skill.

The next phase of this project will describe a general model that serves as a starting point for developing a lexicon, context, and mental template for the development and application of leadership education for architecture graduates to enter the profession with competency and confidence.

In anticipation of this, the following preliminary recommendations are presented as general considerations and with application examples. These will inform the next phase of this project.
The DSL Team recommends that leadership education is best served by the following outcomes which should be embedded into the current CABE experience of education including formal curricula and informal student social and practice activities:

1. Provide knowledge of critical concepts about critical thinking and synthesis thinking from a multidisciplinary perspective

2. Provide practice of the application of these skills in a context-dependent settings under the purview of a facilitator or knowledgeable leader, and

3. Create a healthy and safe environment, in which an identified leader within the architecture firm mentors, encourages and motivates value to every new employee to apply critical thinking and synthesis thinking skills to make vital decisions.

Based on the various research conducted for this engagement (idealized design, surveys, interviews, and literature review), CABE can distinguish itself as a unique community for students interested in obtaining both an excellent architecture/design degree and leadership training.

Nexus Learning: Since “Learning by Doing is part of the PhilaU DNA,” and is distinctive to PhilaU, an academic experience that connects students in an active, on-going manner with building and architectural firms could provide educational experiences that help them develop leadership competencies. The leadership training should build upon this base and extend it to the various additional leadership learning experiences suggested. Philadelphia University is known to be “innovative” with the Nexus learning at the core of this distinction. Merging with Thomas Jefferson University furthers this innovative reputation. Embedding leadership training into CABE is an expansion of the concept, placing the graduates in a more coveted position for employment and career advancement since they will be look to as the leaders in workplace innovation.

Courses/seminars: Classroom training in leadership concepts should be designed and offered focusing on three types of learning approaches: conceptual, action/experiential, and reflective. This should begin early in the student’s program to allow the development and implementation of leadership learning across many situations as their program/career advances. More than 8 types of leadership styles/models can be identified. Students can learn to identify and relate to these and to select one or more that fits their professional and personal interests. Indeed, being able to distinguish the roles and approaches taken by an administrator, manager, and leader is important foundational knowledge. When students are placed in the position to carry out leadership responsibilities, they can avoid many of the pitfalls demonstrated by those who do not know a variety of styles and the basic leadership concepts. This learning will be reinforced by the experiential training that was identified in the research as the true "leadership education.”

Leadership opportunities: Class projects, studios, seminars, and social communities and events within CABE should have where possible specific opportunities to implement the leadership skills that are described in classroom settings. Less a series of standardized topics and more a lens that becomes a way of understanding and engaging in practice, leadership will need to be part of the thinking and practice of all CABE students. Specified leadership elements can be integrated into current experiences, enabling some leadership skills to be specifically measured. The integration and leadership style development in projects and studios are best done under the guidance of a faculty/mentor in very specific learning situations which requires faculty/mentor education to ensure learning objectives are shared. Much of the research points to characteristics of a good leader that were developed through leadership experiences. It is establishing a leadership culture within CABE that will support and sustain these outcomes.

Mentorship – Jeffcoat and Grace (2007) described “Mentoring: A Natural Element of Architectural Leadership.” They suggest that a key aspect of leadership development in the design field is mentorship
and describe a step-by-step approach to developing an effective mentorship program. Miriam Grace, one of the authors, was one of the members of the program design team for DSL and may be available to help guide CABE if this approach is deemed appropriate.
APPENDICIES

APPENDIX I: PREMISE OF THE INQUIRY

CABE posed the question: What leadership capacities and competencies does architecture and design students require before they enter the profession? The question was posed in anticipation of offering a curriculum for their community that would enhance their employability and competencies at executive career management. The DSL Team took this further and designed the inquiry.

The premise of inquiry revolves around the increasing evidence that the success of organizations and the acquisition of competitive advantages are primarily dependent on increasing customer satisfaction. Greater customer satisfaction, in turn, can only be obtained by increasing one's knowledge and understanding of user and market needs and desires. Customer desires are changing rapidly and are increasingly difficult to predict. This is becoming even more difficult as a result of growth in the digital economy and globalization of the marketplace, which is ever more dynamic and complex. In such an environment, it is also increasingly difficult to predict important aspects of the future, including customer and consumer desires and needs.

Although discussion of the methodology of such research is not new, infusion of systems thinking into it is. For example, can any amount of analysis, in contrast to synthetic thinking, explain consumer behavior? By what processes can consumers discover what they want? What is the balance between 'necessity is the mother of invention' and 'invention is the father of necessity'? Dichotomizing market research into the so called 'traditional' versus 'non-traditional' does not serve the field well, since ultimately there is no one approach that provides all the 'right' answers to the emerging questions. The various social sciences and the various 'schools' within these sciences are like the proverbial blind men touching different parts of the elephant. Thus they are actually describing different 'aspects' or 'levels' of social psychological reality. Therefore, we decided to use a very different style of inquiry. We decided to design a balanced approach, employing both traditional and non-traditional market research. The aim of this study is to acquire a comprehensive knowledge and understanding of what customers and consumers (stakeholders) want, rather than merely collecting data and generating information about these desires.

Especially, we decided to use consumer idealized design (CID), a particularly attractive non-traditional way of studying consumers/stakeholders, which engages a carefully selected group of stakeholders in a creative design of an ideal offering. CID is fundamentally different from focus groups in which participants are asked to react to preconceived, already partially designed offerings. The purpose of CID is to produce a design that a relevant and representative group of stakeholders prepares and considers to be ideal. “Producers often try to find out what consumers want by asking them. This seldom yields useful information because consumers either don't know what they want or they try to provide (or avoid) answers they think are expected of them. In many cases a better way consists of using the consumer to design products or services. It is harder for a market researcher to get inside a consumer's mind than it is for a consumer to turn his mind inside out.” (Ackoff, 1986, p.4)

In particular, even when consumers are aware of what they want and are willing to reveal it, their wants are likely to be strongly influenced by what is available. And when the product or service available is basically unsatisfactory to them, they are unlikely to reveal startling new desires or concepts. The insights resulting from CID are qualitative in nature but appropriately designed quantitative research can provide valuable complementary knowledge and understanding.
APPENDIX II: IDEALIZED DESIGN

The core of this process is the preparation of an idealized design of a CABE leadership curriculum for the 21st century architecture and design professional. The idealized design is a design for the curriculum, which the stakeholders believe, would be the best replacement for the existing program. The purpose of idealized design approach is to unleash and capitalize on the creativity that resides in the stakeholders. Although inspired discoveries are often attributed to talented individuals, it is more often the case that, to deal with the complexities of interdisciplinary challenges, the team creates the solutions. The combined intellects of team members, often representing different disciplines and experiences, can create the intellectual environment in which truly new ideas emerge. The important thing is to provide the right mixes of experience and skills so that the combined knowledge and understanding of the individuals can be focused on the complex challenge. Furthermore, the opportunity to design an ideal curriculum (future) and then work toward the realization of that ideal gives the stakeholder the need or desire to act -- it motivates. A participative process enables the stakeholders collectively to define and redefine their desired system and relate their roles to the totality of the system, of which they are a part, and is the core of any effective means for realizing the full potential of a designed (sub) system (in this case the curriculum).

