# LEADERSHIP IN ARCHITECTURE:
## Teamwork, Collaboration, and Relational Skills

Annette B. Salvador
December 2009

*Submitted towards the fulfillment of the requirements for the Doctor of Architecture Degree.*
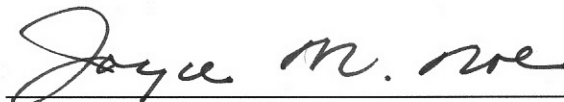
School of Architecture
University of Hawai'i at Mānoa

Doctorate Project Committee
Joyce M. Noe, Chairperson
Gordon D. C. Tyau
Jan Javinar

Leadership in Architecture:
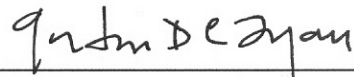Teamwork, Collaboration, and Relational Skills

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December 2009

_We certify that we have read this Doctorate Project and that, in our opinion, it is satisfactory in scope and quality in fulfillment as a Doctorate Project for the degree of Doctor of Architecture in the School of Architecture, University of Hawai'i at Mānoa._
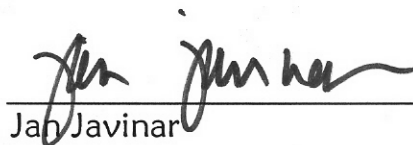
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# Dedication

*To God, I give the highest praise and thanksgiving,*

*and*

*To my parents, Tony and Linda Salvador,*

*With heartfelt thanks for giving me a strong foundation on which to build my life.*

-·-·--·---·--·---·--·---·--·---·--·---·--·---·--·--

# Acknowledgments

*Ultimately, leadership development is a process of self-development...*
*the quest for leadership is first*
*an inner quest to discover who you are.*
J. Kouzes & B. Posner

My journey of pursuing and achieving this doctorate has been a compelling combination of exploration, self-discovery, and reflection in studying a personal interest in emerging leadership in architecture. My research often occurred outside of the classroom, allowing me the freedom to learn and grow in a supportive learning environment with architecture students, colleagues, faculty mentors, and practitioners.

Special thanks goes to my mentor, advisor, and committee chair, Joyce M. Noe, FAIA, for her counsel, encouragement, and energy in completing this project (thank you for not giving up on me). I also want to express immense gratitude and appreciation to the other members of my doctorate project committee (Gordon D. C. Tyau and Jan Javinar) for their time, advice, and support, and for keeping things in perspective. I am fortunate to have the opportunity to work with and learn from them.

I also appreciate the many instructors and practitioners who supported me on this journey, specifically my Practicum Studio Faculty Mentors Lewis T. May, FASLA, and Thomas M. Payette, FAIA, whom I greatly admire and respect. I appreciate the wealth of knowledge and experience, articulate guidance, and gentle understanding they provided. And, special thanks to James P. Cramer for providing me the opportunity to work with you to conduct scholarly research. To all, thank you for your guidance, encouragement, and continued inspiration in the pursuit of discovering leadership in architecture.

My life is blessed with amazing people (and one tabby cat) without whom this doctorate project would have been less joyful and more stressful. I am extremely grateful for the patience, sacrifice, and support from my family and loved ones in helping me complete this journey. My sincere gratitude and deepest appreciation to each of you and for all you have given me to complete this journey.

To Nathan, my love, I am thankful for every single day of your unconditional love, emotional strength, and caring friendship. Thank you for believing in me!

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# **Abstract**

The study of leadership in architecture hinges on three emergent leadership concepts: teamwork, collaboration, and relational skills. Within all organizations and social systems, and throughout all walks of life, effective teams are the key setting in which things get done. By the nature of the profession, architects work in teams in creative collaboration with other design professionals, engineering disciplines, specialty consultants, construction trades, owners, developers, and many others. The need for knowledge of collaborative and relational skills in bringing value to being part of a team is more important than ever. Learning basic leadership skills early in architecture is necessary for productive teamwork, team collaboration, and managing relationships; and it can provide a core building block for a student's future personal and professional development.

The purpose of this qualitative inquiry encompasses an exploration and record of lived experiences to learn leadership in architecture in scholarly and practical environments. The study discusses leadership opportunities in a learning environment and describes the emergent leadership concepts, the participants' engaged reactions, and leadership lessons learned. The basic research question is: Are there learning opportunities for architecture students to experience and develop the emergent concepts of teamwork, collaboration, and relational skills?

Research findings are built upon the lived experiences of the active participant researcher, field notes and observations, and a review of selected literature. The findings affirm that scholarly and practical learning experiences in architecture are about teamwork, collaboration, and relational skills, and in turn, emerge as leadership experiences. These findings also indicate that there are personal descriptors, academic interventions, and leadership involvements that can significantly contribute to the leadership development of architecture students.

This study developed an awareness and understanding of the value to begin learning leadership early in architecture school. This study also provided encouragement to propose a professional practice course with a focus on leadership at the University of Hawai'i-Mānoa, School of Architecture.

# I. Introduction

## A. Background

Being a first-year college student can be an intimidating and profound life-changing experience, notably becoming an independent young adult after graduating from high school. Feelings of anxiety overwhelm the first-year college student, who enters a university campus with 20,000+ students and faculty members. Layers of complexity multiply as the first-year student engages with numerous varieties of college departments, student organizations, and supporting centers found at a university. To the inexperienced college student, however, university campus life does not need to be filled with fear and the unknown. In fact, the first years in college can be shaped into a rewarding and enriching experience. More importantly, the journey through college can provide the student with a fundamental tool kit of basic leadership skills that can be developed after college and applied to everyday life.

Researchers, educators, and professionals study and discuss the concept of leadership endlessly. However, few people who enter positions of authority receive any formal training or preparation to become a leader. Architecture schools have a challenging task in preparing its graduates to enter the profession, and while most graduates are equipped with sufficient technical and graphical skills; more often than not, graduates entering the workforce lack the necessary relational skills to empower themselves and team members to perform effectively and efficiently. Developing this body of knowledge and leadership skills comes with experience, feedback, and reflection; however, the inspiration and motivation to become a well rounded professional starts while in architecture school.

During my undergraduate years at the University of Hawai`i-Mānoa (UH Mānoa) School of Architecture (SOA) in Honolulu, Hawai`i, my classmates and I worked in teams in the upper-level design studios. We thought that working together as a team would increase our productivity. On the contrary, my team's productivity was not managed effectively. There were many barriers and obstacles to overcome, and some personal relationships were hurt. This was caused by a lack of understanding of how team members can collaborate with each other productively and the lack of leadership necessary to facilitate a productive team. We needed relational skills to become an effective team; we needed a team leader.

As a student leader in the American Institute of Architecture Students (AIAS) Hawaiʻi Chapter, I sought many ways to motivate my peers to become proactive members within the student organization. Engaging others to act and perform, as a collaborative student organization was one of the challenges for the student leadership. Often, in planning organizational activities, I encountered a lack of energy, knowledge, or experience from the membership to engage in meaningful and purposeful interaction.

In my first year as an architectural intern, I received a scholarship to participate in Masonry Camp, an introductory training camp sponsored by the International Masonry Institute (IMI) in Swan's Island, Maine. The eight day program brought together architectural students, interns, and mason apprentices to bridge an understanding of each other's roles in the design and construction processes. Here, we learned to cooperate and collaborate as a team on a design/build project.

At the UH Mānoa SOA, the Doctor of Architecture program offers a two-semester sequence Practicum Studio in which I worked in the professional field and observed how my Practicum Faculty Mentors, not only communicate ideas, objectives, and responsibilities clearly and effectively, but at the same time, evoke from every team member a high level of commitment to accomplish their task and goals. They demonstrated a high level of effective leadership in the form of relational skills.

Throughout my journey in architectural education and internship, I have met and witnessed professionals leading teams, not because of a title or position held, but as motivated team members engaged in teamwork and collaboration. These professionals demonstrated the ability and relational skills to be effective leaders, to motivate and direct goal setting, to influence effective decision making, to resolve conflict, to facilitate problem solving, and to promote team building. They exerted leadership characteristics that all aspiring architects should have to be more effective on the teams they serve as well as within the profession and the community they serve.

### *Researcher's Perspective*

My journey as a first-year college student at the UH Mānoa began in 1991, when I was accepted into the baccalaureate program at the School of Architecture. Reflecting on my early years in the undergraduate program, I did not intentionally seek student leadership opportunities. I was, however, motivated by the upper-level architecture

students, who were enthusiastically engaged in shaping the extracurricular environment at the SOA through the AIAS.  I followed their lead and joined the student organization.

As I progressed with my architectural studies, I became more actively involved with the AIAS Hawai`i Chapter.  I was elected Secretary (twice) and then as Vice President/President-Elect, and ultimately served as the Chapter President in my final baccalaureate year at the SOA.  Under my leadership, the Chapter was awarded four AIAS Honor Awards from the National AIAS, one of which was the 1997 AIAS Chapter Honor Award.  Former National AIAS Vice President Casius Pealer recognized the AIAS Hawai'i Chapter for "its continued commitment to community service and excellence, having the highest percentage of student involvement throughout the country" ("Letter to the Author").  I was also honored with a nomination for the Chapter President AIAS Honor Award.

Having received four national AIAS Honor Awards in the same year was a special accomplishment and unheard of in the history of the AIAS organization.  This unique distinction gave the AIAS Hawai'i Chapter a total of seven honor awards, twice as many as the next most recognized Chapter, and the awards came over in four separate years: 1991, 1993, 1994, and 1997 (Pealer "Letter to W. H. Raymond Yeh, FAIA and Dean").  My journey with the AIAS Hawai'i Chapter provided me a foundation to build upon the valuable student leadership experience and insight I received as a student leader.

At the SOA Commencement in May 1997, I was awarded the Alpha Rho Chi Bronze Medal, which recognized my leadership and service to the AIAS Hawai`i Chapter as well as to the School of Architecture as a student leader.  "The Alpha Rho Chi Bronze Medal was established in 1931 to encourage professional leadership and promote the ideals of professional service, where each year more than 100 schools of architecture, whose faculty select a graduating senior who best exemplifies these qualities, participate" (Almanac of Architecture and Design 403).

When I returned to the UH Mānoa as an architecture doctorate student in 2003, I was selected to participate with the UH Mānoa New Student Orientation (NSO) program as an NSO Student Leader.  In this student leadership capacity, I served as a student mentor to incoming freshmen and transfer students from all of the Hawaiian Islands, the continental US, and overseas, where I introduced college life on campus and shared my experiences as a UH Mānoa student.  This role provided me the opportunity to develop my relational skills as a peer mentor and student leader to first-year college students.

My journey as an architectural intern afforded me the trials and tribulations of the multi-faceted aspects of architectural practice.  Although I did not hold a formal position of authority on the teams I worked on, I was consciously aware of my work environment as a member of a team, learning on the job through direct observation of my superiors and peers, receiving constructive feedback, and ideally, practicing what I observed.  My self-awareness afforded me an understanding of my being an integral member of a team.  As I developed self-confidence in my roles for greater responsibilities, I began to see the need to build other skills and to have a wider range of responses in my relations to others (Nicol and Pilling 128).  Former Dean at the UH Mānoa SOA, W. H. Raymond Yeh, FAIA, observed that "architects must learn to work effectively as team members first, or the leadership role when acquired will not be effective and can only be to the detriment of the project" (8).  Although I was not in a leadership role, I exerted leadership qualities in a relational role and collaborated as an effective team member.

As an intern, I started another journey on my leadership development path when I joined the American Institute of Architects (AIA) Hawaiʻi Chapter as an Associate Member in 2004.  Four years later, I was elected to serve as the Regional Associate Director (RAD) of the AIA Northwest and Pacific Region, serving a two-year term.  The Northwest and Pacific Region is the largest component in the National AIA, representing six US states and territories (Alaska, Hawaiʻi, Idaho, Montana, Oregon, Washington, and Guam) and two foreign countries (Hong Kong and Japan).  As the RAD, I represented the Region's Associate membership on the AIA National Associates Committee (NAC), where the NAC developed programming and recommended policy concerning Associate and internship issues.  My leadership experience here primarily involved using relational skills, where I collaboratively worked with other RADs and engaged with AIA Associates in planning towards the fulfillment of the NAC's goals and objectives.

After five years in architectural practice as an intern, my "Aha!" moment arrived on a summer afternoon in a lunch meeting with my mentor, Joyce M. Noe, FAIA.  Our discussion led to my realization that in my young adult years at the UH Mānoa, I was engaged in opportunities focusing on emerging student leadership.  With reflection on my past leadership experiences in architectural education and internship, I realized that my experiences in student leadership motivated me to shape and develop the individual I am today.  My personal interest in emerging student leadership shaped the focus and purpose of this study: to explore and study leadership in architecture.

### *The Five Collateral Organizations in Architecture*

In the education and practice of architecture, there are five collateral organizations that govern, regulate, and influence the education, training, and practice of architecture in the United States (US).  The organizations are the Association of Collegiate Schools of Architecture (ACSA), American Institute of Architects, American Institute of Architecture Students, National Association of Accrediting Boards (NAAB), and National Council of Architectural Registration Boards (NCARB).  For additional information on each organization, refer to Appendix B: Collateral Organizations in Architecture.

These five collateral organizations represent the primary stakeholders in architecture – educators, architects, students, accrediting agency, and registration boards.  The ACSA encourages diversity of approach in the academic institutions that educate future architects.  The AIA integrates education into practice and practice into education, fostering support for structured intern training in its member firms.  The AIAS, representing future architects, promotes excellence in architectural education, training, and practice, and NAAB accredits the academic institutions and applies conditions for performance criteria.  The NCARB establishes registration or licensing policies, in respect to safeguarding the public health, safety, and welfare.  Table 1 below summarizes the concerns of the collateral organizations.

## Table 1: Concerns of the Collateral Organizations

| ORGANIZATION | CONCERNS |
|---|---|
| ACSA | Encourage diversity of approach |
| AIA | Integrate education into practice and practice into education |
| AIAS | Promote excellence in architectural education, training, and practice |
| NAAB | Apply Conditions for Accreditation for "Student Performance Criteria" |
| NCARB | Safeguard public health, safety, and welfare |

Source: (Noe University of Hawai`i-Mānoa, Doctor of Architecture Program) Excerpt from UH Mānoa, SOA Doctor of Architecture PowerPoint presentation.

## *Overview of Architectural Education, Experience, and Examination*

### *Education*

The first step to become a registered architect in the US is to obtain a NAAB-accredited professional degree from an accredited architecture school.  Currently, the NAAB accredits the following professional degree programs:

- A five-year Bachelor of Architecture (B Arch) program intended for students who enter immediately after high school or who have no previous architecture training.

- A two-year Master of Architecture (M Arch) program for students who hold pre-professional undergraduate degrees in architecture or a related area (engineering, landscape architecture, etc.).

- A three- or four-year Master of Architecture program for students with an undergraduate degree in another discipline.

- A seven-year Doctor of Architecture (D Arch) program for a variety of incoming students, from high school student to transfer student to "licensed architect" student (Kim 3; NAAB 2009 Conditions for Accreditation - Final Edition 27; Noe University of Hawai`i-Mānoa, Doctor of Architecture Program).

Architectural education in the US spans over a hundred and forty years with continuous evolvement and modifications in architectural degree programs.  Current US architectural curricula offer a multi-model approach, a dual emphasis on professional practice and research.  The multi-model approach has since evolved in the past two decades; and following precedence in American schools of law and medicine, architecture students at the UH Mānoa enter the Doctor of Architecture program and find a rigorous interdisciplinary curriculum, combining architectural and professional studies with general education studies.  The first of its kind in the nation and inaugurated in 1999, the D Arch is a first professional accredited degree program, integrating international practice experience with classroom and overseas studies while "developing architectural leaders with a global perspective" (University of Hawai`i-Mānoa School of Architecture The Practicum Studio; Yeh).  For a general overview of architectural education, refer to Appendix C.

As of April 2009, there are 102 NAAB-accredited first professional degree programs in the US, where thirty-nine (39) (38%) degree programs offer a first professional B Arch, sixty-two (62) (61%) degree programs offer a first professional M Arch, and one (1) (1%) degree program offers the first professional D Arch (NAAB "NAAB

Accredited Architecture Programs in the United States").  Refer to Appendix D: Accredited Architecture Programs in the United States for additional information.

The NAAB recognizes six (6) regions within the US.  The six regions are East Central, Northeast, Southeast, Southwest, West Central, and West.  Table 2: First Professional Degree Programs by Region and Type of Degree below illustrates a breakdown of each region's tally for first professional degree programs (NAAB "NAAB Accredited Architecture Programs in the United States").  The Northeast region tops the list for a combined total of twenty-nine (29) (28%) degree programs.  East Central has three (3) (3%) degree programs; Southeast has nineteen (19) (19%) degree programs; Southwest has twelve (12) (12%) degree programs; West Central has thirteen (13) (13%) degree programs, and West has twenty-six (26) (25%) degree programs.  Refer to Appendix E: NAAB-Accredited First Professional Degree Programs for additional information.

## Table 2: First Professional Degree Programs by Region and Type of Degree

|  | East Central | Northeast | Southeast | Southwest | West Central | West |
|---|---|---|---|---|---|---|
| ■ B Arch | 1 | 15 | 9 | 3 | 3 | 8 |
| ■ M Arch | 2 | 14 | 10 | 9 | 10 | 17 |
| ■ D Arch | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | 3 | 29 | 19 | 12 | 13 | 26 |
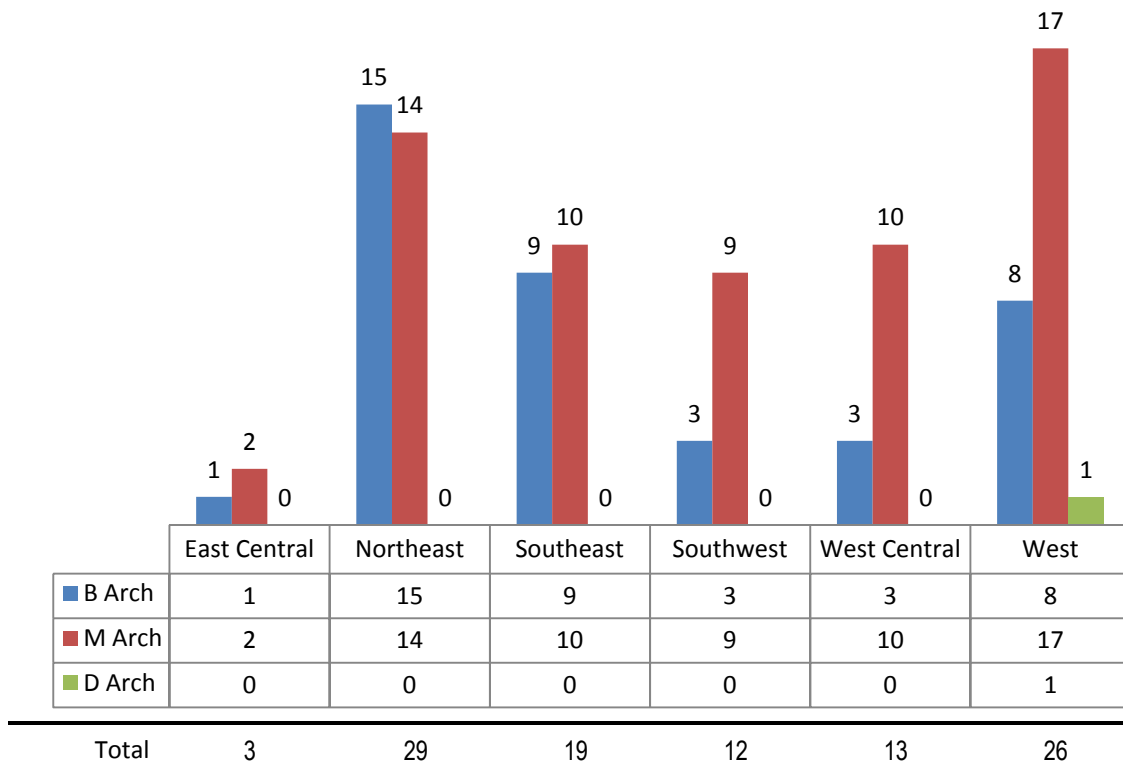
Source: (NAAB "NAAB Accredited Architecture Programs in the United States").