The idealized design began with the assumption that the current curriculum was destroyed last night but that CABE’s personnel and environment remained intact. It was emphasized that idealized design is a design of the CABE offerings (curriculum) that its stakeholders would have right now if they could have any program they wanted — without any constraints. It is noteworthy to mention that the product of such a design is not ideal or utopian because it is subject to subsequent improvement from within and without. It is called "idealized" because it is the best ideal-seeking (sub) system its designers can imagine when they prepare it. The ideal it seeks is expressed in the mission statement of CABE. The designers recognize, however, that they and others may be able to imagine a better design in the future, especially after implementing the one now being prepared. Therefore, the curriculum designed must be flexible — ready, willing, and able to change — so that it can learn, and thereby improve and adapt to changing conditions. This enables it to maintain or increase its effectiveness under changing internal or external conditions.

DESIGN METHODOLOGY APPLIED ON 23 OCTOBER 2015 (ADVANCEMENT COUNCIL MINUTES)

On 23 October 2015, a workshop was conducted on the campus of Philadelphia University to solicit input and insight from participants (CABE stakeholders) about the requisite leadership education that architecture and design students would require prior to entering the industry. Specifically, the invited participants were asked to both think about the challenge of 21st century leadership and identify specifications a leader needs to be successful in that environment. The challenge presented was to create this series of workshops using design thinking methodology, and allowing the DSL doctoral students to play an active role in the process.

Participants in the meeting (core design team) were challenged to specify the properties, e.g., roles, competencies, capacities, and skills of the people ideally they would like to hire or recommend for hire in architecture profession. The meeting was a facilitated process that generated shared knowledge and created an initial list of specifications for the ideal candidate they would like to hire today. The output of this session, i.e., the characteristics and the ideal candidate, as well as results of traditional research will become the input to the design of a curriculum — set of workshops — that will be offered to CABE stakeholders. By inviting additional participants to observe without intervention/comment, core design was able to have a dialogue at the conclusion of the session with the additional participant (observers). The dialogue generated additional characteristics and a preliminary ideal candidate design.
The session morphed into a more active discussion and generated a brainstormed list of skills, capabilities, and behaviors the core design team felt were mission-critical for senior executive success. The ideas were recorded and posted for review. While prioritization did occur, additional time would have been required to walk the participants through the entire design process. As a result, the DSL doctoral students captured the data to use in the subsequent steps of the process.
## APPENDIX III: IDEALIZED DESIGN OUTPUT

The output presented below is an unedited list. The DSL team took the raw data output from the Idealized Design session and separated the comments into 3 categories: Roles, Skills, and Characteristics.

<table>
<thead>
<tr>
<th>ROLES</th>
<th>SKILLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal Setter</td>
<td>Accountable</td>
</tr>
<tr>
<td>Listener</td>
<td>Ability to Delegate Authority</td>
</tr>
<tr>
<td>Create Other Leaders</td>
<td>Mediation</td>
</tr>
<tr>
<td>Trailblazer</td>
<td>Multitasking</td>
</tr>
<tr>
<td>Spokesperson</td>
<td>Clear Speaking Skills</td>
</tr>
<tr>
<td>Mediator</td>
<td>Organization</td>
</tr>
<tr>
<td>Fundraiser</td>
<td>Design Thinking</td>
</tr>
<tr>
<td>Conductor</td>
<td>Quick Learner</td>
</tr>
<tr>
<td>Public Relations Rep</td>
<td>Balance Independence of Leaders w/Their Responsibilities</td>
</tr>
<tr>
<td>Motivator</td>
<td>Public Speaking</td>
</tr>
<tr>
<td>Team Leader</td>
<td>Independent Thinker</td>
</tr>
<tr>
<td>Visionary</td>
<td>Futurist</td>
</tr>
<tr>
<td>Cheerleader</td>
<td>Research Skills</td>
</tr>
<tr>
<td>Problem Solver</td>
<td>Business Mindset</td>
</tr>
<tr>
<td>Decision Maker</td>
<td>Managing People</td>
</tr>
<tr>
<td>Persuader/Seller</td>
<td>Perceptive</td>
</tr>
<tr>
<td>Questioner</td>
<td>Time Management</td>
</tr>
<tr>
<td>Gyro</td>
<td>Self-Driven but Takes Direction</td>
</tr>
<tr>
<td>Servant</td>
<td>Ability to make consensus</td>
</tr>
<tr>
<td>Hacker</td>
<td>Persuasiveness</td>
</tr>
<tr>
<td>Project Manager</td>
<td>Holistic Systems Thinker</td>
</tr>
<tr>
<td>Challenger</td>
<td>Foresight, Pattern Recognition</td>
</tr>
<tr>
<td>Strategist</td>
<td>Resilience</td>
</tr>
<tr>
<td>Citizen</td>
<td>Think out of the box, Innovation</td>
</tr>
<tr>
<td>Collaborator</td>
<td>Integrity</td>
</tr>
<tr>
<td>Tolerant</td>
<td>Empowering</td>
</tr>
<tr>
<td>Communicator</td>
<td>Ability to Accept Feedback/Criticism</td>
</tr>
<tr>
<td>Risk Taker</td>
<td>Ability to access progress towards goal</td>
</tr>
</tbody>
</table>
• Captain
• Facilitator
• Coordinator
• Strategist
• Researcher
• Motivator
• Delegator
• Outside the Box Thinker
• Implementer
• Facilitator
• Barnstormer
• Synthesizer
• Assessor
• Project Leader
• Ideas Generator
• Activist
• Thoughtful Leader
• Connector (Develop Networks)
• Visionary
• Self-Support
• Sacrificial
• Monetary Awareness
• Listening
• Understanding Systems
• Empathy
• Dependable
• Multi-Faceted
• Think on your Feet
• Marketing
• Leader Emerges from Citizens
• Ability to Transition Dream to Reality
• Decisive
• Command Respect
• Technologically Proficient
• Care for others
• Handwriting
• Knowledge of Different Cultures
• Ability to Grow
• Determined to Move Forward
• Emotional Intelligence
• Prioritization
• Facilitator
• Organized Mentally Secretarially
• Social Media Awareness
• Strategic Thinker
• Forward Thinking
• Organization
• Literacy
• Be A Learner
• Communication
• Think across topics/projects
• Basic Business Skills
• Trustworthy
• Understand How to Motivate
• Flexibility/Adaptability
• Interpersonal Skills
• Motivator
• Strategize
• Discovery of another point of view
• Connect with People
• Pragmatism Balance with Creativity
• Recognize your best skills
• Acknowledge Bad Ideas
• Listen Synthesize, Broad Appeal
• Understand How to Follow
• Ability to Compromise
• Understands Options in the Profession
• Look for Opportunities
• Athletic
• Influence Through Dialogue
• Information Management Filtering
• Fluidity
• Capable of Creative Response

Characteristics
• Ethical
• Optimistic
• Trustworthy
• Inspirational
• Open Minded
• Creative
• Confidence
• Realistic/Pragmatism
• Mature/Wisdom
• Holistic Systems Thinker
• Doer
• Ability to Dive In
• Flexible
• Sounding Board/Interpreter of Ideas
• Challenge and Disrupt the Normal Processes
• Good Citizen
• Diplomatic
• Passionate
• Inclusive
• Empathic
• Organized
• Charismatic
• Contextualize
• Analytical
• Faith In...
• Seeker
• Personality (Capacity)
• Guidance
• Can Adapt to Multiple Projects
• Reliable
• Adaptable
• Proportionate to Change
• Communicator
• Authenticity
• Independence
• Political Savvy
• Resourceful
• Foresight
• Collaborator
• Focuser
• Inspirational
• Team Player
• Community Activist/Advocate
- Want to be able to have a drink with them
- Self-Aware
- Persistent
- Judgment
- Balanced Mindset
- Integrity
- Learner
- Rational
- Innovator
- Listener
- Curious
- Balanced Ego
- Multi-Taker
- Aggregator of Divergent Ideas to Forge a Path Forward
- Eager to Work with Designers/Directors
- Strong Personal Interests
- Fairness
- Extrovert vs. Introvert
- Open to New Ideas
- Mentor/Mentorship
- Maintaining their stress levels
- Passion
- Volunteer for Projects
- Positive
- Positive Attitude
- Diligence
- Healthy Balance
- Deadline Oriented
- Brave/Fearless
- Continuous Learner
- Well Mannered
- Hard Working
- Responsible
APPENDIX IV: VISUAL REPRESENTATIONS OF THE DATA OBTAINED FROM DESIGN SESSION

Data can be interpreted in several ways and the DSL team determined that a visual representation would be useful for the purpose of both framing the literature scan and also presenting it to the Sponsors.

APPLICATION FIGURE A, a Wordle™, is a visual representation of the data presented from the CABE stakeholders. Limitations of this tool include the randomization of the text function and the font capabilities resulting in a more general understanding of the thematic impact.

APP FIG A - IDEALIZED DESIGN SESSION WORDLE

APP FIG B is a thematic analysis, Pareto Chart, conducted by the DSL team to visually represent the impact and volume of themes highlighted in the data. In both cases, the information can be mapped along the lines of Lead and Design.

APP FIG B - IDEALIZED DESIGN SESSION PARETO CHART
APPENDIX V: QUALITATIVE ANALYSIS OF THE DATA

Qualitative methods and stakeholder engagement

The Qualitative methods used to gather preliminary data for our pilot study were based on, or included, non-probability sampling. The units of research consisted of a combination of people involved in the field of architecture, known to the DSL project team. The DSL doctoral students, responsible for facilitating the CABE leadership study, formulated the questions and collected data through a process of personal interviews and written surveys.

Responses to the following five questions were solicited from participants in the idealized design process and from professionals in the field of architecture:

1. What (qualities) would you be looking for in a new hire (to design firm)?
2. What skills and characteristics are necessary for someone you would consider for promotion?
3. How did you learn leadership in your field?
4. Where did you learn leadership in your field?
5. What are the five most important leadership characteristics of the leaders in your industry?

The DSL team endeavored to employ a FABRIC model in conducting the above interviews and survey. That is, the tools used were:

**Focused:** The questions use for the survey and interviews were agreed upon by the team and were viewed as useful and relevant to what CABE was aiming to achieve.

**Appropriate:** By inviting a response from those involved in the field of design and architecture, the DSL team hoped to gain a deeper insight into the leadership experience and competencies of seasoned professionals.

**Balanced:** By comparing the competencies and skills which surfaced as a result of the idealized design process with the data gathered through stakeholder surveys and interviews, the DSL team hoped to gain clarity about relevant insights regarding pedagogy and practice for leadership education and development.

**Robust:** The process which produced the relevant questions can be validated and the information gathered was seen as useful for further discussion, especially regarding possible changes to the curriculum that could further utilize the Nexus model of education to develop leadership competencies.

**Integrated:** The information produced as a result of the surveys and interviews indicated that organizational actions could be taken to influence the development of a praxis-oriented approach to curriculum development, which focuses on leadership competencies.

**Cost-effective:** There were no costs involved in the means used to measure the opinions of the stakeholders.
APP FIG C - PARETO CHART OF ALL INTERVIEWS

Interview Pareto

APP FIG D - WORDLE OF ALL INTERVIEWS
The following interview with Daniel E. Jost, RA, LEED AP BD+C was conducted by Alfred Bradley. The conversation was recorded and is reported verbatim:

What I learned at Clemson was how to think, how to design, how to learn, and how to implement that. It didn’t matter as much what your end result was, but can you actually build this thing. At Drexel, they took a little bit more time to introduce the ideas of practical design, being actually able to build something.

[We had a discussion about education and the work ethic he learned from his father, fixing up houses].

1). What (qualities) would you be looking for in a new hire (to your design firm)?

First and foremost, [I look for] a willingness to learn. It is the most important because…; I know that when I was first hired, right out of school, I looked for a place that was like a multi-disciplinary kind of place. So, I ended up taking a job—it’s right across the street, actually, where I first worked—with a guy who was a licensed architect, professional planner, an engineer, a design-builder, and a developer. So, this is what shaped me, and, I have strong feelings about how the schools should really force kids to do something different than just go and be an architectural intern and sit in a corner and file files. Because I feel that all of my knowledge that I gained in that first four-and-a-half years is really what drove me to what I am today. And, it was more than just architecture.

I looked up to my boss. [I thought], this guy really does everything. That’s great. I just sat there and sucked it all up. I was a sponge and tried to absorb as much as I could. So, really, a willingness to learn is huge.

You went there right out of school. Did you know, at the time, that he had this broad experience?

It was a very small firm. It was himself, another licensed architect, and me. So he…, when I went in to interview with him, he basically hired me because I was very cheap, right out of school, most likely. He interviewed me and he liked me and he could get me cheap. So, that’s probably one of the bigger reasons, but he wanted to groom somebody. He said that he didn’t want to hire another guy like the guy he had. He wanted to groom somebody to kind of learn and be like him.

So, when I went over there, I knew that he was an engineer and an architect. I didn’t know that he also developed his own properties. So, what we would do was, I would take…, I would see him buy a piece of land, do the site planning, do the civil design, the structural design, and the architectural design, mechanical, electrical, we designed everything. And, then, his design-build firm would hire the subs and build the building. So, my experience was from the idea of, let me put a building here, to the final punch list and grand opening. I was involved with everything from the very, very start of my career.

My experience is that kids just don’t get it out of school like that. And, there is a way, I think, to try to force them to get that. And that to, instead of going and working at a bar over the summer, or working as an architectural intern, make them go work for a contractor or tradesmen, make them do a year [of] work for a mason, or work for a carpenter, a painter. Do that kind of thing and see. I think the best architects understand how things are constructed, not just designed. Really, I would want somebody to suck that up like I did.

They also have to have good organizational skills because, what we do, there’s so many parts to it. I tell people all that time, there’s like a thousand decisions you have to make on a project… All these little decisions and you got to keep everything nice and organized or you’re going to be a mess. Organization is very important. And, you got to have the right attitude. It goes along with the willingness to learn.

What would you see as the right attitude?
You have to have a positive attitude, and, there’s a lot of where things get rough and you have to be able to rise above it and not get down. There are plenty of times when I felt like I had too much on my plate, but, I just kept a positive outlook and kept trying to learn. One of the big things I really believe in is to be a good leader, you have to be confident. And, you can’t be confident if you don’t know what the hell you’re doing.

Confidence just doesn’t come. Some people are cocky, but they’re really not confident in their abilities. If you, the more you know, the more knowledge you feel you have, the more confident you can be and the better leader you’re going to be. When people look and see you, they will say that this guy knows what he’s doing. He’s confident. He takes charge.

We’re in a lot of meetings, where there’s a lot of different people. Typically, we’re the quarterback of that meeting because we have to be the leader.

Does that happen in most jobs; that you’re the one who kind of brings people together?

It depends. A lot of times the contractor will. But, once you get to the point…The contractor is supposed to run the meeting and we’re there to give our input or whatever. But, most of the time the construction manager will run that [i.e., the meeting]. On the design side, we run all the meetings. We’re in charge of all the sub-consultants. The architect is, by default, the leader. We have to hire the civil engineer, the structural engineer, or the mechanical plumbing. We have to coordinate all of your vendors. You bring in a low-voltage guy, etc. All of those guys. We’re responsible for coordinating their efforts and making the project successful.