As noted by NAAB, the curricular requirements for awarding these degrees must include professional studies, general studies, and electives. NAAB also emphasizes its "accrediting process is intended to verify that each accredited program substantially meets those standards that, as whole, comprise an appropriate education for an architect. Since most state registration boards in the [US] require any applicant for licensure to have graduated from a NAAB-accredited program, obtaining such a degree is an essential aspect of preparing for the professional practice of architecture" (NAAB "Accreditation").

### *Experience*

The second step to become a registered architect in the US is to gain practical experience in the profession. Historically, architects-in-training went through an apprenticeship with a master architect (in current terms, commonly referred to as a mentor). As the educational system and profession matured with new design methodologies and construction technologies, an apprenticeship lacked a national standardization. "The [NCARB] established a program loosely modeled on the idea of a medical intern's rotations in a hospital, intended to expose architecture interns to a broad range of the experiences they may encounter as a registered architect" (Kim 69).

Created jointly in the 1970s by NCARB and the AIA, the Intern Development Program (IDP) "is a comprehensive training program created to ensure that interns in the architecture profession gain the knowledge and skills required for the independent practice of architecture upon completion of the program" (Intern Development Program Guidelines 4). The program has four training categories: A) Design and Construction Documents, B) Construction Contract Administration, C) Management, and D) Related Activities, where architectural interns must meet its minimum training requirements. For current and additional information on the IDP, visit NCARB's website at www.ncarb.org.

Additionally, the IDP Guidelines outline the methods of documentation and recordation as well as illustrate the minimum basic standards in work settings, training requirements, and supplementary education. It also states that "every jurisdiction requires that interns acquire experience under a registered architect's direct supervision for some period of time. Most of NCARB's 54 jurisdictions have adopted the IDP as their training requirement for initial registration" (NCARB Intern Development Program Guidelines 6). Upon successful completion of its training requirements, architectural interns can then apply for candidacy to take the Architect Registration Exam (ARE).

*Examination*

The third and final step to become a registered architect in the US is the successful passing of the ARE, which is also administered by the NCARB.  Developed by the NCARB, the "ARE has been adopted for use by all US state and territorial registration boards and by the Canadian provincial and territorial architectural associations as the registration examination for all candidates for architectural registration" (4.0 ARE Guidelines 1).  The NCARB states:

> The ARE concentrates on those services that most affect the public health, safety, and welfare. The ARE has been developed with specific concern for its fidelity to the practice of architecture; that is, its content relates to the actual tasks an architect encounters in practice. This examination attempts to determine the candidate's qualifications not only to perform measurable tasks, but also to exercise the skills and judgment of a generalist working with numerous specialists. In short, the objective is to reflect the practice of architecture as an integrated whole ("NCARB: ARE Overview").

The current ARE has nine (9) divisions, consisting of six multiple choices and three graphic divisions, and it is administered electronically at testing centers throughout the US.  The multiple choice divisions are 1) Pre-Design, 2) General Structures, 3) Lateral Forces, 4) Mechanical and Electrical Systems, 5) Building/Design/Materials and Methods, and 6) Construction Documents and Services.  The graphic divisions are 1) Site Planning, 2) Building Planning, and 3) Building Technology.  For current and additional information on the ARE, visit NCARB's website at www.ncarb.org.

Architect and author of *The Survival Guide to Architectural Internship and Career Development*, Grace H. Kim notes that "the [ARE] was established by NCARB to assess whether a candidate has the skills and knowledge required to provide the varied services of an architect.  However, given the breadth of our profession today, the ARE is not all-encompassing" (100).  Thus, due to the evolving nature of architecture and construction, continuing education and lifelong learning is encouraged in the architectural profession.

In short, to become a registered architect in the US, an individual will go through a process of obtaining an accredited architectural education, fulfilling practical training and work experience through the IDP, and successfully passing the ARE.  On the following page is Figure 1 summarizing the three-step process – Education, Experience, and Examination – that an individual does to become a registered architect in the US.

**Figure 1: Becoming a Registered Architect: Education, Experience, and Examination**

**EDUCATION**
- Accredited Architecture School
- Accredited Professional Degree

**EXPERIENCE**
- Intern Development Program
- Practical Training and Experience

**EXAMINATION**
- Architect Registration Exam

**REGISTERED ARCHITECT**
- Continuing Education
- Lifelong Learning
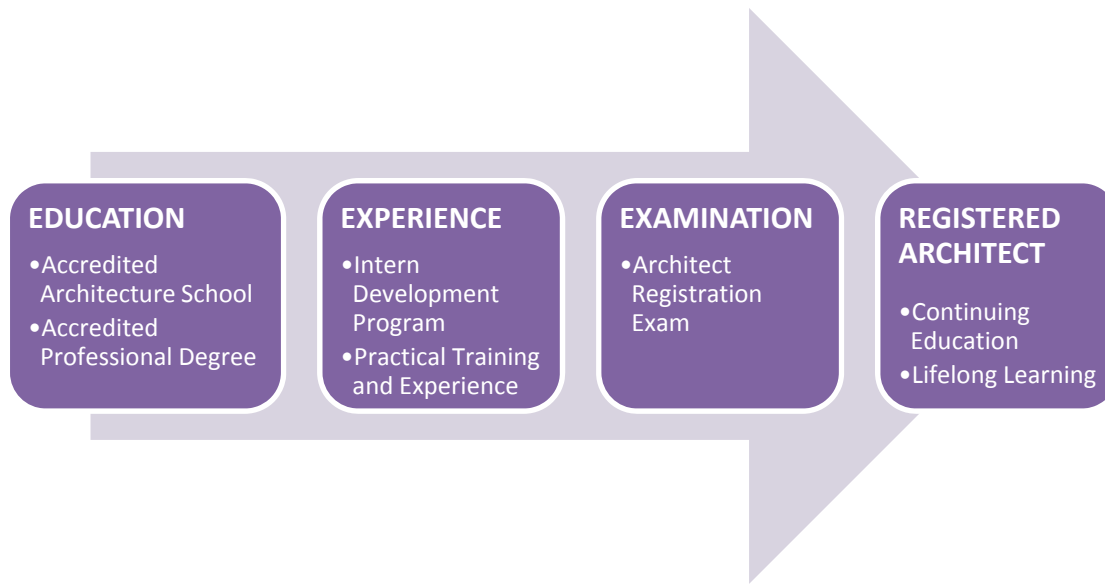
## B.     Need for Leadership Courses in Architectural Education

Here are two points why the need for leadership courses in architecture exists:

▪ It is a learning objective set forth by the NAAB's Student Performance Criteria for architectural degree programs to seek and obtain NAAB accreditation; and,

▪ There appears to be a lack of leadership courses in US architectural education.

### *Learning Objective for NAAB Accreditation*

NAAB established the Student Performance Criteria (SPC) "to help accredited degree programs prepare students for the profession" and architectural "programs must demonstrate that graduates are learning at the level of achievement defined for each of the SPC" (2009 Conditions for Accreditation - Final Edition 21).  The SPC has two levels of accomplishment *understanding* and *ability*, and NAAB defines the levels as follows:

▪ *Understanding* – means the assimilation and comprehensive of information without necessarily being able to see is full application. This includes the knowledge or familiarity with a particular subject, skill, or aspect of the SPC.

▪ *Ability* – means the skill in using specific information to accomplish a task, in correctly selecting the appropriate information, and in accurately applying it to the solution of a specific problem.  This includes the student's capacity or competence in a particular subject, skill, or aspect of the SPC (2009 Conditions for Accreditation - Public Comment Edition 21).

The SPC is organized into three realms: Realm A: Critical Thinking and Representation, Realm B: Integrated Building Practices, Technical Skills and Knowledge, and Realm C: Leadership and Practice, each with descriptive criteria of learning aspirations. "The SPC's [32] criteria are considered to represent the minimum education standard for someone seeking to become a licensed professional" (2009 American's Best Architecture & Design Schools 59). For a descriptive and detailed outline of each Realm's Learning Aspirations, refer to Appendix F: Realms of the NAAB Student Performance Criteria. Table 3 below summarizes the SPC's three Realms and its Learning Aspirations.

**Table 3: Realms of the NAAB Student Performance Criteria**

| REALM | DESCRIPTION | LEARNING ASPIRATIONS |
|---|---|---|
| A | CRITICAL THINKING AND REPRESENTATION | |
| | The ability to build abstract relationships and understand the impact of ideas based on research and analysis of multiple theoretical, social, political, economic, cultural and environmental contexts. | • Be broadly educated<br>• Promote lifelong inquisitiveness<br>• Communicate graphically in a range of media<br>• Recognize the assessment of evidence<br>• Recognize the disparate need of client, community, and society |
| B | INTEGRATED BUILDING PRACTICES, TECHNICAL SKILLS AND KNOWLEDGE | |
| | Technical aspects, systems and materials, their role in the implementation of design, and their impact on the environment. | • Create building designs with well-integrated systems<br>• Comprehend constructability<br>• Incorporate life safety systems<br>• Integrate accessibility<br>• Apply principles of sustainable design |
| C | LEADERSHIP AND PRACTICE | |
| | The ability to manage, advocate, and act legally, ethically and critically for the good of society and the public. This includes collaborative, business, and leadership skills. | • Know societal and professional responsibilities<br>• Comprehend the business of building<br>• Collaborate and negotiate with clients and consultants in the design process<br>• Integrate community service into the practice of architecture |

Source: (NAAB 2009 Conditions for Accreditation - Final Edition).

With the establishment of the SPC, "programs are encouraged to develop unique learning and teaching strategies, methods, and materials to satisfy these criteria, and the NAAB "encourages innovative methods for satisfying the criteria, provided the school has a formal evaluation process for assessing student achievement of these criteria and

documenting the results" (NAAB 2009 Conditions for Accreditation - Final Edition 22). More importantly, the SPC identifies *leadership skills* as a learning objective in an architectural curriculum, as noted in Realm C of the SPC.  The NAAB also notes that

> … [architecture] students enrolled in the accredited degree program [should be] prepared: to live and work in a global world where diversity, distinctiveness, self-worth, and dignity are nurtured and respected; to *emerge as leaders in the academic setting and the profession*; to understand the breadth of professional opportunities; to make thoughtful, deliberate, informed choices; and to develop the habit of lifelong learning (2009 Conditions for Accreditation - Final Edition 10).

Thus, learning leadership skills should be an integral part of an architectural curriculum for students to emerge as leaders in an academic setting as well as in the profession.

### *Lack of Leadership Courses in Architectural Education*

The primary focus of this qualitative inquiry draws from scholarly and practical learning experiences at the UH Mānoa School of Architecture.  As such, research focused on US architecture schools located within the same region as the UH Mānoa SOA – West region – and considered schools that offer first professional degrees, similar to the D Arch being a first professional degree program.  In the West region, we found twenty-six (26) first professional degree programs that offer the following: eight (8) (33%) B Arch programs, seventeen (17) (66%) M Arch programs and one (1) (1%) D Arch program, as illustrated in Figure 2 below (NAAB "NAAB Accredited Architecture Programs in the United States").

**Figure 2: West Region – First Professional Degree Programs by Type of Degree**
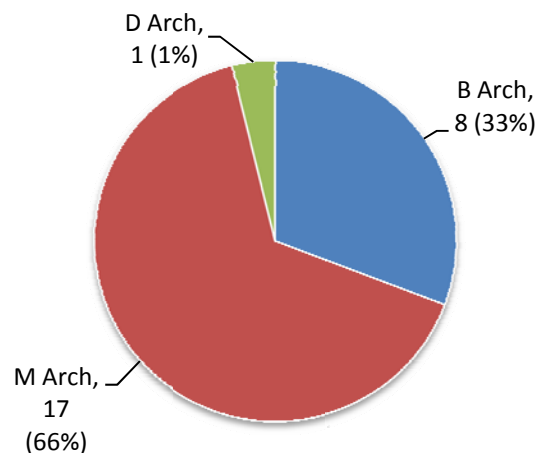


Source: (NAAB "NAAB Accredited Architecture Programs in the United States").

A review of these twenty-six first professional degree programs' online course catalogs provided a descriptive overview of the professional studies offered.  It is important to find if leadership is currently offered as part of the professional studies in architecture schools, as per the NAAB Student Performance Criteria's learning aspirations.  Through a cursory review of each program's architectural curriculum, concept words (i.e., teamwork, collaboration, relational skills/relationships, leadership) were highlighted in the professional studies coursework descriptions.  Refer to Appendix G: West Region Architectural Schools – Professional Practice for additional information.

We discovered seven (7) degree programs (29%) were identified using the aforementioned concept words in its professional studies coursework descriptions.  Of these seven programs, six (6) are Master of Architecture degree programs and one (1) is a Doctor of Architecture degree program.  The programs are found at the following schools: 1) Academy of Art University, 2) California College of the Arts, 3) University of California at Berkeley, 4) University of California at Los Angeles, 5) University of Hawai`i-Mānoa, 6) Montana State University, and 7) University of Washington.  As shown below in Table 4: West Region Architecture Schools, the degree programs that offer leadership in its professional studies are:

**Table 4: West Region Architecture Schools – Leadership in Professional Practice**

| DEGREE PROGRAM | ARCHITECTURAL SCHOOL | STATE |
|---|---|---|
| ▪ M Arch | Academy of Art University | California |
| ▪ M Arch | California College of the Arts | California |
| ▪ M Arch | University of California at Berkeley | California |
| ▪ M Arch | University of California at Los Angeles | California |
| ▪ D Arch | University of Hawaiʻi-Mānoa | Hawai`i |
| ▪ M Arch | Montana State University | Montana |
| ▪ M Arch | University of Washington | Washington |

Source: (Academy of Art University; California College of the Arts; Montana State University; University of California at Berkeley; University of California at Los Angeles; University of Hawai`i-Mānoa School of Architecture "Architecture Courses; University of Washington).

With only seven degree programs offering leadership as a learning objective in its professional practice courses, it appears that the current architectural curriculum in the West region presents a lack of a leadership courses being taught in architecture schools.

## C.    Project Statement

Understanding and developing leadership skills is a lifelong learning process.  In architecture, the learning process should begin in architecture schools, where leadership opportunities emerge, and concurrently, can be developed while in a learning environment.  Leadership in architecture is about how the typical architecture student is motivated to embrace teamwork, encourage collaboration, and engage relational skills during their professional formation years in architecture school.

The study of leadership in architectural education hinges on three emergent concepts: teamwork, collaboration, and relational skills.  The need for knowledge of teamwork, collaboration, and relational skills in bringing value to being a member of a team is more important than ever.  Therefore, the focus of my doctorate project is to enhance the leadership learning process so that the average architecture student can significantly increase their relational skills and performance capabilities to be collaborative team members, and more significantly, effective leaders when they enter the profession.

## D.    Purpose of the Study

The purpose of this study encompasses an exploration and record of lived experiences in higher architectural education, to uncover, explore, reflect, and gain new understandings of the phenomenon of leadership in architecture.  This qualitative inquiry provides insight into the knowledge, skills, and awareness embedded in the lived experiences and to gain an understanding of the meanings attached to leadership in architecture.  By first focusing on the researcher's understanding of leadership in architecture and self-identity with this description, the ability to recount the lived experiences contributed to the focus and development of this study.

This study also aims to identify architectural education experiences and demonstrate the significance of the leadership lessons learned based on the three concepts.  In addition, this study will help to define the three emergent concepts: teamwork, collaboration, and relational skills in the context of leadership in architecture.

By examining and understanding the lived experiences as an evolution to greater self-confidence and competence in personal and professional development, this doctorate project potentially offers a framework to support learning leadership in architecture.

### E.    Research Questions

The basic research question is: Are there learning opportunities for architecture students to experience and develop the leadership concepts of teamwork, collaboration, and relational skills?  To respond to the basic research question and purpose of the study, the following secondary research questions guided this study:

1.    How do architectural education experiences provide opportunities to learn leadership in architecture?

2.    What leadership lessons can be learned from architectural education experiences?

3.    How do teamwork, collaboration, and relational skills provide value to the architecture student's personal and professional development in the context of leadership in architecture?

### F.    Significance of the Study

By addressing the purpose, objectives and research questions, this qualitative inquiry can facilitate a better understanding of learning leadership in architecture school in an emergent context of teamwork, collaboration, and relational skills.  Learning leadership in architecture school is necessary to develop team collaboration and manage relationships.  Added clarity is gained in identifying higher education leadership opportunities that can inform the value of and approach to learning leadership in architecture.

The significance of the research findings that emerge from this study can be used as a basis to recommend leadership courses in the architectural curriculum at the School of Architecture at the University of Hawai`i-Mānoa.  The proposed leadership courses will be an integral part of the professional studies coursework and of the overall architectural curriculum, and it will be structured for peer-support as students will learn and discuss leadership concepts, exercise leader and team member roles, and develop relational techniques in processing and communicating information as a team.

## II.    Research Methodology

### A.    Qualitative Inquiry – Phenomenological Approach

"Qualitative research is the collection, analysis, and interpretation of comprehensive narrative and visual data in order to gain insights into a particular phenomenon of interest" over an extended period of time (Gay, Mills and Airasian 399). "Qualitative research has as its purpose a description and understanding of human phenomena, human interaction, and human discourse" – the study of phenomena in its natural environment (Lichtman 8).  Phenomenology is both a philosophy and a research methodology (Gadamer; Howard; Lichtman).  As a philosophy, I will use the definition found in the dictionary: "a philosophical movement that describes the formal structure of the objects of awareness and of awareness itself in abstraction from any claims concerning existence" ("Merriam-Webster's Collegiate Dictionary" 929).  Lichtman describes the philosophical movement, generally speaking, as a different way of thinking (about philosophy), "to think [or study] about actual lived experiences" (72).

As a research method, phenomenology is a qualitative inquiry concerned with hearing stories in one's own voice, understanding contextual meaning, describing patterns and processes of connectedness, and in revealing the personal nature of phenomena (Bernstein; Gadamer; Hathaway; LeCompte, Preissle and Tesch; Magee; Packer; van Manen).  "What first characterizes phenomenological research is that it always begins in the lifeworld" (van Manen 7).

The study of lived experiences is not an analytic science that inducts information through empirically derived investigation of particulars (van Manen).  As van Manen explained, "For this reason, too, survey methods, statistical and other quantitative procedures are not appropriate means of phenomenological human science research" (van Manen 22).  Through interpretation of the researcher, understanding *lived experience* is an exploration of what is seen or said, but also examines what is unseen or unspoken (Creswell; van Manen).  This is the basis of phenomenology research, to find meaning in lived experience.  The context is personal and informal, interactive and dynamic, and intuitive and emergent in character, which is central to a phenomenological approach.  Thus, the stories in this study may be unique, subjective, and reflective of the lived experiences of the participant researcher (Creswell; Moustakas; van Manen).