You said that to be a good leader, you have to be confident. And, to be confident, you have to know what you’re doing. You got to know about all those different things.

2). What skills and characteristics are necessary for someone you would consider for promotion?

You touched on some of the characteristics for someone to be considered for promotion. Would they be similar to what you’re mentioned?

Yes. The employee must be a hard worker. And, steady improvement, or progression, is important. You have to see that steady progression. You have to see that they are getting better and better. As I say, there is always room for improvement. To get better, the person should know…, show always be trying to improve, innovate to reach the next level.

Innovation is a big part of what I study. What encourages innovation and what doesn’t? Sometimes the culture, or the nature of the organization, doesn’t allow much room for innovation. People wake up one day and fine that they haven’t innovated. But, it seems to me that the nature of your work, design, always requires innovation. [Here, Dan and I discussed some of the different kinds of projects with which he has been involved].

I do every different kind of project. That’s what they taught us how to do. You can research things so much more easily now. With the internet, everything’s accessible. When you’re researching products, you can just go on the internet to find them. Before, you had to search through catalogs. And, if you didn’t have a catalog, it was much more difficult.

I want someone who is always pushing beyond what is asked of them. If somebody says can you go and file these ten papers, and you see there’s fifteen piles of it, just go ahead and do everything. Do more than what’s asked of you. Leave the place better than you found it. I worked at a nuclear power plant one summer… They said you have to leave this place better and cleaner than when you found it. You didn’t just clear up, you left it better than you found it. That’s another little thing that I remember.
3). How did you learn leadership in your field?

I talked about that a lot already. But, to me, leadership in architecture is learned by watching other leaders in the field. I also feel like sometimes people either have of they don’t. Growing up, I was always the captain of different sports teams. I always kind of took charge.

4). Where did you learn leadership in your field?

So, from what you’ve said, you developed leadership before you got through architectural school?

Yes, as a kid. My high school soccer team; we were 18-1-1 my senior year. We were the best soccer team in [names place]. I was the captain of the team. That same year, I was captain of the golf team. I was always kind of in charge. I took charge of stuff.

As architects, we should always be the captain of the design team. It’s not like it used to be back in the day of Michelangelo and these master builders. They were in charge of the whole thing. Now, it’s more or less that the architect is in charge of the design portion of it and then gets involved with construction administration. But, the contractor’s in charge. In the old day, they [architects] were the master builders. They did everything.

[We discussed the tension between the Pope and Michelangelo about the Sistine Chapel. Then, I asked: Do you just do what the client wants because they are the end user, or…

There’s give and take there. One of my characteristics is flexibility. You have to be flexible. That comes in a lot of different ways: dealing with the client, dealing with employees. One of the things I have here [cf., written responses], where did you learn leadership? After my first job, where I learned all these different skills, like how to design electrical, mechanical, all this stuff, I went to another job and I learned different skills. I learned to handle people and learned how to manage fifteen jobs at a time. I learned something different, but I was managing a design group, a bunch of draftsmen, and, at one point, I was losing my mind because I’m telling the guys to do this and they’re not doing it that way. I’m telling this guy to do this and he’s doing it his way.

I went to my boss and told him that these guys just aren’t listening to me. I’m telling them what to do and they’re just not listening. He said three words: “Everybody is different.” He said, “Dan, everyone is different.” He didn’t have to say anything more. I can’t treat them all the same. I can’t try to impose my will on everybody. I have to just be flexible in the way I deal with these people and try to take their best skills, and, as a good manager, you have ten different people doing ten different things. And, these guys are good at doing this and these guys are good at doing something else. You task them to do those things so that the project comes out the way you want it to. You can’t force somebody because there are a million ways to do things.

For example, if you are doing stuff on CAD, some guys will set up a job one way and other guys will set up a job another way. In this case, I was just telling them that I want you to set it up like this because I also go on the CAD and I need to be able to know how to manipulate it if I need to jump on it. Instead of forcing my will on them, I sat back and listened. They told me this is why I’m doing it. I can do it faster this way or whatever. So, instead of being rigid and saying, hey, I’m the boss, you have to be able to listen. In this job, you have to be a good listener.

How did you transition from working at a place where you learned all these things to being on your own, starting up your own company?

What I ended up doing was..., I tried to go to different places. I worked at three different firms before I started my own company. The first one, I could never have gotten that type of knowledge in fifteen years
there. The guy actually sent me out to be like the site superintendent a couple of times because he needed somebody to cover the jobs. No intern ever does that.

Are interns generally just put in the office? What would they be doing?

Just doing something on CAD, like, if there doing these multi-high-rises, they might just be detailing bathrooms or something. They might be stuck to one task. I think it's probably gotten better, where they allow them to go out and survey spaces or do different things. Architects aren't involved with the construction of buildings. So, they might tag along to look at something on a site, but I was actually in a position where a carpenter said, “Hey, I need this” or asking me a design question. I would have to answer that. He might even say, “I need a couple more two-by-fours.” My boss would say, “Get in the truck and go get a couple two-by-fours.” I was that hands-on with what I was doing.

The kind of internship seems to matter. If you had done your internship in an office just designing bathrooms, you wouldn’t have been exposed to everything from the design phase to the actual construction phase and everything in between.

No. I wouldn't have been. That’s where I think kind of changing the way the National Council Registration Board basically administers the test. They’re in charge of the intern IDP, the Intern Development Program. They make you get x amount of hours of construction oversight. They say that you have to do all this stuff, but typically I don’t think you really get the hours in the categories where they are supposed to. You’ll have a mentor, who will sign off on your hours.

And that’s part of your academic preparation?

That’s once you’re out of school. Once you graduate and have your degree, you have to enter the Intern Development Program. I don’t know what it is now. It may have changed, but you needed to have essentially three to four years’ worth of hours. But the hours had to be in specific categories. Maybe the hours added up to three years’ worth of time, but it could take you five or six years to get all the time in those specific categories because you weren’t going out to the site and... Some of the stuff they wanted you to do was bidding and negotiation, for example, and a lot of times you don’t get involved with that. Firms just don’t get involved with that. Things are kind of fudged on those sheets because almost everybody doesn’t get all the categories. My experience was beyond just the construction administration, sitting in meeting and answering questions. I was on the job site, watching what the guy was doing and I could stop them from doing something that was wrong. You see things out there that you draw on a piece of paper, but you didn’t know that’s what that looked like when you put it together. It helps you to be a better designer when you see that construction.

[We discussed the importance of the internship]

The internship is not considered...You don’t enter the IDP until you’re already through some years of school. I think you can enter it... again, this is fifteen, twenty years ago,...

Is the IDP a requirement for your degree?

No. It’s a requirement for your licensure. You can’t take the test without completing the Intern Development Program. I’m thinking of something that’s not as formal as this. Well, maybe it should be formal. When you get done your freshmen year in college, force them to work for something that doesn’t have to be as an architect. A lot of times, you don’t see...

The whole reason for what we do is to build something. It’s construction. I tell my kids all the time that Daddy puts together like the Lego instructions. That’s what I do. And I give it to the contractor for him to build the thing. So, it all focuses around construction and building.
You have to know all the details, but also keep your eye on the whole.

It's best to have a clue about construction. Too many kids, out of school, have no idea. They go to a job site and they're scared to be out there, you know. There needs to be more exposure to construction.

That helps you to develop the competencies and the confidence to be a leader. Is that how you experienced it?

Yes. I think so. I think that it's important to understand what's actually happening out there. It helps me to be a better designer when I go out there and I witness the plumber trying to squeeze this wall-mounted bracket, and put the toilet on it, and I didn't leave him enough space. A lot of times, you won't hear him complain about it. But, when you go out there, they will complain about it to you. There are certain things you'll see when you're out there that you didn't realize that that thing is that big and has to go in there and I needed to give him another six inches or whatever.

[We discussed how contractors will often know, from their experience, that something in the drawing is probably not right, but, rather than stopping it, they just do it. Conversely, the architect will come in and see that the design specifications aren't working and will adjust. The contractors will often not adjust. By being on site and monitoring the project, the architect has a leadership role, even when s/he isn't the project manager].

A lot of clients don't pay for that service. [Referring to a church project, he said…], We caught a lot of mistakes because we were out there. If we weren't out there, we would have caught the mistakes way after the job was done.

Another thing with being out and feeling comfortable on construction sites is having a relationship… You have to have a relationship. I have good relationships with contractors because they know that I'm practical. They know I'm flexible. I'll help get through situations where everybody wins. I'm not going to let them cut corners, but, if there is a better, easier way to do it, I'll entertain it. You kind of have to have the relationship with all parties: the client, the contractor, my MEP designer, my structural guys, all these guys. You have to have that relationship. It's like anything. Relationships are important.

Did you learn that from your experience?

I learned that from my very first job site. There are a lot of architects [who feel], that's the way I designed it and if it's not that way, 'rip it out.' There are a lot of guys that way. Not everybody, but there are some guys that think that they have a little bit more power. They do, but [they should] try to work together with those guys [i.e., the contractors, etc.].

5). What are the five most important leadership characteristics of the leaders in your industry?

• Confidence—without it, you really cannot be a leader.
  Learning as much as you possibly can about the design and construction trade will help you become more confident because you feel like you actually know what you're doing. You can walk out there and see things and say, “Hey, that's not right.” Knowledge is power, basically.

• Flexibility—In this field, you better be able to adjust on the fly. There's stuff coming at you from every different direction. The people you have to deal with, the things that come up in the field [for example, renovation projects where you don't know what's behind a wall]. You have to be able to be flexible. [Here, we discussed the importance of strategic leadership].

• Collaborations—The importance of relationships and being able to deal with so many different team members on every project. If you're not a good collaborator, you're not going to be a good leader.
Patience—you’re going to run into people from all walks of life. Look at the guys that are on a job site. There are all kinds of different people. The electricians, the carpenters. There are some really bad, bad contractors. Then, they’re the people in your office. Guys that don’t show up on time, or they’re not doing something right. You just got to step back and have some patience. There’s been plenty of times when somebody jumped off the handle with me said something in an email or whatever, and I would type an email response back and then I would just walk away for twenty minutes. Then, I have one of my colleges look at it and I’d ask should I send this? The answer’s always ‘no.’

Then you have the clients that want to rip your head off for being late or over budget. You need to exhibit patience.

Integrity—in any profession, you will run into unscrupulous people that want you to cut corners, or do this, or do that. You might be out there and a contractor says “Hay, I didn’t do this. It’s going to be a little bit cheaper. I saved some money on my end. It’s going to cost the client. Do you think he’ll even notice? Does it matter?” Things like that.

The other thing that comes up a lot is clients that want you to kind of cut corners. For example, they know that they have to put this extra bathroom in..., anything that code, or, safety related, you can’t overlook. You have to have high integrity. You can’t compromise in any of these situations because it’s no good. That’s just a life thing for me. You have to have integrity. I think that it’s also a good characteristic of a leader.

If you were advising the professors at PhilaU about how to build leadership into the curriculum, how would you do it?

I think that part of what I always believed is that you have to get that experience under your belt in different ways than just architecture. Because, what we do is so much more than just designing the building or the bathrooms; it’s understanding how it all goes together. There’s so much that goes into any project. [He shows me a spec book for a project. It’s more than a thousand pages]. There are a thousand pages of information here; another fifty pages of drawings. There is so much that goes into it. And it’s not just learning how to put this book together. It’s learning what is in that book. What is that product? How does it get put into place in the field? I am a big believer that we need to teach these kids by getting them more exposure to construction. I have said this since I got out of school and seen my other friends. They’re working at a firm ten years down the road and they are still sitting there drafting something that somebody gave them. Where, I am managing the whole firm. I’m managing all the people in the place. [He discussed one of his places of employment, where he was managing an account].

First, I got experience with construction and engineering. Then I went and managed projects for different people, different national clients. Then, when I left there, I was focused on serving this one client and doing a great job. That’s when I went out on my own. I pretty much hit everything I could hit and I felt like I was ready to go out on my own [after fifteen years of getting various experience] and do a good job.
The following interview with Eric Heafer was conducted by Alfred Bradley. It was recorded and is reported here verbatim.

1). What qualities would you be looking for in a new hire (to design firm)?

The first thing you’re looking for in a design firm is obviously somebody who has an understanding of design. I’ll look at someone’s resume to see what experience they have, maybe where they went to college. I’ve found that some universities seem to prepare people better than others. I look for somebody who can communicate. Can they have a conversation and am I willing to put them in front of my client to represent me? So, that would be one concern. That goes along with their overall presentation. And, there’s a sort of quality of somebody that I say: “Do they get it?” Do they get the field of architecture? Do they get how a project goes together? Do they understand how to build something? Do they have any kind of practical experience? It’s one thing to be able to draw something on the computer, and copy something somebody else did, but it’s another thing for them to be able to actually create the design.

You spoke about having someone who can communicate and represent you. Can you say something about what represent you means to you? When they show up at a meeting and they are representing you, what does that look like?

Well, I expect them to be able to communicate to the client the ideas, to be able to have an understanding of what the steps in the project are, how to work with the contractor, how to work with the owner, and how to, kind of, pacify everybody, and, calm the waters that sometime happens between a contractor and an owner. The architect becomes the arbitrator a lot of times. So, that’s a quality that they kind of have to have a good understanding of how to arbitrate a situation and look for solutions.

Would you expect that from someone out of school?

Some of this stuff is just inherent in your personality and your ability. Other things are learned. You can learn diplomacy and that’s kind of what you need, is diplomacy in some cases. I’m not looking for somebody with a hot temper, and, I personally am not looking for somebody with a big ego. I personally don’t have a big ego about my design and I’m looking for somebody that is not so stuck on themselves that they think that their design ability is, you know, God’s gift to the world.

2). What skills and characteristics are necessary for someone you would consider for promotion?

Well, if somebody’s coming in, and they are coming in at an entry level position, they are going to know a little bit about how to draw, but I expect them to learn how to put something together, and how to put a project together. They’re going to learn what’s required by code and what’s required by the industry, and how to, basically, build a set of drawings. And, if somebody is going to get promoted to project manager, they are going to learn the steps along the way. I’ve had some good people come in here that have developed into that. Particularly, I’ve had two people who came from NJIT, which, compared to the students from like Drexel, or some of the other design schools, for some reason, the students from NJIT seem to have a better preparation for how to how to deal with people in the industry and how to completely put a project together, in terms of understanding all the components of a project, and, being able to have a good design sense, and, at the same time, an ability to actually make the design sense work. I think that is one of the key components to people in our industry.

It’s one thing to draw a pretty picture; it’s another thing to make it able to be built, to be built at an affordable price so that it can actually get built. So, I am looking for people who have that ability to take an idea from a design concept to something that is practical and buildable, to something that they can afford to actually have built is where we’re at.
And to have someone be able to do that requires some of the things you answered in the first question: the ability to communicate, the ability to see the big picture and the details.