Based on the above in an attempt to understand and interpret the researcher's lived experiences of leadership in architecture, I selected a phenomenological approach for this qualitative inquiry, which offers the best opportunity to describe and understand how individuals experience a particular phenomenon in its natural or social setting(s).

### *Research Design*

A phenomenological approach attempts to study the phenomenon. In this qualitative inquiry, the attempt is to uncover the meaning of real-world experiences in learning leadership as it is experienced in architecture (Creswell). The selection of a qualitative inquiry with a phenomenological approach was based on the type of data being sought – insight into the experiences embedded in the architectural scholarly and practical learning environments and the meanings attached to the experiences from the perspective of the researcher. In other words, it is the process of discovering the reality of how individuals perceive, interpret, and construct meaning of their given interactions in their natural environment. This is a constructivist point of view, because individuals construct knowledge from what they already know and from what they have experienced. The process is also reflective as individuals reflect on their experiences to gain insight and understanding.

Below is Table 5: Research Design which identifies theoretical parameters (and its respective study parameter in parentheses) as phenomena (learning leadership in architecture), knowledge construction (interpretive, constructive, and reflective), method of inquiry (qualitative, phenomenological), and perceptions (individual). On the following pages, discussion will cover the four steps taken for this qualitative inquiry: research questions, data sources, data collection techniques, and data content interpretations.

Table 5: Research Design – Theoretical and Study Parameters

| THEORETICAL PARAMETER | STUDY PARAMETER |
| --- | --- |
| Phenomena | Learning leadership in architecture |
| Knowledge Construction | Interpretive & Constructive; Reflective |
| Method of Inquiry | Qualitative Inquiry - Phenomenological Approach |
| Perceptions | Individualized – Researcher Personally Linked |

## B.     Research Questions

In qualitative inquiry, initial questions for investigation often come from real-world observations and tacit theories, and questions emerge from the interexchange of the researcher's direct experience and theories (Marshall and Rossman).  The research questions were guided by these direct real world observations, existing theory, a review of literature, and the researcher's personal experiences and knowing of being a leader in architecture.

The basic research question is: Are there learning opportunities for architecture students to experience and develop the leadership concepts of teamwork, collaboration, and relational skills?  Specifically, three (3) secondary questions served as the focal point in data collection:

1.     How do architectural education experiences provide opportunities to learn leadership in architecture?

> The objective here is to identify and interpret the scholarly and practical opportunities in higher education to experience leadership in architecture.

2.     What leadership lessons can be learned from architectural education experiences?

> The objective here is to gain knowledge and understanding of the meanings embedded in the leadership experiences and come to new understandings of the leadership lessons learned.

3.     How do teamwork, collaboration, and relational skills provide value to the architecture student's personal and professional development in the context of leadership in architecture?

> The objective here is to define teamwork, collaboration, and relational skills in the context of leadership in architecture and to identify the obstacles and outcomes to each of these concepts.

These research inquiries encouraged personal reflection that lent understanding to the origins of learning leadership in architectural education.

### *Guiding Assumptions*

Qualitative researchers do not generally state formal hypotheses before conducting a study, because they "seek to understand the nature of their participants and contexts before state a research focus or hypothesis" (Gay, Mills and Airasian 61).  Instead,

assumptions are created to guide the qualitative inquiry, and in turn, observe emerging patterns or concepts that may lead to the formation of new assumptions (or hypotheses) (Gay, Mills and Airasian 61).

This qualitative inquiry was based on the following four (4) assumptions:

1. *Learning leadership in architecture is about teamwork.*

   Architecture schools provide its students with learning opportunities to work together on teams, creating a mutual respect and understanding when working together as well as in developing a self-awareness of one's strengths and weaknesses.

2. *Learning leadership in architecture occurs in a collaborative environment.*

   The architecture profession is a collaborative process dependent on people relationships in design, engineering, and construction. To bring this relationship into education and have students collaborating with other students encourages personal growth and leadership development.

3. *Learning leadership in architecture is about relationships.*

   The nature of the architecture profession is fundamentally based on human interaction and building relationships. To have a healthy relationship with the client and project team establishes value, integrity, and credibility.

4. *Learning leadership in architecture takes time, practice, feedback, and reflection.*

   Developing leadership skills takes time, practice, and feedback. Individuals grow and develop at different rates. Self-reflection brings understanding and encouragement. Architecture schools are the appropriate starting place to make mistakes and learn from them.

To further guide and develop this study, the researcher selected a working definition on leadership from Susan R. Komives et al., *Exploring Leadership: For College Students Who Want to Make a Difference*, which states leadership is a:

> "relational process of people together attempting to accomplish change
> or make a difference to benefit the common good" (11).

This working definition of leadership was used during the research to frame the phenomenological approach in the context of leadership in architecture. Refer to Appendix H: Overview of Leadership Theory for additional information.

## C.        Data Sources

The data sources for qualitative inquiry generally come from three areas: individuals, a team, and a specific setting (LeCompte, Preissle and Tesch).  In this study, the data sources also include the role of the researcher and her interactions with the individuals and setting, a selected review of literature, and study participants.

### *Role of the Researcher*

In qualitative inquiry, the researcher is the primary instrument in the research process through which data is collected, reviewed, and interpreted (Lichtman).  "It is imperative, then that the researcher has experience and understanding about the problem, the issues, and the procedures" (Lichtman 16).  My primary role as an active participant observer yielded personal access to the environment and daily activities affecting all teams and individuals, including close relationships with key individuals.  This participant observer role will be further described in the next section under Data Collection Techniques.

Due to the nature of my research questions, I depended on personal lived experiences grounded in my former leadership positions that I held while in undergraduate school and in my early years in architectural internship.  "Personal experience derived from direct participation in the insiders' world is an extremely valuable source of information, especially if the researcher has performed membership roles and otherwise experienced life as an insider" (Adler and Adler 93; Jorgensen).

I also depended on the study participants as a data source for research material.  Thus, as the researcher, my role is to be a sensitive observer, storyteller, and writer (LeCompte, Preissle and Tesch 92; Wolcott "Criteria for an Ethnographic Approach to Research in Schools" 116).  Additionally, my secondary role is that of a learner.  As a learner, the "perspective will lead [me] to reflect on all aspects of research procedures and findings" (Glesne and Peshkin 36).

### *Literature Review*

The purpose of a literature review is to determine what has previously been done that relates to my study through a "systematic identification, location, and analysis of documents containing information relation to the research problem" (Gay, Mills and Airasian 39).  Archival documents include journal articles, abstracts, reviews, dissertations,

books, other research reports, and electronic media – all of which can demonstrate assumptions, provoke new questions, provide additional information, and ultimately, guide the research study (Gay, Mills and Airasian). According to LeCompte et al., there are three (3) components to a literature review: substantive review, theoretical review, and methodological review.

- A substantive review compiles references to all the prior empirical work which has been done in the area of the researcher's investigatory problem.

- A theoretical review looks at how the results of studies in the topic area were interpreted, what theoretical frames were used to inform the study, and what implications were drawn.

- A methodological review examines how all prior studies were done (154).

For this study, a theoretical review on leadership theory was performed. In writing a literature review for a qualitative inquiry, however, a traditional literature review (one that has its own written section in the study) posed a challenge in organizing and presenting the data collected. Lichtman recommends that in qualitative research, it is best to organize the literature review by themes and weave the literature into the entire paper (109). This recommendation has been instituted for this study.

### *Lived Experience*

The setting (or *lived experience*) is the natural environment that the phenomenon occurs in and is being studied. Six (6) lived experiences were specifically selected for this qualitative inquiry in which the phenomenon of leadership in architecture occurred: an architectural design studio, an architectural student organization, a masonry training camp, two practicum studio experiences, and an architectural internship.

Each lived experience is directly related to the education, training, and practice of architecture. First, an architectural design studio is the central academic learning environment in which an architecture student learns, grows, and develops as an individual and as a young professional. Second, the student organization, the AIAS Hawai'i Chapter, is part of a non-profit student member national organization in architecture that offers a platform for architecture students to engage in community service and policy making. Third, the selection of the IMI Masonry Camp provided an introduction to role playing real-world collaborations between design and construction disciplines. Next, the two-semester sequence Practicum Studios ("A" and "B") at the

University of Hawai`i-Mānoa School of Architecture provided a structured learning environment and framework in which learning leadership in architecture occurred.  And lastly, the architectural internship offered a reflective perspective in developing one-on-one relationships that may become of value for mentoring young professionals.

These six lived experiences cover a span of seventeen (17) years in architectural education and internship.  Table 6 below summarizes the lived experiences in architecture, when it occurred, and the duration of the occurrence.

Table 6: Lived Experiences in Architecture

| No | LIVED EXPERIENCE | WHEN OCCURRED | DURATION |
|----|------------------|---------------|----------|
| 1 | Architectural Design Studio | Undergraduate School Years | Sixteen (16) Weeks |
| 2 | AIAS Student Organization | Undergraduate School Years | One Academic School Year |
| 3 | IMI Masonry Camp | 1st Year Architectural Intern | Eight (8) Days |
| 4 | Practicum Studio "A" Payette Associates Inc. (PAI) | Graduate School Years | Eighteen (18) Weeks |
| 5 | Practicum Studio "B" PageSoutherlandPage (PSP) | Graduate School Years | Eighteen (18) Weeks |
| 6 | Architectural Internship Clifford Projects Inc (CPI) | 6th Year Architectural Intern | Four (4) Months |

Note: Refer to Appendix I for an Executive Summary of the UH Mānoa SOA Practicum Studio.

### *Study Participants – Teams and Individuals*

My relationships with the study participants are twofold, where I immersed myself within teams and also interacted with individuals.  There are three types of teams: formal, informal, and occasional (Lichtman 140).  As described by Lichtman, a formal team exists on a regular basis, such as students in a classroom or professionals at a workplace.  In an informal team, the members of the team meet informally and not on a regular basis; although members are in contact with each other.  However, this type of team has its members moving in and out of the environment, such as a community volunteer team or an online chat team.  An occasional team meets infrequently and has its membership constantly changing.

For this qualitative inquiry, the study participants in all of the lived experiences are part of a formal team.  On the following page, Table 7 provides a summary of each lived experience and its study parameters and participants.

## Table 7: Study Parameters and Participants

| No | LIVED EXPERIENCE | STUDY PARAMETER | DESCRIPTION |
|---|---|---|---|
| 1 | Architectural Design Studio | Environment<br>Team<br>Participants<br>Context | University of Hawai'i-Mānoa, School of Architecture, Hawai'i<br>Formal<br>Baccalaureate architecture students<br>Formal Higher Education, Classroom Learning Environment |
| 2 | AIAS Student Organization | Environment<br>Team<br>Participants<br>Context | University of Hawai'i-Mānoa, School of Architecture, Hawai'i<br>Formal<br>Baccalaureate and Masters architecture students<br>Formal Higher Education, Extracurricular Activities |
| 3 | IMI Masonry Camp | Environment<br>Team<br>Participants<br>Context | International Masonry Institute, Swan's Island, Maine<br>Formal<br>Architecture Students & Interns, Craftworker Apprentices<br>Training and Learning Environment |
| 4 | Practicum Studio "A" PAI | Environment<br>Team<br>Participants<br><br>Context | Payette Associates Inc., Boston, Massachusetts<br>Formal<br>Project Team and Client (Government)<br>Key Informant, Thomas M. Payette, FAIA, Principal<br>Work Sessions – Planning and Programming |
| 5 | Practicum Studio "B" PSP | Environment<br>Team<br>Participants<br><br>Context | PageSoutherlandPage, Houston, Texas<br>Formal<br>Project Team and Client (Government & Community)<br>Key Informant, Lewis T. May, FASLA, Vice President of Planning<br>Work Sessions – Planning and Programming |
| 6 | Architectural Internship CPI | Environment<br>Team<br>Participants<br>Context | Clifford Projects Inc., Honolulu, Hawai'i<br>Formal<br>Key Informant, George Hogan, Projects Architect<br>Work Sessions – Construction Administration |

Note: Refer to Appendix J for additional information on team structure and study participants.

Additionally in qualitative inquiry, willing individuals may also offer material and data for the research. These individuals are called "key informants, who possess special knowledge [experience and expertise], status, or communicative skills" (LeCompte, Preissle and Tesch 166; Zelditch). This study identifies three key informants:

- UH Mānoa SOA Practicum Faculty Mentor Thomas M. Payette, FAIA;
- UH Mānoa SOA Practicum Faculty Mentor Lewis T. May, FASLA; and
- Projects Architect George Hogan.

## D.     Data Collection Techniques

In qualitative inquiry, there are three primary data collection techniques: observation, interviewing, and archival research (e.g., examination of related documents), which are all utilized in this study (Angrosino; Gay, Mills and Airasian; Lichtman). Angrosino offers these definitions for each of the data collection techniques:

- ▪     Observation is the act of perceiving the activities and interrelationships of people in the field setting through the five senses of the researcher (37);

- ▪     Interviewing is a process of directing a conversation so as to collect information (42); and

- ▪     Archival research is the analysis of materials that have been stored for research, service, and other purposes both official and unofficial (49).

### *Active Participant Observation*

Active participant observation was utilized in this study.  As an active participant observer, the researcher: "(1) engaged in activities appropriate to the situation and (2) observed the activities, people, and physical aspects of the situation" (Spradley 54).  The aim of active participant observation is to understand the team's and/or individuals' social interactions with each other and within their environment from an insider's perspective. For this study, the researcher sought to observe and gather the impressions of the study participants' behavior which involves looking, active listening, asking, and interacting (LeCompte, Preissle and Tesch).

Active listening is a communication technique that promotes rapport between the study participant(s) and researcher.  Active listening is a process using "the ability to pick up, define, and respond accurately to the feelings expressed by the other person; it is learning to really listen, without butting in or projecting one's own opinion and ego" (Rosenbaum 81).

Four (4) strategies were used to guide the researcher's observations:

- ▪     Observations by broad sweep,
- ▪     Observations of nothing in particular,
- ▪     Observations that search for paradoxes, and
- ▪     Observations that search for problems facing the team (Wolcott Transforming Qualitative Data: Description, Analysis, and Interpretation).

Observations by broad sweep allows for general descriptors, such as the description of the physical environment, how many individuals are there, who are they, the time of day and the purpose of the social situation. Observations of nothing in particular comments on what individuals are wearing or where individuals are seated in the setting. Observing for paradoxes and for problems, the researcher begins to look more deeply into the interactions exchanged and displayed (Glesne and Peshkin). The benefit of participant observation is that it affords the researcher an opportunity to "gain insights and develop relationships with participant that would not be possible if the researcher observed but did not participate" (Gay, Mills and Airasian 414).

### *Field Work, Field Notes*

Data collection specific to the Practicum Studio sequence "A" and "B" centered on fieldwork, which included "spending considerable time in the [learning environment] under study, immersing oneself in this setting, and collecting as much relevant information as possible as unobtrusively as possible" (Gay, Mills and Airasian 413). Although field notes could also refer to other qualitative research materials collected, recorded, and compiled, the field notes in this qualitative inquiry were specifically accumulated through my field work in the Practicum Studio.

There are three (3) types of field notes: inscription, transcription, and description.

- Inscription is the notation made in the midst of interaction and participation; quick jottings of key words or momentary notes to remember something.
- Transcription is writing something down as it occurs, recording as much as possible as exactly as possible.
- Description occurs out of the flow of the activity, sometimes even out of the field (LeCompte, Preissle and Tesch 224).

For this phenomenological approach, all three types of field notes were generated and kept in either a bound notebook or a compiled stack of loose papers. A personal journal was also utilized in the Practicum Studio to aid in self-reflection and examination of my own thoughts and motivations. For the Practicum Studio, I created a template worksheet that assisted in my documentation and record of meetings with the study participants and key informants, which was submitted formally as required by the Practicum Studio requirements. A sample worksheet, "Summary of Mentorship Conference" is found in Appendix K.

### *Interviews*

Interviews are distinguished by their degree of structure and formality: structured interviews and unstructured interviews (Gay, Mills and Airasian 418). Both are purposeful interaction between researcher and study participant in which interviews allow the researcher "to obtain important data they cannot acquire through observation alone" (Gay, Mills and Airasian 418). In this study, the format of an unstructured interview was utilized, because it was through daily interaction, dialogue, and exchange that data was collected. Gay et al. describes this as a little more than "casual conversation" with open-ended questions, because interviewing is also a "process of directing conversation" to collect data (Angrosino 51; Gay, Mills and Airasian 419). Moustakas described the phenomenological interview as "an informal, interactive process [which] utilizes open-ended comments and questions" (114).

Specific to the Practicum Studio, this data collection technique of holding informal conversations with study participants creates a participant-led interview process (Creswell). Casual conversations occurred outside of the formal setting of the phenomenon being studied, and it is "designed to ask participants to reconstruct their experience and to explore their meaning" (Seidman 69). Conversations over lunch, or in between meetings, or in the car on the way to the Client's office are examples of informal settings where continued exchange of dialogue occurred between the researcher and the study participants. These casual conversations allowed for additional information either for clarity or meaning. The unstructured interview format presents reflection and interpretation on the participants' experiences, as suggested by Seidman with the focus on (1) the life story of the participant; (2) the "concrete details of the participants' present experience"; and (3) reflection on the meanings of these experiences (11).

### *Electronic Questionnaire*

An electronic questionnaire was also utilized as a data collection technique, which was electronically submitted to the UH Mānoa SOA Practicum Faculty in January 2006. The selected individuals served as Practicum Faculty Mentor to a Practicum Student assigned to their respective firm, who were enrolled in Practicum Studio for a semester of scholarly research and practical pursuits. The Practicum Faculty represented executive leadership from several architectural firms located in Hawai`i and the US Mainland. A total of ten (10) questionnaires were electronically mailed to Practicum Faculty, with a

response rate of five (5) questionnaires (50%) returned.  Refer to Appendix L for a sample of the electronic questionnaire provided to Practicum Faculty Mentors.

### *Examination of Related Documents*

Archival research is basically a collection and examination of other related documents.  In this study, as it is related to the Practicum Studio, I also collected and reviewed selected reports written by other Practicum Students that were submitted as a requirement of the Practicum Studio scholarly assignments.  These reports were written in reflection of each individual's learning experiences in Practicum Studio and how they interpreted, evaluated, and defined leadership in architecture.

Additionally, I also collected and reviewed reports written by second year architecture students enrolled in the UH Mānoa SOA Fall 2003 course, ARCH 200: Professional Practice of Architecture.  This particular course is an introductory course in a strand of professional practice courses taught at the SOA.  These reports were written also in reflection of each student's learning experiences as they were introduced to professional practice by visiting local architecture firms and speaking with practitioners.

### *Data Triangulation*

The importance of using multiple data collection methods and multiple data sources was sought to order to increase the trustworthiness of the findings in the research process, otherwise known as data triangulation (Angrosino; Glesne and Peshkin).  Four (4) basic types of triangulation are identified as follows (Denzin and Lincoln):

- Data triangulation

  Comparison and cross checking the consistency of different data sources derived at different times and by different means within qualitative inquiry methods.

- Theory triangulation

  The researcher reviewed selected literature and documents on leadership theories, and applied the perspectives to interpret the data collected.