Yes. That is absolutely...an architect has to know a little bit about a whole lot. An architect has to be able to know when to ask for help on specifics: When do I need to hire a structural engineer? When can I design it myself? When do I need to hire a mechanical engineer? When do I need to bring in a special consultant to do materials analysis or cost studies or cost benefits? I know a little bit about a whole lot and a lot about a little bit. It is the ability to know when to get other people to come in and help.

When you came out of school, where the same things expected of you? It seems to me that you would have acquired a lot of the skills you presently have from your experience. When you first got out and got involved in the field of architecture, did you have an opportunity to see the big picture, to bring with you what you learned

To some degree, yes. I did start working under somebody else, but it didn't take long for me to get my own projects. It was what they call “baptism by fire.” They kind of throw you into a project to see how you do and if you're able to manage it and figure it out, they give you the next project, which is a little bigger and more important and you develop into either getting your own stuff or working on another projects. It didn't take me long to be able to run my own projects and have people working under me.

What enabled you to run your own projects?

I had a lot of experience actually building things and doing some work during the summers in construction, where I actually saw how things went together. I actually learned how to do some of the stuff. One of my experiences was working for a guy who was renovating houses. I was kind of like a general, do everything kind of guy for him. I would help the plumber, the electrician. I would do the framing. I would hang the dry wall. I would put the ceilings up. Sometimes working with somebody who was more knowledgeable than me, and, other times, I was the most knowledgeable person. Seeing how the whole thing went together and getting that experience of actually working in the field and interacting with people in the field certainly helped me with my ability to draw and to see how it goes together, to know exactly what I drawing. A lot of people coming out of college have no practical experience whatsoever. All they know is what it looks like on paper, but, when they go out into the field, when they see a metal stud, they say what's that. Well, that's the metal stud you were drawing that's holding up the wall. A lot of times, they don’t have that understanding. So, I find getting them into the field is helpful early on for them to be able to go and see what things are, especially, if they are just out of school.

Are there internships for architects?

Yes. I've hired some summer interns. They'll come looking for a job for between May and August. I've brought some of them back at Christmas and Easter break to if they were looking for work. Again, I've had some good ones and I've had some bad ones. And, the good ones are doing well in the industry, and, the other ones, I don’t know where they're at.

What would you say were some distinguishing things between the good ones and the ones who were not? What distinguished them?

We talked about ability to communicate, to ask questions of you that were thought out and you wouldn't have to tell them twice. I guess that’s one of the things that distinguish a good one from a bad one. If I show somebody how to do something, and explain it to them once, I don’t expect to have to do it three or four times. I expect that you will pay attention to what I’m telling you, you’ll learn from that experience, and build on that knowledge. And, maybe be able to adapt what we talked about in one situation to another
situation. I think that that adaptability and applying what you've learned moving forward is one of the big distinguishing characteristics.

What does leadership look like to the architect who is managing a project…?

It varies greatly between client to client, to be honest. I have clients where all they want me to do is draw the drawings and get them a permit, and they’ll let the contractor take care of everything else. Get me my permit and show me my legal obligation and that’s it. I have other clients that I have to hold their hand the whole way through the process and walk with the contractor and explain to the contractor how to do something, tell them that they’re doing it wrong, and make sure that it exactly right. A lot of times, it has to do with the level of sophistication of the end user. You know, a doctor’s office...doctors are generally the cheapest people in the world in terms of wanting to spend money. So, they’re going to low-end developers. They don’t want you involved past the minimum you have to do by code. Whereas you go to a corporate company, like we did something for [names company] and they were very specific about the quality of what they wanted and I had to be there every step of the way with the contractors to make sure that the quality was there. And, the price wasn’t as much of a concern for them as it was for the doctor because they had a level and a quality and an image they were trying to portray to their industry and to their clients. So, it was very important to them that it was done correctly. I would have a lot of oversight in a case like that.

It sounds to me like your leadership look like whatever the end user wants.

That is true. What are you hired to do? In construction observation, it goes from absolutely nothing to having to be there every day. Again, [it] depends on the size of the project, the scope of the project. [References another project] At the start of the project, I was there two or three times a week. By the end of the project, we were there every day because it demanded that kind of attention.

It seems like your leadership role is determined by what the client wants. And, you have to be able to provide that.

The size of the project determines a lot [gives example of a large project]. In a simple thing, like a retrofit, there is very little interaction that needs to happen for something that simple. If you’re dealing with something that is complicated, like renovating a shrine, where you’re excavating and finding bones and finding foundations that were not there and nobody knows what they are, kind of unknowns. In an old structure, where you’re doing renovations, there’s lots of you can’t draw because you can’t know about them until you open it up. Once you open up what’s there, and get to see what’s there, then you sometimes have to do investigating to determine what it reality it is. You have to make decisions on the fly. In a lot of older buildings, that occurs a lot.

If you’re building a new building from scratch, you don’t have any of that. Once you get out of the ground, your only unknowns, generally, is what’s in the ground. Is there rock in there? Is there water? What’s the soil like? Once you get past the foundation, and you’re out of the ground, everything else should be as per your drawings. It should go pretty smoothly, as long as you have a competent contractor.

It sounds like part of being successful is having an ability to deal with the unknowns, to deal with whatever situation you find yourself in. The project may look one way on paper, but then when you start doing a renovation project, it’s going to look different.

You absolutely find things that are unknown; things that people forgot about ninety years ago. [There are] lots and lots of unknowns. [Mr. Heifer discussed the importance of problem solving]. Some contractors are proactive and others will stop work until you tell me what to do. There’s a wide range of approaches from the contractors as well. A lot has to do with union mentality as well. “If it’s not on my paper, it’s not in my
contract, and I am not doing it. I’m not paid to think about it”. As opposed to, “we have a problem. Let’s work together to solve it quickly and move on”.

3). How did you learn leadership in your field?

My leadership ability goes back to being involved in church government at an early age, in terms of becoming a church councilman at the age of fifteen, in the Lutheran church. It put some responsibilities on me in terms of having responsibility like serving on committees and learning to work with other people at an early age, [everything from] having your ideas shot down and trying to come back with something new, to leading a youth group and planning activities for the organization, which, again, doesn’t have direct relevance in terms of architecture, but the ability to be able to organize and to put things together, whether it’s an activity for people or a project. There is a relationship there with that ability to organize and to make something happen.

You have to have an “I can do it attitude.” There are people who will just sit back and wait for somebody else to lead. And, there are people who will just say, “I’m going to do this. Come along.” There are times where you need to be able just to lead your staff, lead your project, and lead the client to where logically the answer is. I have an ability to look at something and say, “This is the most logical cost-effective way to do something.” I have to convince the client that it’s the right thing to do and convince the contractor to build it that way. A lot of architects have that same kind of understanding of what’s practical, what’s feasible, and what you can actually do.

It sounds to me like it’s a proactive role. It’s not a passive role. You’re not just there to do the drawings, give them to them, and take your directions from them, but you provide, as you said, an ability to organize and make something happen.

It’s nice for a client to have an idea of what they want to do, but if it’s not feasible, or it’s impractical, or overly expensive, I take that as my responsibility to convince them of the right thing to do. I’m doing that now with a rehab project on [names location] where the client has Champaign taste on a beer budget. Well, how do you make it look like it an ‘A’ class building on a ‘B’ class budget, with a ‘C’ class attitude? [Here, Mr. Heifer compares that with a church building, done with quality material and labor that, he believes, will last three-hundred years].

4). Where did you learn leadership in your field?

At Temple, I started a fraternity and was the treasurer. I had other leadership positions. I started an IFC, which is an inter-fraternal council, which hadn’t been done for years. I got involved in student government. I got to hobnob with the President of the University. I got to learn how to deal with this.