- Methodological triangulation

  This is the application of two or more research methods in a single study.  Often it refers to the combination of quantitative and qualitative research methods.  The researcher only examined the consistency of the data generated by participant observation field notes between the six selected lived experiences.

- Investigator triangulation

  The researcher did not use several different investigators or other researchers to review findings.

Data triangulation is a tool to support the construction of the research findings, and it allowed a focused framework to draw interpretations from.  The use of multiple sources and techniques supported the development of a more comprehensive understanding of the lived experiences and the phenomenon of learning leadership in architecture.  LeCompte et al. noted that data triangulation also assists in correcting biases that occur when the researcher is the only observer of the phenomenon under investigation.

A summary of the data collection techniques utilized for this phenomenological approach is provided in Table 8 below:

### Table 8: Data Collection Techniques

| No | LIVED EXPERIENCE | OBSERVATION | FIELD NOTES | INTERVIEW | EVALUATION OF RELATED DOCUMENTS |
|---|---|---|---|---|---|
| 1 | Architectural Design Studio | Active Participant | Description | None | Yes |
| 2 | AIAS Student Organization | Active Participant | Description | None | Yes |
| 3 | IMI Masonry Camp | Active Participant | Description | None | None |
| 4 | Practicum Studio "A" PAI | Fieldwork, Active Participant | Inscription Transcription Description | Unstructured Conversational Questionnaire | Yes |
| 5 | Practicum Studio "B" PSP | Fieldwork, Active Participant | Inscription Transcription Description | Unstructured Conversational Questionnaire | Yes |
| 6 | Architectural Internship CPI | Active Participant | Description | Unstructured Conversational | None |

### E.     Data Content Interpretations

According to Gay et al., data analysis and data interpretation serve two different purposes in qualitative inquiry:

- Data analysis is an attempt by the researcher to summarize collected data in a dependable and accurate manner.

- Data interpretation is an attempt by the researcher to find meaning in the data and to answer the "so what?" question in terms of the implications of the study (467).

Data interpretation involves finding the *meaning* in the data content collected, and interpreting the data content was an essential part of the process of understanding and contextualizing the phenomenon under study.  For this qualitative inquiry, data content interpretations were done in sequence with the data collecting process.  As Merriam noted "the right way to analyze data in a qualitative inquiry is to do it *simultaneously* with data collection" (162), enabling the researcher to focus and shape the study as it proceeds (Glesne and Peshkin).  Data content interpretation strategies were informed by the following references:

- *Educational Research: Competencies for Analysis and Applications* (Gay, Mills and Airasian);

- *Becoming Qualitative Researchers: An Introduction* (Glesne and Peshkin);

- *Ethnography and Qualitative Design in Educational Research* (LeCompte, Preissle and Tesch); and

- *Qualitative Research in Education: A User's Guide* (Lichtman).

The researcher formulated a strategic plan to:

- Re-visit the original proposal, research questions, and objectives

- Create a personalized graphic timeline of the leadership opportunities experienced

- Organize field notes by lived experience, chronologically

- Scan the data material and begin jotting notes and observations in the margins (utilize using symbols, i.e., "star" or "exclamation mark" to mark importance)

- Reflect on the field notes and describe thorough, comprehensive descriptions of the lived experience

- Generate a list of keywords based on research questions, review of related literature, and reflection/scanning of data material

- Identify themes that have emerged from the review of literature and in the data collection
- Create a color-coding system representing keywords and themes
- Begin conceptual mapping of relationships, connections, or common aspects between keywords and themes
- Ask additional follow-up questions to question the data collected
- Establish categories within which the data are organized
- Continuously update keyword, themes, and color-codes

Once the initial process of going through the data content had been sorted through, the next step was to establish broad outlines of learning leadership in architecture. Writing first from memory and later checking it against the data content was a preferred strategy (LeCompte, Preissle and Tesch). Writing summaries of each lived experience helped to develop the pieces that fit together, which LeCompte et al. describe as convergence (LeCompte, Preissle and Tesch). "Because the goal of data interpretation is to find the meaning of the data, it is based heavily on the connections, common aspects, and linkages among the data, especially the identified categories and patterns" (Gay, Mills and Airasian 478). Thus, attention to organizing and coding, creating categories from the emerging connections and identifying common concepts and linkages were important to facilitate the interpretation of the data.

### *Reflection & Limitations*

A drawback to conducting active participant observation is that the researcher "may lose objectivity and become emotionally involved with participants" (Gay, Mills and Airasian 414). Thus, this phenomenological approach assumes that through dialogue and reflection, the meaning of the lived experience will be revealed. According to Densten and Gray, this reflection process is deemed critical to leadership development, and provides the student an opportunity to gain further perspective (119). The findings of this qualitative inquiry are not generalized beyond the lived experiences selected or the study participants involved. In addition, the study participants are researcher-selected and may not represent the entire architectural student population or architectural profession or community. The product of this work should not be treated as a final position on architectural students' leadership development, but rather provide a framework for additional research inquiry into learning leadership in architecture.

## F. Summary of Research Methodology

In summary, the purpose of this phenomenological approach is to understand the phenomenon of leadership in architecture and to interpret the meanings within the lived experiences of the researcher. Table 9 below summarizes the purpose of the study, its research methodology, research questions, data sources, data collection techniques, and data content interpretations utilized for this study.

Table 9: Summary of Research Methodology

| PURPOSE OF THE STUDY | | | |
|---|---|---|---|
| Explore and record practical and scholarly opportunities to learn leadership in architecture | | | |
| RESEARCH METHODOLOGY | | | |
| Qualitative Inquiry, Phenomenological Approach | | | |
| BASIC RESEARCH QUESTION | | | |
| Are there learning opportunities for architecture students to experience and develop the leadership concepts of teamwork, collaboration, and relational skills? | | | |
| RESEARCH QUESTIONS | DATA SOURCES | DATA COLLECTION TECHNIQUES | DATA CONTENT INTERPRETATIONS |
| How do architectural education experiences provide opportunities to learn leadership in architecture? | ▪ Lived Experiences<br>▪ Study Participants<br>▪ Selected Literature and Documents<br>▪ Observation Notes | ▪ Active Participant Observation<br>▪ Field Work & Notes<br>▪ Interviews<br>▪ Literature Review<br>▪ Data Triangulation | ▪ Coding<br>▪ Categorizing<br>▪ Identifying Concepts<br>▪ Reflection |
| What leadership lessons can be learned from architectural education experiences? | ▪ Lived Experiences<br>▪ Study Participants<br>▪ Selected Literature and Documents<br>▪ Observation Notes | ▪ Active Participant Observation<br>▪ Field Work & Notes<br>▪ Interviews<br>▪ Literature Review<br>▪ Data Triangulation | ▪ Coding<br>▪ Categorizing<br>▪ Identifying Concepts<br>▪ Reflection |
| How do teamwork, collaboration, and relational skills provide value to the architecture student's personal and professional development in the context of leadership in architecture? | ▪ Lived Experiences<br>▪ Study Participants<br>▪ Selected Literature and Documents<br>▪ Observation Notes | ▪ Active Participant Observation<br>▪ Field Work & Notes<br>▪ Interviews<br>▪ Literature Review<br>▪ Data Triangulation | ▪ Coding<br>▪ Categorizing<br>▪ Identifying Concepts<br>▪ Reflection |

# III.    Research Findings

We begin first with an aim to understand what the phrase "leadership in architecture" means by searching to define each word in the phrase individually.   Next, we will look at research findings as an exploration and record of lived experiences in the phenomenon of leadership in architecture.   Each emergent leadership concept: *teamwork*, *collaboration*, and *relational skills* will be presented further with descriptions of the six lived experiences and provide an analysis of leadership concepts and lessons learned.   The research findings will also indicate that there are personal descriptors, academic interventions, and leadership involvements that can significantly contribute to the leadership development of architecture students.

## A.    Leadership in Architecture

This section aims to describe and define the following questions:

- What is a leader?
- What is leadership?
- What is architecture?
- What is leadership in architecture?

### *What is a Leader?*

#### *A Leader Leads and Directs with Influence*

A leader is defined as "a person who leads and directs with authority or influence" of others ("Merriam-Webster's Collegiate Dictionary" 707).   The dictionary definition refers to a person in a leadership position who has been elected, selected, or hired to assume responsibility for a team.   In this reference, the term can also refer to a person who has commanding authority or influence over others, a person with a position of title, such as president, supervisor, team captain, or committee chairperson.   This type of leader is called a positional leader (Komives, Lucas and McMahon 14).

#### *A Leader Relates and Demonstrates*

As a leader you must be, and be seen to be, a people person who has the best interests of the team (as well as the organization) at heart.   The key to connecting with individuals on a team is a challenge for any leader, and so, the leader's role is to relate with individuals through open communication that demonstrates a supportive style of

approach.  An effective leader demonstrates an open, honest, and willing helpful attitude to support and develop teamwork and collaboration.

A leader is also a person who understands the characteristics of a team and can develop a team that thinks and acts together, with individual and team interests aligned. This type of leader engages with others using relational skills, which is the ability to relate interpersonally and socially with individuals.  The social character of a leader is a key characteristic in leadership ability.  "Whether as the positional leader or participant-collaborator-[team] member, a person can be a leader by taking initiative and making a difference in moving the [team] forward toward change" (Komives, Lucas and McMahon 14).  This type of leader is called a relational leader (Komives, Lucas and McMahon 14).

Robert Katz, in a 1974 classic Harvard Business Review article entitled *Skills of an Effective Administrator*, suggested that all [leaders] need three basic skills to be successful (qtd. in Sperry 43).  He described these basic skills as technical, human relations, and conceptual skills.  Today, these skills are more commonly referred to as technical/analytical, relational, and strategic skills, as shown in Table 10: Leadership Skills below.

**Table 10: Leadership Skills – Technical/Analytic, Relational, and Strategic**

| TECHNICAL/ANALYTIC SKILLS | RELATIONAL SKILLS | STRATEGIC SKILLS |
|---|---|---|
| <ul><li>Mastering job-specific skills</li><li>Problem solving and decision - making</li><li>Time management</li><li>Project management</li><li>Performance monitoring</li><li>Training and development</li></ul> | <ul><li>Communication</li><li>Team development</li><li>Conflict resolution</li><li>Coaching</li><li>Motivation</li></ul> | <ul><li>Visioning and strategy formulation</li><li>Strategic implementation and management</li><li>Guiding change</li></ul> |

Source: (qtd. in Sperry 43).

For the purpose of this qualitative inquiry, we will focus on the five (5) elements listed for relational skills: communication, team development, motivation, conflict resolution, and coaching.  These elements will be further examined in the section under Relational Skills.

Additionally, as defined by Daniel Goleman in his book *Working with Emotional Intelligence*, the "capacity for recognizing our own feelings and those for others, for motivating ourselves, and for managing emotions well in ourselves and in our relationships" is an extension of a being a relational leader, which Goleman defines as

emotional intelligence (316).  Emotional intelligence consists of five (5) basic emotional and social competencies: self-awareness, self-regulation, motivation, empathy, and social skills, described as follows.

- ▪ Self-awareness

  Self-awareness involves recognition of one's feelings in the moment, the capacity for realistically assessing one's own abilities and possessing sufficient self-confidence to take risks.

- ▪ Self-regulation

  Self-regulation involves sufficient mastery over one's emotions and impulses to cope effectively with emotional distress and changing circumstances.  It also involves self-responsibility and the capacity to delay gratification in the pursuit of personal and professional goals.

- ▪ Motivation

  Motivation involves having a results orientation and the capacity to take initiative, to strive for improvement, and to persevere despite frustrations and setbacks.  It also involves holding oneself accountable for one's goals.

- ▪ Empathy

  Empathy involves one's awareness of others' emotions and needs.  An empathic individual can take on the perspective of others and establish rapport with them.

- ▪ Social skills

  Social skills involve the capacity to accurately read social cues, to cooperate and interact with others in a positive and effective manner, and to utilize these skills in persuading, negotiating, problem solving, and settling conflicts (Goleman; qtd. in Sperry 23).

Discovering your strengths and weaknesses is an inward journey to understanding your emotional and social competencies, including clarifying your personal goals, values, and beliefs.  Each person has a unique way of adapting to personal challenges and experiences, and the key to this principle is the concept of individuality, how the individual uses relational skills, emotional and social competencies, problem solving skills, and critical thinking strategies to develop confidence in one's knowledge of leadership skills as well as develop an understanding of others.

Self-awareness comes almost completely through observation over a period of time.  As self-awareness emerges, you begin to see the need or desire to build other skills and to have a wider range of responses in decision making, problem solving, resolving

conflict, and ultimately, in relating with others as a leader (Komives, Lucas and McMahon 128). Authors James M. Kouzes and Barry Z. Posner made the following observation regarding self-awareness:

> Learning to lead is about discovering what you care about and value. About what inspires you. About what challenges you. About what gives you power and competence. About what encourages you. When you discover these things about yourself, you'll know what it takes to lead those qualities out of others (The Leadership Challenge 391).

"Self-awareness also plays a crucial role in empathy or sensing how someone else sees a situation: If a person is perpetually oblivious to his feelings, he will also be tuned out to how others feel" (Goleman, Boyatzis and McKee 30). The ability to relate to others as a leader is based on an openness to personal growth and self-awareness in an active "process of influence whereby a leader persuades, enables, or empowers others to pursue and achieve the intended goals of the organization" (Sperry 79).

How individuals relate and conduct themselves in interpersonal and organizational situations is a dimension of their personality and social competencies, and an effective leader aims to understand basic human behavior in order to motivate them. People have various kinds of needs and knowing why people behave as they do is the key to gaining their commitment and trust. Gaining their trust is a challenge for any leader, and so, the leader's emotional and social character is a key component in his or her ability to relate to people as individuals. A leader's ability to relate with others is communicated through his or her knowledge of team dynamics and relational skills.

### *A Leader Motivates Others with Credibility*

Motivating others to create or improve team efficiency requires purposeful communication and team building skills that help each person seek to work cooperatively together. Based on two functions, motivation is about expectations and reinforcements, either positive or negative (Sullivan and Glanz 198). Motivation is based upon a leader's expectations of desirable goals and the reinforcement method(s) chosen to accomplish those goals. The emphasis is on a leader's feelings of success (or failure) in a learning situation. Supportive leadership nurtures individual growth, instilling a sense of belonging, one of the key principles in creating a motivational environment. As a leader helps others to solve problems, his/her leadership ability to resolve complex issues

increases. As a leader demonstrates empathy and compassion for others, his/her sense of emotional well-being is heightened.

However, to motivate others, a leader's ability is to find the right balance of a team's knowledge and skills toward building collaboration and team efficiency. Kouzes and Posner identified four characteristics of admired leaders, who others continuously look for and admire in a leader (and most likely would want to follow): honest, forward-looking, competent, and inspiring (The Leadership Challenge, 25). An honest leader brings "strong integrity" to the team, and followers want assurance that a leader will be "truthful, ethical, and principled" (Kouzes and Posner The Leadership Challenge 27). A leader should be forward-looking and have in mind the bigger picture or long-term plan for the team (or organization). A competent leader has relevant experience to get things done, and more importantly, posses "the ability to bring out the best in others" (Kouzes and Posner The Leadership Challenge 30). The ability to bring out the best in others is a reflection of an inspiring leader, who exhibits enthusiasm and energy in motivating his/her team. These four characteristics bring value, purpose, and meaning to a credible leader.

As suggested by Kouzes and Posner, a leader's credibility, how leaders earn trust and confidence, depends on the leader's ability to listen empathetically and adapt to the changing needs and dynamics within a relationship as it develops (Credibility: How Leaders Gain and Lose It, Why People Demand It). Effective leaders understand credibility is a key aspect to developing and maintaining a reciprocal relationship between those who choose to lead and those who decide to follow (Kouzes and Posner Credibility: How Leaders Gain and Lose It, Why People Demand It). Developing a personal approach to leadership is difficult. It requires thoughtful examination of our own values, principles, and attitudes as well as the attributes and characteristics of a team.

### *A Leader Supports a Relationship of Trust*

A leader, who supports a relationship of trust with his or her members of a team, encourages team involvement and motivates individuals to contribute to the team's goals. An atmosphere of trust must develop in relationships. Being a leader is a trusting role in which one person is in a relationship to assist and lead others, influence and create change, and effectively build collaborative relationships in an effort to accomplish a shared goal. Developing a personal approach to leadership is difficult. It requires thoughtful examination of our own values, principles, and attitudes as well as the

attributes and characteristics of a team.  Leaders are defined by their actions in providing vision, motivation, and direction for others.  Leaders can lead indirectly or directly, depending on what they say or how they act will influence others.  Through a leader's interpersonal relationship with others, a leader can be effective in bringing value and meaning, personality and self-identify, and team identity.

A leader's understanding of basic human behavior can work in the best interests of the team (as well as the organization) in supporting relationships and promoting effective team functioning.  The stronger the relationship between a leader and his/her team members, the more likely effective leadership occurs.  Exemplary leaders enable others to act, fostering collaboration and building trust in relationships.

A supporting leader nurtures individual growth, instilling a sense of belonging, one of the key principles in creating a motivational environment.  According to Maslow's Theory, the five basic interpersonal needs are physiological need, safety need, belongingness need, esteem need, and self-actualization need.  Abraham Maslow, author of *Toward a Psychology of Being* asserted that all humans have basic interpersonal needs, and these needs can be arranged in a pyramid hierarchy; "that is, people do not concern themselves with higher-level needs [belongingness, esteem, and self-actualization] until the lower-level needs [physiological and safety] are satisfied" (qtd. in Beebe and Masterson 60; qtd. in Hitt 161), as shown below in Figure 3: Maslow's Theory.

## Figure 3: Maslow's Theory

Self-Actualization Need
Esteem Need
Belongingness Need
Safety Need
Physiological Need

Source: (qtd. in Beebe and Masterson 60; qtd. in Hitt 161).

The first two lower-level needs, physiological and safety, are survival needs, such as the fundamental need for air, water, food, and rest, and the fundamental need for security (e.g., shelter, stability in order/laws) and protection (e.g., clothing).  Once survival needs are fulfilled, the three upper-level needs can then be met, such as the need to belong or need for a place in a one's family (e.g., to belong to a high school sports team or to

belong to a church), the need for esteem (which leads to self-confidence, self-efficacy, and self-respect), and the need for being (self-actualization and self-fulfillment) (Hitt). These three upper-level needs become more important to an individual throughout their lives.

In the context of architecture, Maslow's Theory can serve as guidelines for a leader to motivate his/her team members. According to Hitt, a leader should first provide safe physical surroundings, eliminate safety hazards, prevent excessive stress, and promote good health in the work environment (164); secondly, a leader addresses the safety needs by achieving a match between job demands and staff capabilities; letting the team members know what is expected of them, and providing a candid and timely feedback on performance(165); and thirdly, a leader involves his/her team members in goal setting and planning, team problem solving, team decision making, review of a team's performance, and team development activities(166). For a leader to assist in his/her team member's self-esteem, a leader should treat each person with dignity and respect, show each person how his or her work contributes to worthwhile ends, promote self-management, ask the team for their ideas and opinions, and recognize individuals for good work (Hitt 168). For a leader to assist in his/her team member's self-actualization, a leader should show personal interest in the development of each individual, identify the personal goals of each individual, provide effective on the job training and coaching, provide opportunities for formal education and training, and provide career planning assistance (Hitt 169). The above are examples of how a leader supports his/her members and begin to build a relationship of trust.

To recap, a leader is a person, who is proficient in understanding people's basic needs and behaviors, motivates the team with trust, and actively supports collaborative relationships to maximize performance or accomplish change. Table 11 below highlights the descriptions of what is a leader:

Table 11: What is a Leader?

| What is a Leader? | <ul><li>Leads and Directs with Influence</li><li>Relates and Demonstrates</li><li>Motivates Others with Credibility</li><li>Supports a Relationship of Trust</li></ul> |
|---|---|

### *What is Leadership?*

#### *Leadership is an Active Learning Process*

Leadership is about dedication and commitment to learning and benefiting from personal growth, proactively learning to gain an understanding and appreciation of being a team leader and team player.  An individual must be an active committed participant to learning and developing leadership skills.  Authors Astin and Astin in *Leadership Reconsidered* assert that "leadership development is important and useful because it can enrich the undergraduate [i.e., architecture student's] experience, and because it can empower students and give them a greater sense of control over their lives" (18). Researchers suggest that the future of our society depends on students learning critical leadership skills while at college (Astin and Astin; Roberts).  The learning process is useful for both personal and professional development.  As an architecture student, actively learning leadership throughout school, and ideally in the lifeworld, brings value to building a student's leadership character.

**Figure 4: The Learning Pyramid**
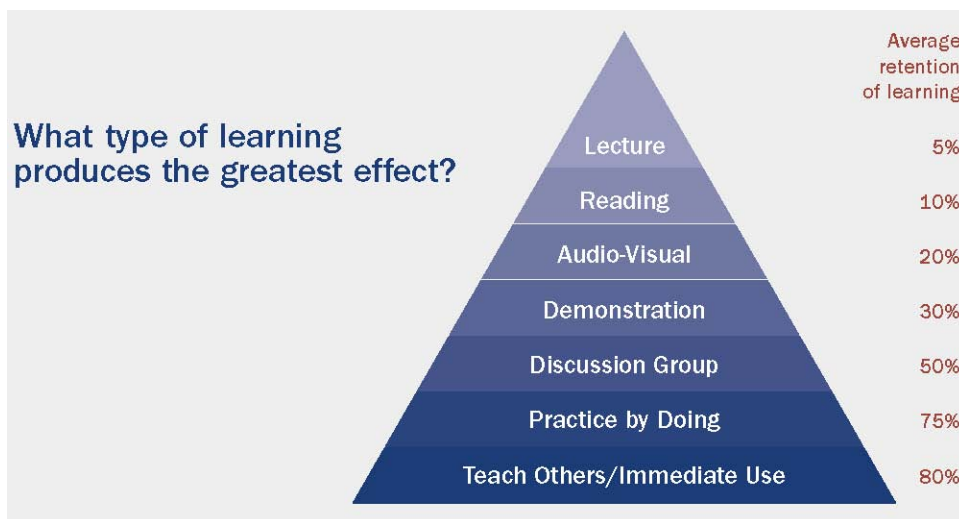


Source: (Meister 37).

The "Learning Pyramid," from Jeanne C. Meister's *Corporate Universities*, is an pyramidal illustration responding to what type of learning produces the greatest effect (37).  As shown above in Figure 4: The Learning Pyramid, 80% is the average retention when learning deals with teaching others/immediate use, 70% is the average retention when learning is practicing by doing, and 50% is the average retention when learning is

within a discussion group (Meister 37).  The "Learning Pyramid" also informs other types of learning, such as demonstration (30% average retention), audio-visual (20% average retention), reading (10% average retention), and lecture (5% average retention) (Meister 37).

The above information on the "Learning Pyramid" is of value to understand in the context of architectural education.  In architecture schools, the design studio is the primary learning environment for architecture students, where learning is a "process that occurs in interpersonal and [team] contexts and is always composed of an interaction of factors to which we append labels such as motivation, cognition, emotion or effect, and attitude" (Sarason vii).  Learning was also defined by Marton and Tsui as "the process of becoming capable of doing something as a result of having certain experience of (doing something or of something happening)" (5).  They also stated, in their definition of the learning process that "learning is always the acquired knowledge of something" and emphasized that "acting or actions" need to occur so that learning can also occur (Marton and Tsui 5).

Student interaction, more specifically, interaction amongst team members is a major characteristic of a design studio, through which learning as in "practicing by doing" and "teaching others" should be encouraged.  Authors Paul H. Ephross and Thomas V. Vassil in *Groups That Work* offer this statement on learning:

> Learning can be vicarious.  While one member may be learning how to perform a certain job within the [team], the [team] as a whole is also participating in that learning.  Such learning may be important for the [team] as a whole as well as for individual member.  [Team] members can learn skills and knowledge that they internalize and then carry into other [teams] and other aspect of their lives.  This kind of learning involves the concept of transfer of learning; viewing the [team] as a learning laboratory is one of the ways of underscoring the importance of the [team] as a setting for educational experiences (33).

In essence then, "learning is the knowledge actively created by participants [interacting] in a social context environment, which is shared (externalized) and rethought (internalized) by individuals [on a team] through the production an activity or task (Bail "Social Context of Learning").  In design studio, architecture students are actively engaged in their learning environment through processes of interacting amongst each other, practicing by doing, and teaching each other.

## *Leadership can be Learned and Developed*

Leadership is a commitment to continuous learning and developing personal growth and relationships with others. An individual must be an active committed participant to learning and developing leadership and relational skills. Three (3) basic principles are involved in learning: knowing, being, and doing:

- *Knowing*: You must know-yourself, how change occurs, and how others view things differently than you do.
- *Being*: You must be-ethical, principled, open, caring, and inclusive.
- *Doing*: You must act-in socially responsible ways, consistently and congruently, as a participant in a community and on your commitments and passions (Komives, Lucas and McMahon 5).

Leadership can be learned and developed in three progressive levels – individual, team, and organization, where each level offers opportunities for an individual to practice, reflect, and gain feedback in learning and developing new leadership skills.

- As an individual, you have probably displayed some kind of self-leadership in personal ways such as setting a goal for yourself, motivating yourself to meet that goal, and feeling personally responsible for meeting that goal. Leadership on this level is about self-discovery and individuality.

- As part of a team, leadership translates from your personal skills and internal motivation into guides of action as a member of a team (Komives, Lucas and McMahon 109). Leadership on this level begins with the self-person, "I," and when combined with others, "we" are a team. Leadership on this level gains from the relationships formed.

- On an organizational level, leadership covers a broader and larger organic structure, such as a business or political party, and it can be viewed as one large team made up of many small teams. The concept here is found in self-managing teams, where people at the "worker-level" are responsible for high-level decision making (Manz and Sims Jr.). Leadership on this level affects the administrative and functional aspects of the organization.

At the UH Mānoa SOA, an example where leadership can also be learned and developed is found in the Practicum Studio environment, where an architecture student learns in all three progressive levels as mentioned above. The Practicum Studio "provides an exceptional opportunity for exploration, development, and demonstration of basic

architectural proficiencies and research methodologies, leadership skills and personal character, and to thoroughly explore the interrelationship between theoretical knowledge and its real-life application" (School of Architecture <u>The Practicum Studio: Executive Summary</u>).  In support of leadership can be learned, Kouzes and Posner observed in their numerous leadership studies that "it's far healthier and more productive to assume that it's possible for *everyone* to learn to lead" (<u>The Leadership Challenge</u> 383).

### *Leadership is a Relational Process*

According to the dictionary's definition previously stated, the capacity to lead others acknowledges a leader has followers.  If no one is following you, you are not leading.  The capacity to lead others can be presented in several descriptive leadership frameworks; examples include situational leadership, visionary leadership, servant-leadership, transforming leadership, and principle-centered leadership.  Whatever framework one refers to, leadership is inherently a relational process.  However, "understanding the relational nature of leadership and followership opens up richer forms of involvement and rewards in teams, organizations, and society at large" (Hollander 43; qtd. in Komives, Lucas and McMahon 11).  Much of the attention has been focused on the leader's behaviors to get followers to do what the leader wants.  This approach clearly does not adequately describe the leadership relationship among people in teams (Komives, Lucas and McMahon).  The relationship between a leader and his/her follower when leading others is about a connection with people, and this connection needs to happen on an individual basis.  How we relate to each other and work together matters.  The stronger the relationship between a leader and his/her follower and the stronger the connection between the individuals on a team, the more likely effective leadership occurs.

To reiterate the working definition on leadership as defined by Komives et al., leadership is a "relational process of people together attempting to accomplish change or make a difference to benefit the common good" (11).  In an attempt to accomplish change or make a difference, the relational process is a shared dialogue between a leader and his/her followers.  The concept of common good means having shared purposes and a common vision, a valuing of the role of social responsibility.  According to Komives et al. the Relational Leadership Model involves a focus on five (5) primary components: inclusive, empowering, purposeful, ethical, and process-oriented; as illustrated on the following page in Figure 5: Relational Leadership Model.

### Figure 5: Relational Leadership Model
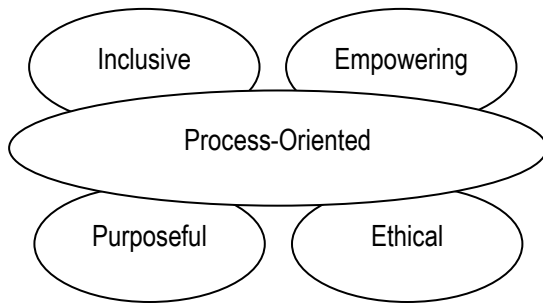


- Inclusive of people and having diverse points of view;

- Empowering of others who are involved;

- Purposeful means having an individual commitment to a goal or activity; and

- Ethical is being driven by values and standards and leadership which is "good" or moral in nature.

Source: (Komives, Lucas and McMahon 69-70).

In this leadership model, leaders do not function alone, but operate within an inclusive context in which they are involved with other individuals and encourage a process-oriented approach in accomplishing the goals and objectives of the team. When a leader demonstrates effective relational skills with a firm purpose and commitment, individuals are empowered and motivated to make things happen, either for the individual, team, or organization in an effort to meet vision, objective, or approach. Having effective relational skills is an opportunity to identify purposeful meanings in relationships between a leader and his/her follower.

To recap, leadership is purposeful and intentional in making a difference, either to influence change, direct activity, or lead others. Effective leadership demonstrates the enthusiasm and motivation to empower others, an art of ensuring that others work together with the least friction and the most cooperation. Effective leadership is a relational process in discovering who you are as an individual, in finding self-confidence and esteem in your strengths and weaknesses, and in bringing those attributes to contribute in collaboration. Table 12 below highlights the descriptions of what is leadership:

### Table 12: What is Leadership?

| What is Leadership? | ■ An Active Learning Process |
| | ■ Can be Learned and Developed |
| | ■ A Relational Process |

### *What is Architecture?*

#### *Architecture is an Art and a Design Process*

Architecture is a visual art that deals with one's perception and involves an awareness of the environmental elements in order to "see and recognize visual order, texture, color, pattern, symbols, excellent craftsmanship, expression, and beauty" (Winters xi). Architecture is more than a subjective perception of beauty; it is a conscious effort in creative imagination and artistic expression of built form and open space. The expression is demonstrated through graphic languages to communicate form and space, visual imagery, and symbolism in an environment (i.e. built, natural, spiritual, or cultural).

Architect Francis Oda, FAIA, of Group 70 International in Honolulu, Hawai`i describes architecture as a collaborative art. Architecture is a design process that brings people together from a variety of disciplines and trades to address a dynamic and process-oriented environment (Oda). The design process includes goal setting, active listening, problem solving, effective decision making, conflict resolution, and team building as well as relational aspects of leadership. Architects leading teams use technical, relational, and strategic leadership skills to guide the team through the design process. Architect Audrey J. S. O'Hagan of The Stubbins Associates based in Boston, Massachusetts, describe "the design process [as] a rigorous search for creative solutions to client needs and desires for space [and it] begins with listening to the client and users, investigating the site and surrounding conditions, contemplation and exchange" (Boston Society of Architects 29).

To further define the design process in architecture and connect it with Robert Katz's effective leadership skills (as listed in Table 10: Leadership Skills – Technical/Analytic, Relational, and Strategic), we find that the design process incorporates all three skills.

▪ The design process is technical. A leader actively manages creativity and productivity, engages in problem solving and decision making, and monitors performance. The leader does not need to be the most inventive or technical member on the team, but help release the potential for generating ideas that exists in all individuals on the team. The strength in the leader is demonstrated in resolving daily issues.

- The design process is relational. A team is structured with individuals from diverse cultural backgrounds and professional experiences, who each have a unique set of values, attributes, knowledge, and skills on architecture and design. The strength in the leader is demonstrated in how the leader relates to, motivates, and encourages a team's high-level quality productivity as well as seeking to develop the individual and collective skills of the team.

- The design process is strategic. A leader actively promotes creativity with a long-term vision in mind, focusing on the wider issues that may affect team's effectiveness and anticipating change. The strength in the leader is having a clear focus on the team's goals and objectives.

### *Architecture is a Social Responsibility*

Architecture is a profession with a social responsibility to the community, defined by a "knowledge base, a set of skills, a code of ethics, and a set of values" (Pressman 256). It is a profession with a social and legal responsibility to promote the health, safety, and welfare of the public good. In providing professional design services to the community, architects must be ethical and socially responsible in their manner of conduct. "Social responsibility is a personal commitment to the well-being of people, our shared world, and the public good" (Komives, Lucas and McMahon 15). In the profession of architecture, social responsibility translates to a partnership with the community.

In an electronic web article posted on *DesignIntelligence*, the author of "Design Diplomacy," architect and former US Congressman and Ambassador to Denmark, Richard N. Swett, FAIA, describes community partnership as design diplomacy – "by expanding 'design' from its limited aesthetic sense and broadening it to incorporate people, society and quality of life issues, we shift the traditional paradigm of architecture from the design of buildings to influencing the 'design' process for solving problems in society" (Swett).

An architect's social responsibility also permeates into the design process, whereby an architect engages the interdisciplinary team to provide more than "designing a building," but to also provide a building (or an environment) that will address the community's needs, and ideally, address the quality of life for all citizens. Boyer and Mitgang in their book, *Building Community*, describe "the efforts of the profession be creatively channeled to enrich the mission: building to beautify; building for human needs; building for urban spaces; and preserving the planet" (34).

### *Architecture is about Value and Relationships*

The practice of architecture is founded on establishing and maintaining good working relationships with a team, client, or community. "The design of buildings is informed by values affirmed by architect or student, by the demands of client or instructor, values within the sociocultural ambiance of community, society, or school of architecture" (qtd. in Pressman 18). Architecture involves actively interacting with people, fulfilling certain basic needs when relating to human values. Ultimately, knowing how to lead comes with experience from being in relationships with people and community, and the attitude demonstrated through leadership is an attitude projected by the leader's values on the interpersonal relationships she holds with others.

To summarize using the words from the 1985 AIA Gold Medal recipient William "Bill" Caudill, FAIA, architect and founding principal of CRS, a Texas-based architectural firm, "architecture is an aura – emanating from buildings, fulfilling certain basic needs relating to human values and creating an uplifting [aesthetic] experience" (Caudill <u>Architecture by Team</u> 47). The aura in architecture is about value and relationships. Table 13 below highlights the descriptions on what is architecture:

Table 13: What is Architecture?

| What is Architecture? | ▪ An Art and a Design Process<br>▪ A Social Responsibility<br>▪ About Value and Relationships |
|---|---|

### *What is Leadership in Architecture?*

Returning to the working definition on leadership as described earlier by Komives et al, we understand that leadership is a "relational process of people together attempting to accomplish change or make a difference to benefit the common good" (11). Leadership in architecture is about how a leader can be most effective and influential in creating a results oriented environment, in relating with others throughout the complete design and construction process, and in bringing value to the interpersonal relationships a leader holds with others. Successful human relations and achieving balance in a collaborative team effort can be integral to benefiting all as well as growing future leaders. Principal and architect Thomas M. Payette, FAIA, of Payette Associates Inc. in Boston, Massachusetts defines "leadership in architecture [as] an attitude of human

activity" (Payette).  Leadership is addressed through human activities, when a leader demonstrates the awareness of the needs of the team and how a leader understands relationships bring value and meaning to the interaction and exchange of creative ideas.

--†--†--†--†--†--†--†--†--†--†--†--

Leadership in architecture is ethical, purposeful, and intentional in making a difference, either to influence change, direct activity, or lead others.  Effective leadership is a relational process in discovering whom you are as an individual, finding self-confidence and esteem in your strengths and weaknesses, and bringing those attributes to contribute in a collaboration.  Effective leadership demonstrates the enthusiasm and motivation to empower others, an art of ensuring that others work together with the least friction and the most cooperation.  Leadership in architecture demonstrates awareness of the needs of the team and understands how relationships bring value and meaning to the interaction and exchange of creative ideas.  In response to the aforementioned questions at the start of this chapter, Table 14 below provides a summary on leadership in architecture:

### Table 14: Summary of Leadership in Architecture

| LEADERSHIP IN ARCHITECTURE | | |
|---|---|---|
| Demonstrates awareness of the needs of the team and understands how interpersonal relationships bring value and meaning to the interaction and exchange of creative ideas towards successful goal achievement | | |
| LEADER | LEADERSHIP | ARCHITECTURE |
| ▪ Leads and Directs with Influence<br>▪ Relates and Demonstrates<br>▪ Motivates Others with Credibility<br>▪ Supports a Relationship of Trust | ▪ An Active Learning Process<br>▪ Can be Learned and Developed<br>▪ A Relational Process | ▪ An Art and a Design Process<br>▪ A Social Responsibility<br>▪ About Value and Relationships |

### B.      Teamwork

#### *What is Teamwork?*

According to LaFasto and Larson in their book *When Teams Work Best*, "teamwork consists of four factors: openness, supportiveness, action orientation, and personal style.  Each of these factors is a key ingredient in a team's success – or failure" (5).  According to LaFasto and Larson, these four (4) factors are defined as:

- Openness

  Team members who are open are willing to deal with problems, surface issues that need to be discussed, help create an environment where people are fee to say what's on their minds, and promote an open exchange of ideas (8).

- Supportiveness

  Team members who encourage and demonstrate a desire and willingness to help others succeed (14).

- Action Orientation

  Team members who contribute to their team's success have a tendency to act or to do something.  This means being willing to prod, to suggest courses of action, to try something different, or to make a deliberate effort to make something happen (18).

- Personal Style

  Team members who convey a positive attitude in working with others (23).

In addition to understanding the characteristics of teamwork, we also need to understand the components of a team as well as understand the purpose of having a team.  What is a team?  "A team is a group of people [of two or more individuals] with a high degree of [social] interdependence geared toward the achievement of a goal or completion of a task" (Parker 16).  "A goal is defined as the objective, or result, that a group or an individual seeks to achieve" where as a "task may defined as an act, or its result, that a small group is required, either by someone or by itself, to perform" (Barker, Wahlers and Watson 34).  Human beings interact socially with positive or negative action/reaction and actually share influence directly or indirectly with each other.  Within the context of a team, the interaction and reaction between members can be translated to social interdependence, which occurs within a team when an event that affects one individual affects them all (Johnson and Johnson 10).  For example, when scheduling a

team meeting and a member has a schedule conflict, the others would then need to re-schedule around the conflict.