I served on something called an undergraduate council with a national fraternity, which was an amazing experience. We got to go to Lexington twice. The first time there was just a bunch of industry leaders in the country, who were members of the [Delta Tau Delta] fraternity. Just to get to know them on a personal level, to go to the bar and drink with them, to have a good time and to say, ‘hay, these are the leaders [e.g., Bank President, Dean of a University, etc.], people just like us. If they can do this, I can do this. It was kind of like an encouragement for me to see that kind of..., to get to know people on a personal level, [people] who were some of the best this country had...To interact with them, to work with them, was just a great experience.

Was that after you graduated or during the time you were working on your degree?

During. You have an undergraduate chapter, but there is a whole alumni network. They have these conferences and the conferences are run by alumni. The alumni are the officers of the national large
chapter. They have alumni chapters in different cities, where people who have graduated from schools and work in that area get together and network.

I was on the undergraduate council. There were twelve of us from across the country, who met with the leaders of the national fraternity both at a pre-conference meeting and at what they call the carnie, the meeting of all the big chapters. The first meeting was with the power brokers and the big meeting was with all the kids and adults and interact.

Did that help you learn leadership?

Yes, absolutely. Being part of that, and working on committees, to work with these people to work on things and develop things was, for me, a big thing. Starting the fraternity, dealing with the University, getting involved with student government had it perks as well. Being an officer in student government, I ran an election [for the President and Vice President] and won and, consequently, got appointed to the position of secretary. Again, [it was] a different kind of learning experience. How do you campaign? How do you run an election on a school level? It was interesting.

Was there anything in the architecture program at Temple that helped you be a leader?

Nothing. In fact, my wife and I both say that we learned more at Temple through the other things we were involved in than we actually learned in class in terms of how to be a leader and what it takes to organize activities and events, and bring members [discusses his wife’s leadership in a sorority].

Being involved in the church government gave me an understanding of how organizations work. When it came time for me to start a fraternity, we had the best fraternity on campus for four out of my five years of architecture school...

Would anything have helped you in your academic preparation at Temple? What would it have looked like if they had tried to embed leadership in their curriculum at Temple?

I think trying to get people involved in other community organizations and participating is some other activities as part of there...I’m not sure if I could have learned it in a class room, per se, as well as getting out and doing things, getting involved in other things.

I don’t know what a course on leadership could do other than talk about how to organize things and how to...I guess you could talk about the qualities to look for in people and the ability to organize projects, organize people. Leadership being from [the perspective of] the person doing the organization and putting things together, that aspect could be taught. [For example, you can learn leadership from] how to run an event. These things get applied to life. When you can organize an event, you can often times organize a project. When you can motivate people to do things, you can motivate people in the workplace. I think that being able to motivate people and provide, in business, a good working environment, providing an opportunity for that person to grow is key to employee retention and developing the leaders. Not just constantly handing someone bathroom details to draw, but giving them the ability to design the bathroom and draw the details. If they do well at that, let them do the next thing. Now you can design a lobby.

5). What are the five most important leadership characteristics of the leaders in your industry?

• The ability to communicate clearly;
• The ability to organize people and activities;
• The ability to understand financial responsibility, both for your business and for your clients;
• The ability to motivate people;
• The ability to listen.
Observations from Interview with Larry Taniguchi, Associate Vice President, Cannon Design, by Michael Asada

1. When hiring a new architect, what qualities do you look for?
While looking through the candidate’s portfolio, we first look for the design and graphics skills, but probably more importantly we try to gauge their attitude and temperament. One of the major differences between design work at school and work is that design in school is mostly solitary and design at work is collaborative. We work in teams, the candidates need to be able to clearly and thoughtfully express their views and be able to work well with others. Team projects are assigned in school, but a typical student is trying to develop their own sense of design and approach within the four or five years of school.

2. What kind of leadership do you expect from an architect?
It depends on the experience level of the candidate. All candidates should display good communications skills. Senior levels should lead by example and be able to motivate the team to buy-in on the design and produce good work - especially when you take in account how many hours are spent on a project. One of the most common complaints we hear from junior staff is that they are not aware of how the work they do contributes to the overall success of the project - a good leader should be able to communicate how important each team member’s contribution is to the project as a whole.

3. Where and how did you learn to be a leader in the field of architecture?
Leadership skills are developed over a long period of time while working with different types of people, with different expectations, interests, skill sets and motivations. When you first start working, you’re under the leadership of more senior level people that teach you by assigning specific tasks. As your experience grows, leadership skills develop with exposure to more projects, large teams, interactions with more colleagues, consultants and clients. The architectural curriculum could modify short-term projects that expose students to leadership tools so they can gauge how effective they are and discover what motivates themselves and how they work in a team environment.

I’m not sure the typical architectural curriculum is able to provide in-depth leadership training as a separate course. Since the program is already impacted, there is very little time for any electives as it is now. The key would be to incorporate leadership skills into classes/projects that already exist. Presentation skills are already reinforce since students present their projects in front of their classmates and reviewers several times during their design studios. I would suggest developing a list of leadership qualities/tools and devise a way to get students to use them in their projects/classes.

4. What skills and characteristics are necessary for someone you would consider for promotion?
Self-motivated
Ability to work with others
Takes responsibility
Clients and team trusts them
Produces high quality work

5. What are the five (5) most important leadership characteristics of leaders in your industry?
1. Can motivate and get team to produce high quality work.
2. Trustworthy - teams won’t follow leaders they don’t believe.
3. Leads by example. Is a team player and works hard to produce good work.
4. Creative - results of this process distinguishes us from the competition.
5. Can get clients to repeat business or provide exceptional references.
Preparing Architects for a Leadership Roles by AIA Dallas

The AIA Dallas Leadership committee implemented an internal leadership program to identify, cultivate, and mentor emerging professionals in the following areas of professional leadership: the firm, the profession, and the community. The program is a response to the need to recognize, develop, and prepare women and men to assume increasing responsibilities in firm leadership and community reciprocity.

Key elements include:

Looking for new leadership - 10-month curriculum, nominate up and coming architects, keynote speakers and panelists, series of leadership directed discussions, 19 participants, 17 different firms, one Friday per month, and learned through example, practice, and theory.

Knowledge Transfer – The contributors, leaders in the local industry (oil company chair, mayor, leading architects), gives the program's participants insight into the professional and political workings of a number of prominent companies and organizations. They also renewed motivation to dedicate individual talents to positively impact the natural and built environments. For instance, the group was challenged

Forming New Leaders – participants are taught leadership by breaking down complex and dynamic workplace-related situations into effective practice of leadership and greater understanding of human behavior; lessons are heavily driven by group participation and examination of professional trends looking at factors contributing to individual and organizational success. Dr. DeLisle's activities also enhance the participant's personal knowledge and camaraderie among peers, which promotes values, and leadership among a new generation of professionals. The unique design aspect of the program is the active participation of the program members in the design and implementation of the program events, selections of sites, and engagement of speakers and guests. The participants are also self-auditing and self-managing with ongoing evaluations using online surveys and end of session dialogues.

15 KEY terms: leadership, ability

Terms correlated to the top 15 terms from the CABE design: leadership, ability

Summary – This is a list of pointers for those trying to ascend leadership in the project management/architectural industry. The frustration of reaching a point where you were not trained to perform and finding out how to get the help necessary is the basis of this article. The author concludes that mentoring is the type of key relationship necessary to successfully navigate this conundrum. There are 4 phases of mentoring: Introduction, Planning, Execution, and Separation. This article does not speak to the actual leadership training and is more directed towards a self-help guide to mentoring.