In the practice of architecture, as defined by Bill Caudill, the purpose of [an architectural design] team is in "solving problems in an atmosphere where opinions of each other are respected, who share common goals and are willing to cooperate and communicate with each other" (Caudill <u>Architecture by Team</u> 69).  Caudill's description represents what teamwork in architecture is about: the openness to discuss problems, the supportiveness in terms of creating a respectful working environment, and the action orientation and personal style of each team member willing to positively cooperate and communicate in order to accomplish the team's goals.

### Figure 6: Conceptual Relationship in Teamwork – Circle of Shared Influence
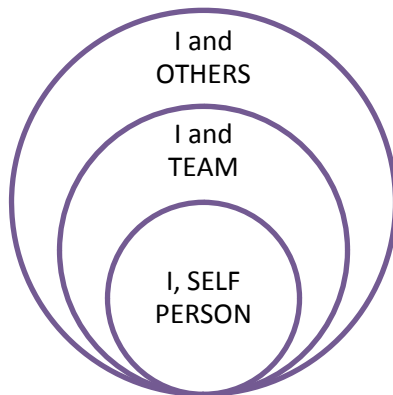
To conceptually understand what teamwork is, and ultimately understand a team's effectiveness in performance and capabilities, one must examine the individual components of a team.  Similarly to interdependence, a team's effectiveness is a shared influence among its members of a team.  This shared influence can be imagined as a circle of influence, as shown in the adjacent Figure 6: Conceptual Relationship in Teamwork, beginning with the "I, self-person" as the innermost circle, representing an individual.  The "I, self-person" then expands outwardly, where an individual interacts with members of a team.  This interaction is the middle circle, creating a team of two or more individuals, where shared influence and interdependence begin to occur.  When the circle of influence expands to interact with "others" (i.e., members on external teams who are not on the originating team), the circle of influence forms a combined larger team.  At this level, the team is a complex system, such as a corporation or organization.   This interaction represents the third outer circle of shared influence.  Conceptually, from the innermost circle "I, self-person" an individual holds varying degrees of shared influence in all three circles.

Teamwork may be defined then as a shared effort of an interdependent team of individuals with a common purpose.  However, teamwork begins with a willing, motivated individual, who will contribute to the team's learning, performance, growth, and accomplishments.  Larson and LaFasto offer this statement on teamwork:

> "Teamwork takes place within a structure that either facilitates or impedes effective coordination of effort.  Teamwork is more likely to succeed if members are both competent in the technical knowledge and skills associated with the performance objective and able to collaborate effectively with one other.  And teamwork succeeds most dramatically when team members are enthusiastically unified in pursuit of a common objective rather than individual agendas" (84).

In this qualitative inquiry, the behaviors and attitudes of teamwork are reviewed with respect to the characteristics of a team.  This section will present two (2) lived experiences and provide an analysis of leadership concepts and lessons learned as it relates to teamwork:

- Lived Experience #1 – Architectural Design Studio
- Lived Experience #2 – AIAS Student Organization

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### *Lived Experience #1 –Architectural Design Studio*

#### *Background*

Generally speaking, in architectural education, the architectural design studio is the primary learning environment for architecture students, where students brainstorm and yield their best (and worst) design ideas on tracing paper, in forms of three-dimensional models, or within digitally created computer-aided programs.  Design studio is a learning environment supported by what the students learn from other architectural courses on technical skills and knowledge in architecture and integrated building practices.

The design studio functions as a classroom when a faculty member is present.  The design studio can also function in the absence of the instructor, because the goal of the design studio is for students to continually work on projects in their studio.  Authors M. D. Gross and E. Y. Do of *The Design Studio Approach: Learning Design in Architectural Education* describe the design studio as follows:

Traditionally the practice of architectural design is learned through a project-based "studio" approach. In studio, designers express and explore ideas, generate and evaluate alternatives, and ultimately make decisions and take action. They make external representations (drawings and three-dimensional models) and reason with these representations to inquire, analyze, and test hypotheses about the designs they represent.

Through the linked acts of drawing, looking, and inferring, designers propose alternatives, and interpret and explore their consequences. In their sketches architects find visual analogies, recall relevant examples, and discover new shapes and geometric configurations. They use the representations to test their designs against a-priori performance criteria. And in the highly social environment of the design studio students learn to communicate, to critique, and to respond to criticism, and to collaborate. (1).

In design studio, there are two types of interaction: instructor-to-student and student-to-student. Instructors are influenced by their own life experiences, personal interests, and also by the type of education they received as students of architecture. And this in turn, presents the way instructors influence and interact with the students in design studio. On the other hand, architecture students also bring to the design studio their own life's experiences and interests, and as aspiring young adults, they also influence each other in their learning – positively and negatively. Architecture students interact with each other constantly. With this type of constant social interaction and shared influence, architecture students may be the main source of information for each other.

The following lived experience focused on a student team of an upper-level architectural design studio at the UH Mānoa SOA. The context of the study evaluated the team's interaction and performance in working together on a semester-long design project. The project required the team to conduct research, design a small building, and present their design via presentation boards at the end of the course.

## Figure 7: Lived Experience #1 – Team Relationship
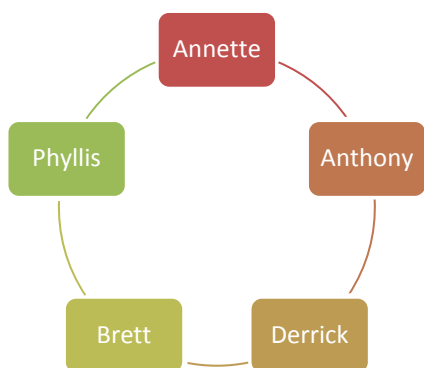


For lived experience #1, the students were given free reign to assign themselves to teams of four or five members. Although everyone knew each other in design studio, students who had formed a stronger bond of friendship in previous classes gravitated towards each other to form teams. This

particular student team was comprised of five (5) fifth-year architecture students: two (2) female and three (3) male students. This was the first time these particular students were working on a team together. As there was no starting discussion on identifying a team leader, no one volunteered. The team's first meeting was a discussion on the design project, schedule, and individual assignments. As illustrated in Figure 7: Lived Experience #1 on the preceding page, the team's relationship and structure between the students was non-hierarchal and non-directional. This conceptual illustration indicates the team's lack of a team leader. Refer to Appendix J: Lived Experiences – Team Structure for additional information.

## *Analysis of Leadership Concepts and Lessons Learned*

### *Openness – Goals and Ground Rules*

The instructor provided each student team with the course syllabus, listing milestone deadlines at specific phases of the design project. To meet each deadline, specific goals, objectives, and tasks needed to be stated clearly to reach each milestone's deadline. To get started, the team brainstormed and wrote a list of tasks to be done for each phase and assigned individuals to each task item. Everyone seemed eager to share in the exchange of ideas. The team's open discussion at the start of the project was necessary for everyone on the team to contribute and agree to its common goals.

Goals should include expectations and ground rules set by the team from the start of a project to assist everyone in managing their individual responsibilities. "Ground rules are explicit, agreed-on prescriptions for acceptable and appropriate behavior" for the team to function effectively, and honesty, fairness, respect, and personal safety are typical values embedded in such rules (Beebe and Masterson 89). Beebe and Masterson offer these following questions to assist a team in developing ground rules:

- How long should our meeting last?
- Should we have a standard meeting place and time?
- What should a member do if he or she can't attend a meeting?
- Who is going to organize the agenda for our meeting?
- How will we follow up to ensure that each member is doing his or her assigned work?
- How will we manage conflict?
- How will we make our decisions – by majority vote or consensus?
- What kind of climate do we want in our meetings? (90).

In this study, the team had not openly discussed these types of questions at their "kick-off" meeting. Come midterm of the semester, when an assignment took longer than anticipated to complete, the team realized they had to pull an "all-nighter". However, two students left when they completed their individual assignments, leaving the other three students to complete the final work. The three students worked all night; frustrated, they could not understand why the other two did not remain to help with completing the presentation boards. The frustration escalated from the team's inability to discuss honestly and fairly the individual expectations at the start of the project. The unsaid assumption was that if you were done with your portion of the work, you should offer to help with other tasks.

If ground rules had been openly discussed and agreed to at the start of the design project, then the students would have understood what needs to be done in challenging situations like this and pulled together to work cooperatively towards accomplishing the project. "Having a common, well-defined goal [and ground rules are] the most single most important attribute of an effective team" (Beebe and Masterson 9).

### Supportiveness – Agreement and Endorsement

The architectural curriculum is a rigorous one. Often times in design studio, the work mode is grueling and overwhelming in terms of the amount of time spent in design studio to produce a design that is agreeable to the entire the team. To remain motivated and not get burnt out takes team support and motivation, continually communicating individual needs as well as the needs of the team. Team support usually comes from an individual who exhibits a positive attitude while working with others, who works behind the scenes to aid the team and is generally easy to work with (LaFasto and Larson 15). Supportiveness often comes in the form of a specific behavior, when an individual listens to others' ideas or is willing to work behind the scenes to benefit the team.

The overall attitude of the team was generally positive. The project was received to be an exciting design challenge, and everyone was willing to support each other for the benefit of the team's work and performance. However, one evening in design studio near the end of the semester, Brett appeared to be disinterested in listening to new ideas from Phyllis, ideas that would generate additional work for the team, and in particular him. Ultimately, this would mean a delay in completing the final presentation drawings.

The friction between Brett and Phyllis appeared to be a personality challenge, "Brett versus Phyllis" scenario when the disagreement escalated into a shouting match between the two, and the rest of the team (and our classmates!) stood by in disbelief and shock. Phyllis wanted to change the method of the rendering style, which meant Brett would have to re-do the line work for the drawings. Instead of listening to Phyllis and having a fair discussion with her, Brett let his emotions control him. By this time, Brett was not calm and vented his anger. And, instead of being sensitive to Brett's work efforts, Phyllis was stubborn and would not compromise for the sake of meeting the project deadline. She appeared to understand the consequences in not meeting the project deadline, but in her defense, she said she would stay up all night to finish the boards. "Defensive is the opposite of supportiveness," and that is what happened to both Brett and Phyllis as each defended his or her point of view (LaFasto and Larson 17).

After a time-out, the team knew it had to discuss the next steps before anyone could move forward on the project. The other students (Annette, Anthony, and Derrick) helped to start the dialogue between Brett and Phyllis. With support and endorsement from their team members, Brett and Phyllis came to an agreement. We learn from this example of "Brett versus Phyllis" that supportiveness is an active approach: "invest more time to better understand others' perspectives" and most likely we will find a climate of support (LaFasto and Larson 16). As summed up by LaFasto and Larson, "the principle of openness implies that it is better to talk things over. The principle of supportiveness implies that it makes a great deal of difference *how* you talk things over" (17).

### *Action Orientation – Stepping Up to Make Things Happen*

Action orientation is characterized as team members stepping up to make things happen for the team. In this study, the team structure was non-hierarchical and non – directional. Brett provided constructive feedback in team discussions, but he kept to himself while he worked on his individual assignments. Phyllis occasionally gave her opinions quite decidedly, but to the rest of the team, it appeared she was making observations, instead of asking for team feedback on her opinions and ideas. Derrick and Anthony were essentially "loafers" on the team – not wanting to take on additional assignments nor exhibit the desire to accomplish more than expected. Although they completed their share of the work, Derrick and Anthony let the others do majority of the work. Annette did not want to take any risks or create conflict, typically agreed with the

majority of the team's decisions.  These are examples of passive actions exhibited by each team member.  To be action oriented, members could:

- Rise to the challenge; be achievement oriented;
- React positively to immediate needs; and
- Constantly share ideas to help the team improve on its work production or be efficient in its process (LaFasto and Larson 18).

To be action oriented, questions to ask: Are we doing anything at all?  Could we have produced a better design project?  Could we have discovered an efficient and effective way to work together in a respectful, supporting environment without the anger and frustration built-up?  As noted by James P. Cramer, an educator and strategic business advisor for The Greenway Group, "a leader emerges when [he or she] takes a proactive part" in helping the team meet its goals and objectives (Salvador "Personal Communication with the Author").  This team lacked the understanding of teamwork and how team members can actively cooperate and collaborate with each other in a productive manner.  As such, the inaction of the students produced no designated leader for the team.  Thus, the team's productivity was not managed effectively.

### *Personal Style – Positive Attitude*

Teamwork also involves a personal style that is on purpose to convey a positive attitude while being a part of a team and working cooperatively together.  Teamwork in architecture is about pulling together and not pulling against each other, as illustrated in Figure 8: Conceptual Diagram of Teamwork on the following page.  In the image on the left, we see members pulling against each other; there is no common path or one direction for the team.  This concept leads to members doing their own thing, which appears to be a negative attitude (i.e., not helping each other), because each individual appears to be working alone.  In the image on the right, we see members initially converged to a common point and then move in the same direction towards the team's common goals.  This concept appears to be a positive attitude, where individuals are on their own path and yet helping each other as they move in the same direction towards a common goal.

**Figure 8: Conceptual Diagram of Teamwork**



On the left is Figure 8, a conceptual illustration in regards to *teamwork.*

In image A, we see members pulling against each other with no common goal or purpose. Each member goes his/her own way.

In image B, we see members converge at a common point, pulling together with a common goal in a cooperative manner.
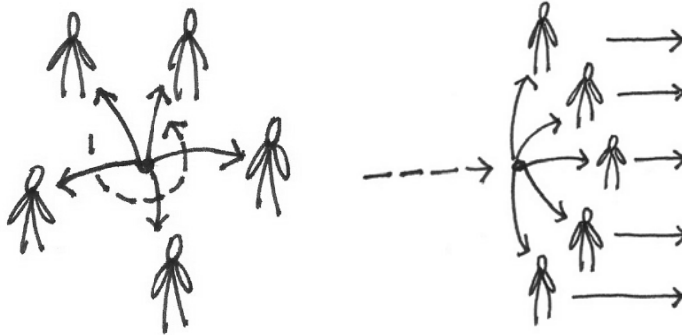
A: Members Pulling Against          B: Members Pulling Together

Source: (Caudill <u>Architecture by Team</u>).

In this qualitative inquiry, the student team reflected the conceptual diagram on the left, where each student had their individual assignments and would go their separate ways to complete their tasks. Every now and then, the students would re-convene to assess progress on assignments and discuss schedule, but the students would return to their own workstations again. The physical manner in which the team worked on their design project probably caused additional and unnecessary angst amongst the team members, since members were not "pulling together" to help each other.

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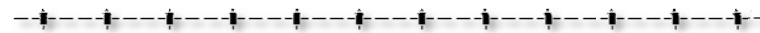
### *Lived Experience #2 –AIAS Hawai`i Chapter*

#### *Background*

This study focused on the 1995-96 student leadership team of the AIAS Hawai`i Chapter at the UH Mānoa SOA. The context of the study was framed primarily around the Chapter's Executive Council team meetings and also evaluated the planning and organizational processes it conducted for its membership throughout the school year. The Executive Council held weekly meetings to discuss, update, and decide on activities for the membership, events for the SOA, and service projects for the community.

**Figure 9: Lived Experience #2 – Team Relationship**

President

Vice President/
President Elect

Treasurer

Corresponding
Secretary

Recording
Secretary
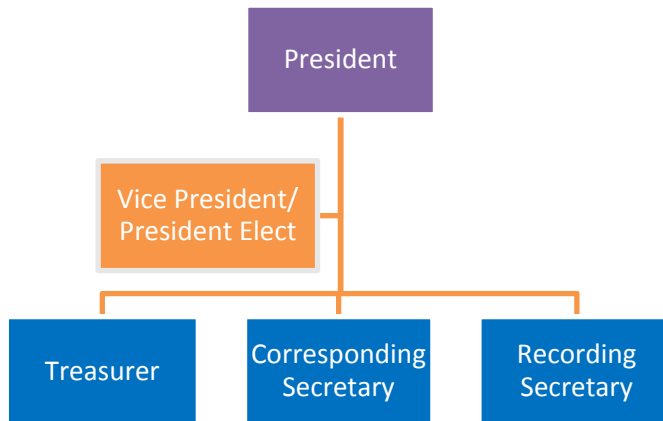
For lived experience #2, we find the AIAS Hawai`i Chapter governed by five (5) elected student Officers, collectively called the Executive Council.  As illustrated in the adjacent Figure 9: Lived Experience #2, the team relationship and structure of the team was hierarchal.  The President was the designated leader and had direct communication with the others,  Vice President/President-Elect, Treasurer, Corresponding Secretary, and Recording Secretary.  Refer to Appendix J: Lived Experiences – Team Structure for additional information.

## Analysis of Leadership Concepts and Lessons Learned

### Team Goals

The goals of the Executive Council were unclear and abstract, creating disarray and confusion among the Officers.  Composed by the President at the start of the new school year, a list of things to do was given to each Officer.  The list included the name of an activity and a brief description, without milestone dates or resources to help the Officers plan.  Additional inquiry, discussion, or feedback between the Officers was minimally encouraged by President.  The Officers accepted the list without a clear vision of a main goal or a clear consensus on how to make the list of things happen.  Without an open inquiry or feedback at the very first Executive Council meeting, lack of clarity and consensus can trickle down to subsequent meetings, or worse, the team goals may not be accomplished.  Having team goals are important, because "goals are guides for action, and it is through [team] goals that the efforts of the [team] members are planned and coordinated" (Johnson and Johnson 71).

To avoid confusion, delay in planning, and be useful, team goals have to be clear. There are two recommended methods in helping organizations set effective goals, as provided in "Joining Together."  The first method is called survey-feedback method, where a team "leader interviews individual members of the [team] about goals and the priorities of the team as they see them" (Johnson and Johnson 78).  The leader should

hold a team discussion at the start of the school year to set its goals and priorities, and more importantly, the leader should set the tone of the environment on grounds of respect, trust, and integrity.  The leader should also encourage feedback and recommendations from the team.  At the end of each session, each Officer should have a clear understanding of the team's goals and priorities.

The other method is called critical-path method, where the team "sets its effective goals by first specifying the end state they want to achieve" (Johnson and Johnson 79).  Then the team works backwards from the end state, detailing what must happen next to accomplish each part of the goal.  In addition, the Officers should post a timetable listing all of the future events, and it should be accessible to the entire membership.  A timetable benefits the team's goal reaching process, since it would delineate specifically when each task should be done to achieve each goal.

The AIAS Hawaiʻi Executive Council had specific goals, but these goals were not created collectively as a team.  There was no supporting endorsement or "buy in" from the other Officers.  Goals that have a team's positive support are important for a team to remain focus, maintain direction, and be in alignment.

### *Interpersonal Communication*

"All communication within [teams] is between individuals and is, therefore, interpersonal communication" (Johnson and Johnson 133).  Interpersonal communication "can be defined broadly as any verbal or nonverbal behavior that is perceived by another person" (Johnson and Johnson 130).  Here, the interpersonal communication between the Officers was primarily informal, via electronic mail and conversations held during the school day.  Four of the five Officers were classmates in a current design studio, having known each other since their first year in architecture school.  This is not to say that familiarity is bad, on the other hand, the informality and familiarity sometimes inhibit the meetings.  Discussions at the meetings sometimes swayed to talks about the weekends, boyfriend-girlfriend concerns, and even gossip about the faculty.  The President let such distractions take over the meeting.  Consequently, the meetings were lengthened, and most often, the agenda did not get covered entirely.  There needs to be a formal tone set from the start of a meeting and that the meeting will run for an expected amount of time.