Key points include:

Introduction Phase – mentoring is about the relationship between the mentor and the protégé, a written agreement was necessary before anything could evolve. A relationship had to develop in order for the process to be useful and there needed to be ground rules to determine if it was moving in the right direction. This could be developed by a number of informal meetings where the two parties just get to know each other.

Planning Phase – establish a mentoring plan. The plan should include the following:

1. Receive formal training that will increase subject knowledge
2. Receive formal training that will help enhance leadership skills
3. Gain an understanding of all of the roles and responsibilities of each member of the team
4. Gain an understanding of BPM (Business Process management)
5. Gain an understanding of process, procedures, and tools that would be helpful to an architect

Execution Phase – Once the plan is completed, a start date can be set. Both parties followed the plan, each executing their roles and adjustment made when things change. The plan was very goal oriented, therefore, when something jeopardized the goal, adjustments must be made.

Separation Phase – Once the agreement is completed, the relationship changes from mentor/protégé to either colleague or apprentice. This must be a conscious adaptation allowing for the proper growth to occur.

I think this paper delved into the how to more than what which is what we are trying to identify at this stage.

15 Key Terms: architect, help, know, plan, mentor, experience, learn, work, develop, ask, phase, need, understand, answer, goal, course

Terms correlated to the top 15 terms from the CABE design: understand

The Architect as a leader, and other specialists by Roy Osherove

Summary - Architects by definition should have a leadership role on the team but many present themselves as a bottleneck. The architect should act as the unofficial leader in the team that mentors and teaches people on the team about architecture and make them unneeded so that their knowledge is spread enough so that they are no longer the bottleneck. The architect must become much more than a dispenser of architectural guidance but should train the team so that the team can self-organize. At that time, the architect can learn skills beyond architecture and add in different ways to the team.

Any specialist on the team should be a latent leader just as the architect. They should be mentored and challenged to become an unofficial leader that challenges and pushes others to learn about their specialty (teach), share in the specialist’s knowledge, so that he is no longer a specialist, just a mentor setting overall goals and constraints about a specific subject.

This article highlights an important goal in training an architect, design specialist, or any team member. It outlines a principle that should be taught to students – transparency and simplification. By demystifying what you do, others can support your effort and your knowledge becomes part of their DNA.

15 key terms: architect, team, need, learn, bottleneck, know, mentor, leader, special, job, specific, skills, organize, goals, decision

Terms correlated to the top 15 terms from the CABE design: leader, skills

http://5whys.com/blog/the-architect-as-a-leader-and-other-specialists.html
APP FIG L - OSHEROVE PARETO CHART

APP FIG M - OSHEROVE WORDLE
Architectural Leadership and other skills Workshop Overview by Bredemeyer Consulting

Summary – The purpose of the workshop is to teach architects “how to be great”. This is a guide to pursue excellence. It teaches those how to demand excellence from themselves, their architecture, and their organization. The class charts the path to excellence.

Key benefits – the participants work on key skills, including:

Leadership skills such as creating and communicating an architectural vision; consulting skills such as interviewing architecture stakeholders, leading architecture reviews, and taking criticism constructively; political awareness building such as understanding organizational networks and influencing; and strategy skills such as building technology roadmaps and scenario analysis.

These workshops are integrated covering strategy, leadership, organizational dynamics and politics, consulting, system thinking, visualization all from the perspective of an architect. The organizational topics are balanced with the technical aspects of the architect role such as system and requirement modeling but do not get covered in depth. The role of an architect is explored from the following perspectives:

1. What skills do I need? Where should I focus my personal development?
2. What have others learned in creating architectures? What works? What does not?
3. What should we do to make our architecture successful?
4. What should we communicate, to whom?

The course is set up as a 3-day workshop covering a variety of topics. There is a 1-day version for those who do not have very much time. There is an additional 4-day course in software architecture to complement this course. There is an option for this to be held on the worksite if 6 or more participate in the course. This is very close to what we are trying to accomplish although this is geared to systems architects not architects of physical structure.

15 key terms: architect, work, **lead**, **skills**, organize, class, role, consult, build, create, **strategy**, cover, stories, help, world, focus

Terms correlated to the top 15 terms from the CABE design: **lead**, **skills**, and **strategy**

http://www.bredemeyer.com/Workshops/Role_of_the_Architect_Workshop_Overview.html

FIGURE N - BREDEMEYER CONSULTING WORDLE
APP FIG O - BREDEMEYER CONSULTING PARETO CHART
Architectural Leadership presentation by Justin Arbuckle at the 3rd Architectural forum in Barcelona

This is a slide show of 30 slide presented to the forum outlining what is necessary to be a leader in the architecture field. The presenter believes whatever makes a great architect could be an asset to every business leader. Perspective as a context for assumptions, abstractions as the basis of judgment, time as a context for tool selection are all important qualities for an architect. An architectural leader can anticipate the effects of change.

This presentation offers some good content for the lectures. It goes more into specifics than our intent for this phase of development.

15 key terms: action, theory, leader, design, architect, know, context, future, assumption, business, plan, principle, craft, past, perspective

Terms that correlate with the CABE design: leader, design

http://www.slideshare.net/dromo/architectural-leadership
Leadership by John Maxwell in the Life of an Architect blog

The article is riveting because it begins by asking people to think about what leadership means. The author had to step back and think about the meaning of leadership because he was present the topic at an AIA conference. He examined not just the concept but also the principle of leadership. He identified 3 core elements that he thought enhanced his leadership:

1. Make time for activities outside of work
2. Value and importance of talking to non-architects
3. Keeping design at the center of it all.

The author was very candid about his confidence in believing that he was truly a leader in his industry even though his colleagues earlier made a list of qualities that would define a leader in the industry. He went on to compile a number of quotes by famous people describing a leader. It was from this list he was able to bring the characteristics to life and guide the people he was lecturing.

This article offers great insight on the process we are conducting. The author, like us, was thrust into an exercise to discuss something that was not truly defined before our exercise. I believe this will be most useful for those he quoted (content) and the identification of the thought process that led him to his presentation. His takeaway, “My research has found loads of examples of people telling others how to become better leaders, the truth seems to be that leadership is thrust upon those who, through strength of conviction and moral character, lead through personal example. Leadership is a label earned with character and behavior, and ultimately bestowed by others.”

15 Key terms: lead, people, thing, good, talk, want, ask, time, sure, know, present, courage, solutions, decision, strength

Terms correlated to the top 15 terms from the CABE design: lead

http://www.lifeofanarchitect.com/leadership/
1. **Stakeholder Specifications** – This is part of our to-do list. We must structure the project to determine who will be responsible for what regarding processing clear specifications. I reviewed the meeting summary and there seems to be many overlaps between skill, characteristics, and qualities. We can use affinity groupings, Pareto charts, and word groupings to identify what is most important. Once the top items are identified, we need to research how they can be best accomplished (training, practicum, mentoring, etc.). At that point, we can draft some clear educational approaches to be presented back to the stakeholders. We may possibly need to gather some more information/data.

15 key terms: Leader/ship, skill, Think/er, ability, balance, design/er, strategic, ideas, motivator, project, understand, listen, collaborate, communicate, empathy

2. The consulting team has decided to reach out to some industry leaders to find out exactly what leadership characteristics they see as important to develop in students. Al and Michael have connections with national architectural leaders who are willing to participate in this activity.

The survey will expose the important qualities that an up and coming architectural leader should possess. This short list of qualities would allow more focus to be applied to the leadership training experience being designed by CABE.