In another area of interpersonal communication, there also exists the nonverbal behavior, or unspoken body language.  Here, the President exhibited a great deal of

nonverbal language at meetings; including rolling of the eyes and sighing deeply as if saying, "I really don't want to do this." This set a negative tone in team meetings and may have reciprocated a lack of motivation from the other Officers. The President did not readily recognize these kinds of nonverbal or negative signals. This kind of communication, probably extended by the familiarity of the Officers, dampened the spirit of the team, and in turn, may create unnecessary motivational challenges for the rest of the membership. The President should demonstrate self-awareness to recognize the various nonverbal signals and the insight to question these signals when in disagreement with the verbal words. A list of constructive and effective communication skills would benefit the Officers, increasing their awareness on effective communication. Sullivan and Glanz suggested four (4) keys to effective communication through meetings:

- ▪ Clear purpose and agenda,
- ▪ Clear roles and responsibilities,
- ▪ Clear ground rules, and
- ▪ Evaluation and feedback (119).

### *Decision Making and Problem Solving to Reach Goals*

Decision making is a process that should include all team members. "The first reason [to involve all team members in the team's decision making] is to increase the quality of the decision by fully utilizing the resources of all members" (Johnson and Johnson 231). Since the Executive Council was made up of four female Officers and one male Officer, the male Officer (who was the Treasurer) seldom actively participated in team discussions and spoke when the discussion involved the budget. This example should not limit participation in decision making to one's positional role on a team.

"The second reason [to involve all team members in the team's decision making] is to increase member's commitment to implement the decision" (Johnson and Johnson 231). The decision making process may have been hindered by the Executive Council's premature acceptance of its goals. The path to reach its goals was not clearly defined by the team at the start of the school year, and that in turn, affected participation in deciding the actual roles and responsibilities of who was responsible for doing what by when.

Participation appeared unequally balanced among the Officers in the decision making process. Typically, the President spoke first, followed by the Vice President, and then the Treasurer. This pattern followed the discussion points listed on the meeting

agenda, which was established by the President.  When the discussion came to making decisions or recommending solutions to a problem, the pattern changed: the President spoke to the Corresponding Secretary and everyone else listened.  Unfortunately, the President did not encourage all of the Officers to participate for a balanced discussion.

"Decision making occurs within the context of problem solving" and the first step in problem solving is to identify and define the problem, challenge, or issue at hand (Johnson and Johnson 269).  When the President distributed the list of activities to plan for the school year, the most obvious challenge was in making the budget.  Questions rose: How will we pay for the expenses?  Should we raise the membership dues?  Should we charge additional fees for special events?  Should we hold a fundraiser?  The challenge in problem solving, as suggested by Johnson and Johnson, is three-fold:

- Prematurely defining the problem,
- Lack of clarity in stating the problem, and
- Lack of supportive, trusting, cooperative atmosphere (270).

The Executive Council exhibited these characteristics.  Based on that, the Executive Council did not raise membership dues, but instead decided to charge additional fees for special events.  This may not have been the best solution for the membership, but it was a quick and convenient fix.  Decision making is a process that has three (3) basic methods: democratic, consensus, or problem solving (Sullivan and Glanz 134); in which case, the above example described but did not result in effective results in teamwork.

### *Evaluation –Seek Input & Feedback, Ask Questions*

Evaluation is an important part of teamwork, because evaluation collects feedback for the team to assess its performance and capabilities.  However, evaluation is an aspect often overlooked or forgotten and therefore, not done.  In this study, Executive Council held an evaluation discussion immediately following an event, since it was incorporated into the next meeting's agenda.  This was good practice; however, the process was not entirely effective since the evaluation process was limited to only the Executive Council. The general membership did not have the opportunity to provide feedback.  Besides not including the membership, the Executive Council used a roundtable discussion format, which may be beneficial for some activities, but in other cases, it might be valuable to ask for anonymous feedback in writing as well.

Also, when not enough information is provided, the decision making process and ultimately the outcome of the goal is not one of quality. The Executive Council needs to prepare, give time and effort to outline the specifications of a goal, and therefore, make a concerted effort and decision for the organization. Quality decisions should be made with each Officer's understanding and input into the process. To better understand the decision making process, an evaluation form should be distributed to the membership to evaluate each activity, making way for constructive feedback and questions.

Team members must be able seek input and ask questions, recognizing and utilizing the different ways in which it is possible to listen and the importance of checking they have understood what is said, instead of simply assuming they do (Nicol and Pilling 137). To feel as they belong to the team, the President should have recognized the opportunity to include all Officers in on the planning and decision making process.

In support of the emerging leadership concept, *teamwork*, we evaluated two lived experiences that describe the characteristics of *teamwork*. In architectural design studio, we noted specific individual behaviors of openness, supportiveness, action orientation and personal style as part of an individual's self-growth and self-awareness as well as being part of a team. In this type of learning environment, the architecture student begins to learn how to relate with others. In the AIAS student organization, we found specific concepts such as team goals, interpersonal communication, decision making, problem solving, and evaluation as means to creating effective and efficient teamwork. Leadership is an active learning process, and leadership is demonstrated through the success and failures of teamwork. To recap on *teamwork*, below is Table 15 summarizing the leadership concepts and lessons learned as it relates to teamwork.

## Table 15: Teamwork – Summary of Leadership Concepts

| LIVED EXPERIENCE | TEAMWORK: LEADERSHIP CONCEPTS AND LESSONS LEARNED |
|---|---|
| Lived Experience #1 Architectural Design Studio | ▪ Openness – Goals and Ground Rules<br>▪ Supportiveness – Agreement and Endorsement<br>▪ Action Orientation – Stepping Up to Make Things Happen<br>▪ Personal Style – Positive Attitude |
| Lived Experience #2 AIAS Student Organization | ▪ Team Goals<br>▪ Interpersonal Communication<br>▪ Decision Making and Problem Solving to Reach Goals<br>▪ Evaluation – Seek Input & Feedback, Ask Questions |

## C.      Collaboration

The etymology of the word collaborate is from the French verb "collaborate" or working together, which is derived from two Latin words "col" meaning "together" and "laborare" meaning "to labor, to work". The current meaning given to the word collaborate is "to work jointly with others or together especially in an intellectual endeavor" ("Merriam-Webster's Collegiate Dictionary" 243). In the context of architecture, collaboration benefits the creative design and construction process (from drawing board to the construction project site); getting the right team together and working towards a common goal can be invigorating and produce a whole that is greater than the sum of its parts.

Why should collaboration occur in architecture? Collaboration brings people from different disciplines to create a learning environment, it increases available resources, and it focuses more effectively on a common approach and objective (American Institute of Architects "Committee on Design: Observations on Collaboration").

Observations from the AIA's Committee on Design describe collaboration as:

- ▪      Sharing knowledge and information,
- ▪      Effective communications and active listening,
- ▪      More than a relationship that helps each [team] achieve its own goals, and
- ▪      Involves cooperation and coordination [from the team members] (American Institute of Architects "Committee on Design: Observations on Collaboration").

Understanding the above observations can be helpful, especially when individuals on a team understand each other. Bill Caudill viewed architecture as a team made up of individuals with differing strengths and weaknesses. If they collaborated as a team, they would learn to maximize each person's strong points and avoid or control each person's weaknesses, and ultimately, improve performance as a team (King and Landon 12).

In terms of leadership, Chrislip and Larson (1994) discuss the importance of collaborative leadership, a leadership model that requires interdependent parts working together. "Our ability to create healthier communities, become better people, and live together more peacefully depends on our willingness to work and act together. [Collaboration] implies teams of people working through a process together, rather than on the direction of one individual. Therefore, the primary focus of leadership when

people have to collaborate may be on the "process" of how people work together to solve problems, not on the "content" of the problem itself (Chrislip and Larson 163). As suggested by Kouzes and Posner, the following three elements should occur in collaboration for effective leadership to take place:

- Create a climate of trust
- Facilitate positive interdependence
- Support face-to-face interactions (<u>The Leadership Challenge</u> 243)

In terms of facilitating positive interdependence, this will also be defined as the opportunity to engage everyone and to value member contribution. Kouzes and Posner also suggested that basic communication skills are pertinent, such as active listening and clarity of thought is important for collaboration to occur and have each team member effectively communicate with each other. "Collaboration is the master skill that enables teams, partnerships, and other alliances to function effectively: (Kouzes and Posner <u>The Leadership Challenge</u> 265).

In this qualitative inquiry, this section will present one (1) lived experience and provide an analysis of leadership concepts and lessons learned as it relates to collaboration:

- Lived Experience #3 – IMI Masonry Camp

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### Lived Experience #3 –IMI Masonry Camp

#### Background

In the summer of 1998, I was granted a scholarship to participate in a Masonry Camp, sponsored by the International Masonry Institute held on Swan's Island in Maine. "Masonry Camp [brought] together [Builders Allied Contractors mason] apprentices [architecture interns] to experience the masonry crafts firsthand – brick and block, tile, terrazzo, stone, plaster, and restoration – and to understand the advantages of craftwork/designer collaboration" (IMI). The challenge: "design and build a project in an integrated team atmosphere. The camp fosters communication across the two professions and gives architecture graduates the chance to take a more focused view of masonry and materiality while affording masons the opportunity to consider the multidimensional concerns architects deal with while designing" (Mortice). The goal of Masonry Camp,

says Maria Viteria, IMI's Director of Program Development, is "to foster a level of collaboration between the people who are designing and the people who are building" (Law).

The eight-day program was divided in three parts: 1) introduction; 2) mock design studio; and 3) mock construction site. The design/build project was for each team to design a structure within the given parameters and then build it. The unique aspect of Masonry Camp was that the design/build project was specifically structured to have the design portion led by the mason apprentices and the build portion led by the architectural interns. The professional roles were switched between designer and builder, which provided a genuine learning environment to truly experience firsthand a collaborative, integrated team atmosphere.

"Guided by IMI's professional staff, increased dialogue between [interns and apprentices], exposure to each other fields and a teamwork approach to a design challenge are the foundations that Masonry Camp hopes to instill in its participants" (Sovinski). The focus was on collaboration between design and construction disciplines: to build a bridge of understanding of roles in the design and construction process.

### Figure 10: Lived Experience #3 – Team Relationship



INTERNS

+

MASONS

→

ORANGE TEAM
• 4 Interns
• 4 Masons
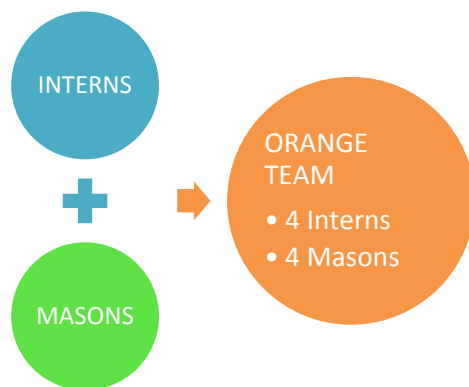
Masonry Camp brought together forty (40) camp participants comprised of architectural interns and mason apprentices. We were divided into five (5) teams of eight (8) members, each team assigned a color to identify itself. Each team had four (4) architectural interns and four (4) mason apprentices. As illustrated in the adjacent Figure 10: Lived Experience #3, the team relationship and structure was a joint collaborative effort between architectural interns and mason apprentices. My team had no designated team leader throughout the design/build challenge. However, individuals on the Orange Team, who had design knowledge and technical construction expertise stepped up to facilitate discussion and direction when needed. Refer to Appendix J: Lived Experiences – Team Structure for additional information.

## *Analysis of Leadership Concepts and Lessons Learned*

### *Create a Climate of Trust*

In Part 2 of Masonry Camp, we found ourselves indoors in a design studio environment, where teams learned about the fundamentals of architectural design, drawing, and presentation. Since we were on a fast track schedule, our team understood that the quicker we got our design ideas drawn onto paper, the sooner we could get to the mock construction site and start building our design into reality. After the team discussed its approach and strategy for the design phase, individual tasks were assigned: the architectural interns would provide a sketch of the conceptual design, and the mason apprentices would prepare the presentation drawings, as shown below in Figure 11: Creating a Climate of Trust in Design Studio. The Orange team had three mason apprentices skilled in brick construction, and so, they would be able to provide the "know-how" technical knowledge and experience once the team started its construction phase. Based on this, the structure was conceptually designed to be built out of brick, concrete masonry block, and stone.

### Figure 11: Masonry Camp – Creating a Climate of Trust in Design Studio



On the left is photograph Figure 11, where we find the Orange Team in a mock design studio.

Here, two architectural interns (standing, left to right, Jennifer and Annette) are with mason apprentices (sitting at table, Robert and Chris (foreground) and Trina (background).

Photo Courtesy of A. B. Salvador, 1998.

Robert, a mason apprentice, had field experience with only marble and ceramic tile. He had not worked with brick or stone before. By the time we reached Part 3 to begin construction, Robert asked "Where is the marble going?" Someone on the team said, "There is no marble going in." Robert got very upset. Evidently, there was a misunderstanding during the design process as Robert thought he would be able to contribute his masonry skills and build with marble. Robert's frustration escalated into a

vocal shout-out, and every one on the team fell silent.  Robert walked away from the team.  David, one of the more experienced mason apprentices on the Orange Team, spoke privately with Robert and was able to calm his anger.  Robert returned and apologized to the Orange Team, but the damage was done.  Robert felt less confident about being "accepted" on the Orange Team.  It seemed that Robert lost trust and confidence in members of his team.

For the Orange Team, trust needed to form quickly because of the nature of the design/build challenge.  However, a climate of trust did not take form.  In haste to begin the design phase, the Orange Team lost sight of discussing each member's goals and individual needs and expectations.  This simple act of openly sharing everyone's ideas, strengths, and weaknesses would have provided the team with an opportunity to create a climate of trust amongst its members.

The leader does not need to be the most creative or inventive person on the team, but as a leader, recognize the potential for generating ideas and solutions that exist in all individuals on the team.  "When leaders create a climate of trust, they take away the controls and allow people to be free to innovate and contribute.  Trusting leaders nurture openness, involvement, personal satisfaction, and high levels of commitment to excellence" (Kouzes and Posner The Leadership Challenge 247).  David stepped in to a leadership role when he spoke with Robert privately to regain Robert's trust in having him return to the team.  When Robert returned, the team talked about how to modify the design such that Robert would be able to participate in construction.  Open communication and sharing occurred within the team, and the team came up with a design field change to include marble in the construction.

The practice of architecture is founded on establishing and maintaining trust with team, client, and community.  An atmosphere of trust must develop within a team.  Trust is built from openness, sharing, and acceptance, according to Johnson and Johnson:

- Openness is the sharing of information, ideas, thoughts, feelings, and reactions to the issues the [team] is pursuing.
- Sharing is the offering of your materials and resources to others in order to help them move the team toward goal accomplishment.
- Acceptance is the communication of high regard for another person and his contributions to the [team's] work (123).

Being a leader is a trusting role in which one person is in a relationship to assist and lead others, influence and create change, and effectively build collaborative relationships in an effort to accomplish a shared goal.  Developing a personal approach to leadership is difficult.  It requires thoughtful examination of our own values, principles, and attitudes as well as the attributes and characteristics of a team.  A leader is defined by their actions in providing vision, motivation, and direction for others.  A leader can lead indirectly or directly, depending on what they say or how they act will influence others.  Through a leader's personal relationship with others, a leader can be effective in bringing value and meaning, personality and self-identify, and team identity.

### *Facilitate Positive Interdependence – Team Building*

"The first step in ensuring that [team] decisions are of high quality is to structure positive interdependence in the [team]" and engage everyone toward the team's goal accomplishment (Johnson and Johnson 245).  Engaging everyone on the team purposefully to reach the team's goals can be a challenging task in itself.  The Orange Team had no designated leader when they first got together, but by the time the team was well under way with construction (and only after the incident that happened with Robert), then individual members started to engage and interact more meaningfully.  An example is shown in Figure 12: Engaging Everyone at the Construction Site below.

### Figure 12: Masonry Camp – Engaging Everyone at the Construction Site



On the left is photograph Figure 12, where we find the Orange Team on the construction site.

Here, several members are brainstorming with a Camp Instructor on how to construct the wood formwork that will go in to temporarily hold and form the archway opening.

Photo Courtesy of A. B. Salvador, 1998.

Meaningful interaction on a team that moves the team forward and closer to accomplishing their goals leads to team building.  According to Sullivan and Glanz, team building is a "code word for developing better relations – and often involves resolving some conflict between members or to help the members bond" (78).  "[Team] building contributes to the development and maintenance of open, supportive, and health interpersonal relationships among [team] members" (Hackman and Johnson 58).  In turn, members begin to value member contribution.  At Masonry Camp, the Orange Team behaved more of a collaborative team during the construction phase, rather than how they first started off in design studio, which was a team with individual members doing individual tasks.  Being a collaborative team was evident when the interns started to lay down brick blocks onto the grout; the interns soon realized that they needed further technical assistance from their fellow mason apprentices.  Dialogue and interaction quickly picked up between the interns and apprentices.  And together, the design product that the Orange Team drew on paper was physically taking shape on the construction site.  Once the team could visually see their design ideas come to life in physical form and shape, then did the team begin to value each other's contribution.

### *Support Face-to-Face Interactions*

"Architecture is a result of a collaborative process" within a team of people, such as design professionals, engineers, contractors, and the client (Waldrep 6).  The process involves people and activities, such as programming, planning, design, and construction documentation.  At Masonry Camp, the collaboration between mason apprentices and architectural interns was truly evident during the construction phase of the program.  During the construction portion, the architectural interns were asking questions from all points of construction: How many concrete masonry blocks are needed (because we need to carry that many from the stock pile to our area)?  How will the archway opening be formed (because we need to build the formwork first)?  How big is the keystone (because we need to cut the stone block into its correct shape and size)?  How will this corner be constructed (because brick, stone, and concrete masonry block converge at this one point)?  Is this too much grouting (because if the grout is too thick on one side, the piece will not level off)?  A lot of questions were asked during design/build construction, and each member listened to what the other member had to say.  "The [design and building]

process begins with listening" and with that, collaborative efforts are more meaningful and less stressful (Boston Society of Architects 29)

### Figure 13: Masonry Camp – Supporting Collaboration



In this respect, leadership should encourage members to take risks in their thinking, share their ideas, and practice new skills. When encouraging others in a collaborative effort to take risks in an exchange of ideas, there is an opportunity for everyone to benefit from sharing new ideas and learning collaborative skills. The adjacent photograph, Figure 13: Supporting Collaboration, shows intern Craig (left) discussing the corner layout with mason apprentices, Trina and David.

Photo Courtesy of A. B. Salvador, 1998.

The interns soon realized that if a miscalculation occurred during construction, having to re-do the work would take much time and effort to tear down, re-evaluate, and re-build – which the team could not afford. The construction phase was a complete turn-around in team behavior. In design studio, the team interacted in a cooperative way to address individual assignments. In construction, the team interacted in collaboration, recognizing that as a member of the team, one can provide a supporting role in building the team's self-awareness, trust, and confidence. "Self-awareness is necessary when fully engaging in collaboration with others, finding one's own purpose, and contributing and committing to the team's common purpose" (Haber 32).

If you bring the appropriate people together in constructive ways with good information, they will create authentic visions and strategies for addressing the shared concerns of the team (or organization or community). Many times, the hardest part [about collaboration] is finding the right balance between just telling team members what to do and giving them the opportunity to freely express their individuality. The Orange Team's successful design/build collaboration is shown on the following page in Figure 14: Masonry Camp – Collaboration a Success.

**Figure 14: Masonry Camp – Collaboration a Success**



A: The team's progress efforts in construction.          B: The team's completed design/build project.

Photo Courtesy of A. B. Salvador, 1998.

In support of the emergent leadership concept, *collaboration*, we find a lived experience with characteristics of *collaboration*. At the IMI Masonry Camp, we discovered leadership skills as verbal communicators, which must be founded on attitudes of respect and trust of other people's points of view. "Both cooperation and collaboration are helpful processes: cooperation helps the other person or [team] achieve their own goals, whereas collaboration joins with another person or [team] in setting and accomplishing mutual, shared goals" (Komives 96). Through collaboration, respect, and trust, leadership is demonstrated through a leader's awareness of the needs of the team and brings value to interaction and exchange of ideas. To recap on *collaboration*, below is Table 16 summarizing the leadership concepts and lessons learned as it relates to *collaboration*:

**Table 16: Collaboration – Summary of Leadership Concepts**

| LIVED EXPERIENCE | COLLABORATION: LEADERSHIP CONCEPTS AND LESSONS LEARNED |
|---|---|
| Lived Experience #3<br>IMI Masonry Camp | ▪ Create a Climate of Trust<br>▪ Facilitate Positive Interdependence – Team Building<br>▪ Support Face-to-Face Interactions |

### D.    Relational Skills

As suggested by Johnson and Johnson in *Joining Together*, teams cannot effectively function without the use of relational skills needed to coordinate their efforts, and the more productive a team is, the more positive relationships are among its team members (249).  According to Katz, relational skills include the following elements (qtd. in Sperry 43):

- [Interpersonal] Communication
- Team Development
- Conflict Resolution
- Coaching [Mentoring]

We discussed earlier the characteristics of interpersonal communication, where Johnson and Johnson defined it broadly as "any verbal or nonverbal behavior that is perceived by another person" (130).  Interpersonal communication occurs among individuals on a team, "who share a common purpose or goal, who feel a *sense* of belonging to the [team], and who exert influence on one another" (Beebe and Masterson 4).  In this qualitative inquiry, observations on interpersonal communication will focus on the shared influence and impact on the relationship between two individuals on a team, such as a leader and a member.  We want to see how a leader facilitates the dialogue as well as communicates to the team on moving forward with the project.

In team development, the emphasis is on the "quality of the relationships among members, the level of members' [relational] skills, and the ability of the team to adapt to changing conditions and demands" (Johnson and Johnson 524).  "A thorough understanding of [the team's] goals, needs, and risks will enable to build relationships and assemble the right team of design and construction professionals for [a] project" (American Institute of Architects <u>Building Relationships</u>).  A leader understands the team dynamics, how a team operates and addresses both internal and external factors that can help to bring confidence and balance to the team, or worse, bring negative attitudes that would potentially hinder the team's successful accomplishment.  With the understanding and an empowering relationship from the leader comes successful team building, and in turn, increased team confidence.

What causes conflict?  "Conflict results from differences between [team] members – differences in personality, perception, information, culture, and power or influence" as it is a natural byproduct of human interaction (Beebe and Masterson 169).  Because people are unique in their beliefs, values, and attitudes, conflicts will occur: 1) when people disagree about issues, 2) when personalities clash, and 3) when people misunderstand one another (Beebe and Masterson 171-74).  However, the idea here is how does a leader maneuver around the obstacles and address the conflicts to gain the team's trust and confidence?  To address conflict resolution, a leader should be aware of internal barriers (including negative attitudes, values, fears, anxieties, and habitual patterns of avoiding conflict) and external barriers (including task requirements, pressure to maintain a congenial public image, and faulty perceptions of one's vulnerability and other's strength) (Johnson and Johnson 346).  When a leader addresses conflict and not simply avoids it, the leader is going through a motion of conflict resolution: a maintenance process to minimize the risks of its team members losing focus of its objectives and goals.

Coaching, for the purposes of this qualitative inquiry and in the context of architecture, is very similar to mentoring.  Mentoring is a relationship between two individuals: a mentor and a mentee.  A successful mentoring relationship requires collaborative efforts from both parties, where a mentor "provides insights, instruction, and advice" to the mentee (Kim 171).  While a mentor is typically an older individual, who has experience and knowledge to share, the individual can also be a peer mentor.  In some cases, the sharing of knowledge can go both ways, when the mentor also learns from the mentee.  Quoted in *Becoming an Architect*, architect Grace H. Kim provides this definition on mentoring:

> "Mentoring is more about leadership than it is about satisfying [Intern Development Program] requirements.  Mentoring is about being a role model, giving others the courage and confidence to tackle the situation themselves in the future.  This is the way I think leadership is integral to mentoring" (Waldrep 200).

In the context of architecture, Kim also suggests that mentorship is  key to helping architectural interns develop into well-rounded professionals (165).  The understanding and awareness of relational skills in the context of interpersonal communication, team development, conflict resolution, and mentoring provides a leader with tools in how to manage and maintain relationships with others.  In doing so, a leader actively seeks ways

to "manage the conflict by focusing on issues, information, and evidence rather than on personalities" and to "improve the [team] climate and maintain positive relationships with other [team] members through both verbal and nonverbal expressions of support" (Beebe and Masterson 29). "Being a mentor is a special and trusting role in which one person, the more knowing, is in a position to assist another person, the less knowing" (Ender and Newton 16).

In this qualitative inquiry, relational skills and interpersonal relationships between individual members of a team were observed. This section will present three (3) lived experiences and provide an analysis of leadership concepts and lessons learned as it relates to relational skills:

- Lived Experience #4 – Practicum Studio "A" at Payette Associates Inc.
- Lived Experience #5 – Practicum Studio "B" at PageSoutherlandPage.
- Lived Experience #6 – Architectural Internship at Clifford Projects Inc.

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### Lived Experience #4 –Practicum Studio "A"

#### Background

For this lived experience, the study focused on the interpersonal relationships observed during Practicum Studio "A", where I was placed under the mentorship of Thomas (Tom) M. Payette, FAIA, and Principal of the architectural firm Payette Associates Inc in Boston, Massachusetts. The Practicum Studio is a required course in the Doctor of Architecture program at the UH Mānoa School of Architecture. Payette Associates accepted me as its first Practicum Student, and this was my second Practicum Studio experience. Refer to Appendix I for an Executive Summary on the UH Mānoa SOA Practicum Studio.

Under the leadership guidance of Tom, I was an active participant observer on the PAI core team working on the Aga Khan University Faculty of Arts and Sciences (AKUFAS) project. During my Practicum Studio research, the AKUFAS project was in its programming phase, which is at the beginning of a typical design process. Programming as defined by the NCARB is "the process of discovering the owner/client's requirements and desires for a project and setting them down in a written, numerical, and graphic form" (Intern Development Program Guidelines 39).

In Figure 15: Lived Experience #4 below, the Team Relationship is illustrated in a four-tier hierarchical format consisting of 1) Client, 2) Principals-in-Charge, 3) Project Management, and 4) Design/Engineering Project Team.  The illustration provides a simple representation of the PAI core team.  The top tier, Client (i.e., the Aga Khan University) is represented by Project Director Karim Nurmohamed.  The middle tiers include the PAI leadership and project managers on the AKUFAS project, respectively Principals and Project Manager.  The PAI Principals-in-Charge were George Marsh and Tom Payette, and the PAI Project Managers were Scott Parker and Mark Careaga.  The bottom tier captures the design/engineering consultants, an interdisciplinary team led by Payette Associates, who was the prime consultant to the Aga Khan University.  Refer to Appendix J: Lived Experiences – Team Structure for additional information.

**Figure 15: Lived Experience #4 – Team Relationship**
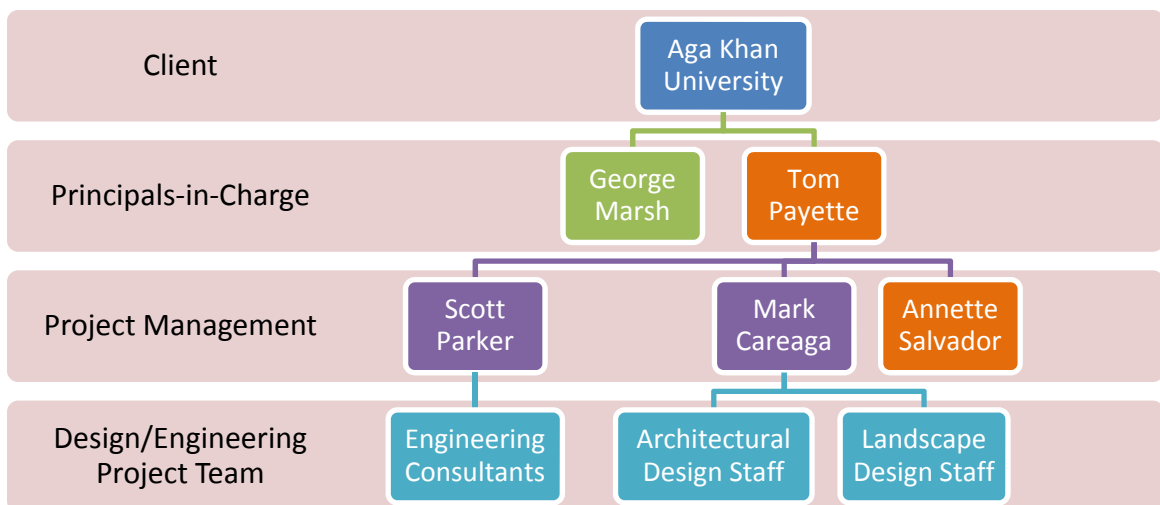


Source: (Payette Associates Design Organization Chart for Faculty of Arts and Sciences Campus; Salvador "Practicum A: Project Team Meeting Notes").

As a Practicum Student, I shadowed Tom on many management and team coordination meetings with the client and consultants, observing Tom interact with the team as well as with individual team members.  With Tom, I also received privileged access to project confidential information, such as financial reports, that were not readily accessible to the rest of the team.  I also assisted Mark on a regular basis, conducting additional programming research for the AKUFAS project.  For this qualitative inquiry, this lived experience will primarily focus on the relationship and interaction between Tom

Payette and the PAI personnel, but additional observations will also consider the relationships among the client and consultants.

The AKUFAS project team, which consisted of the PAI team and its design/engineering consultants, was directly led by the senior leadership of Tom Payette, and the team's daily project management and coordination was led by Project Manager Mark Careaga. The Accounts Managing Principal for the PAI team was George Marsh, who stopped by periodically to check with Tom and Mark (every other week or so) for a progress status report. The other PAI members were Scott Parker, Senior Project Manager, whose leadership role was to provide project management support to Mark as well manage the local and international design/engineering consultant teams; four PAI architectural designers, Daniel (Dan) Gorini, Mike Liporto, Al Weisz, and Nima Yadollahpour; and two PAI landscape designers, Brian Carlic, Project Landscape Designer and Jeffrey Dumars, Landscape Designer (Salvador "Practicum A: Project Team Meeting Notes"). Dan was the senior designer for the architectural design, and Brian was the senior designer for the landscape design. Note that Mark was a relatively new Project Manager, as he was being trained in his role as Project Manager of a very large and complex architectural project. Tom was a mentor to Mark, but Mark also sough direction and advice from George and Scott.

The general scope of work for the university campus was to create a master plan accommodating an academic core of undergraduate and graduate programs, professional schools, collegiate athletics and intramurals, library as well as its supporting administrative facilities and utilities (Payette Associates The Aga Khan University Faculty of Arts and Sciences Campus Master Plan and Design). Programming for the Aga Khan University campus, located in Karachi, Pakistan, involved the design and development of an educational and research institution for the Faculty of Arts and Sciences. This process involved many "questions and answers" work sessions between the designers, engineers, and client's representatives. Here, I observed the PAI core team collaborate with the client and various design/engineering consultant teams in order to formulate a report that would identify all the larger components of what a university should have. The process was conceptual in thinking, but the discussions engaged a very realistic approach to what an educational institution should address and meet.

Payette Associates provided a single-point responsibility for all aspects of the master planning, programming, design, and documentation for the AKUFAS project. PAI had assembled a highly-qualified team of US- and Karachi-based architects, engineers, planners, and specialty consultants to address the diverse range of program requirements presented by the project. Majority of the project information transferred between architect, client, and the engineering consultants were through electronic mail correspondence, telephone conference calls, briefing documents, and progress reports. Majority of my observations occurred during team meetings with the client and/or engineering teams. There were two types of weekly meetings: a scheduled telephone conference call with Karim Nurmohamed, the Project Director representing the owner/client and also the prime contact to PAI, and two internal work sessions with PAI and its design/engineering consultant teams.

## Analysis of Leadership Concepts and Lessons Learned

### Communication as Shared Influence

In regards to relational skills, communication as a shared influence builds upon the two previous leadership concepts of teamwork and collaboration. We discovered through teamwork that interpersonal communication, whether it is verbal or nonverbal means, increases self-awareness. We discovered in collaboration that creating a climate of trust through an open, sharing, and accepting mode of communication leads to positive team interdependence. With this understanding and awareness, we find that communication as a shared influence develops and nurtures the trust and respect between a leader and his/her team members. "Trust and respect are the key elements of any good relationship. Trust is expressed by openness in sharing ideas and feelings. Respect is demonstrated by a willingness to listen to the ideas and feelings of others. Without trust and respect, human relations break down" (Manning, Curtis and McMillen 101). Shared influence is an aspect of a positive relationship, one comprised of trust and respect.

On the AKUFAS project, Tom regularly reminded Mark that he is more than just a Project Manager. Aside from Mark's daily project management responsibilities of maintaining the scope of work, overseeing the project schedule, and controlling the design/engineering fees, Tom continually communicated to Mark that he is also perceived as a leader on the AKUFAS project team. Tom would say to Mark:

- The team looks to you for direction, clarification, and information. Understanding this is the first step as you will need to communicate clearly in such a way to develop the trust between you and individuals on the team.

- Communicate on a regular basis, not only to address issues but also to inform on status of the project. This builds rapport, and you begin to nurture the relationship you have with each individual.

- You have a positive attitude and an eagerness to learn from the many challenges the team faces. Your actions in supporting the team – by attending to individual needs – will give you credibility and earn you their trust and respect.

- Stay focus on the problem or issue, and do not focus on the person. Separate the individual from the root of the problem and then attempt to look for solutions. Understanding this will allow you to make informed objective decisions. (Salvador "Practicum A: Project Team Meeting Notes").

The above comments are similar in nature on what Tom would observe and share with Mark. These were words of empowerment from Tom to Mark, a function of leadership that motivates others by raising them to their "better selves" (Hitt 12). Mark received leadership tips from Tom on how to interact with team members from the perspective on cultivating a positive interdependence on the team – by means of listening effectively and communicating clearly – all with a positive, polite, and respectful attitude. I frequently observed this type of interaction between Tom and Mark outside of the "public" AKUFAS project team meetings, when the two shared private conversations. Tom mentored Mark on how to control his own actions among the designers and engineers by understanding his own perceptions of himself as well as others; thereby managing his relationship with the team as well as with each individual. In a subtle way, Tom motivated Mark to do more than simply manage a project; Tom encouraged Mark to lead the team.

When the AKUFAS project team came together in the weekly teleconference call meetings, I also observed Tom enlist Mark into the active discussions. Once Mark stepped in and began to lead the discussion points, Tom would fade into the background and only facilitate the discussion when necessary. This way, Tom shared his leadership and influential capacity with Mark. Tom was giving credibility to Mark by letting him be in control of the team's discussion, actions, and behavior. Mark was in control of the team climate. And, in effect, the team members would also begin to see and accept Mark as a leader.

**Figure 16: Sharing Knowledge to the PAI Team**



In the adjacent photograph, Figure 16, is Tom Payette (blue tie) discussing possible design solutions with Brian Carlic (red shirt), Dan Gorini (tan shirt), and Mark Careaga (right).

Photo Courtesy of A. B. Salvador, 2004.

Tom also motivated the PAI design team, which comprised of Mark Careaga, Dan Gorini, and Brian Carlic, by offering them praise and positive encouragement throughout the duration of the project. Tom exhibited a strong relational leadership in motivating his staff; he "encouraged them to appreciate one another's skills and capabilities, and to work together to achieve the highest standards" (Bruce and Langdon 48). In doing so, he was seen to be fair with everyone and this resulted in a positive team atmosphere. The four individuals are shown above in Figure 16: Sharing Knowledge to the PAI Team.

Tom empowered Mark and others at PAI to be attentive to their responsibilities through praise and encouragement. I observed Mark on several occasions spend extra time and effort on a task, looking at various scenarios for possible solutions. I observed Mark and Dan holding discussions on the side, bouncing ideas off each other, and finding alternate ways to address issues at hand. Because Tom shared his leadership influence with others, such as Mark, Mark's own self-confidence increased. Eventually, Mark would accept his position as a leader of the AKUFAS project team.

### *Team Development – Process Oriented*

Team development involves strategies, methods, and activities that will influence and impact the productivity of the team. This in turn improves the quality of the work produced by the team. Team development is about effective interpersonal communication skills, using skills such as appropriate attending skills, active listening techniques, and empathy, which a leader utilizes while demonstrating a nonjudgmental attitude (Ender and Newton). According to Ender and Newton, the skills are as follows:

- Attention skills focus on the verbal and nonverbal messages as well as the body language shared between a leader and its members.

- Listening skills focus on the leader's attempt to listen intently and paraphrase the message just heard.
- Empathic understanding is linked with purposeful attention and listening skills. The more effective a leader is with the skills of attending and listening, the better the ability to empathize with the members.

These skills noted above assist a leader in motivating and empowering his team members, and it also serves to give credibility to the leader. Tom Payette utilized these team development skills while I observed his interaction with the AKUFAS project team during engineering systems coordination meetings.

In an example of team development, I observed the PAI core team interact with its design/engineering consultant team during the engineering systems coordination phase of the AKUFAS project. "Engineering systems coordination involves selecting and specifying structural, mechanical, electrical, and other systems, and integrating them into the building design," according to the NCARB (<u>Intern Development Program Guidelines</u> 41). Through this interdisciplinary coordination process, Mark would facilitate conference calls between the local US team and the international team. Below is Figure 17: Work Session showing the AKUFAS Project Team on a combined conference call/work session.

### Figure 17: Work Session - Architect and Engineers



The adjacent photo, Figure 17, is a work session conference call to Pakistan:

(left to right) Lenny Zimmerman, Gary Pomerantz (standing), Tom Payette, Stephen Lew, Mark Careaga (standing), Dan Gorini, Bob Daylor (standing), and Zoltan Juhasz.

Photo Courtesy of A. B. Salvador, 2004.

Conference calls between the US East Coast and Pakistan were a nine-hour difference, which started very early in the morning and often ran past the lunch hour. The physical work environment poised a challenge for the team to communicate with those on the other end of telephone, as there was neither video conferencing nor visual exhibits streaming "live" electronically. When an engineer spoke about a particular

document or drawing, he had to very specific and clear in describing what he was referring to.  For someone on the other end of the phone call may not easily understand.

Despite the challenge in the long-distance communication, the relationship between the architect and the engineers demands it to be interactive, seamless, and cohesive.  Particularly, with the AKUFAS project being an international project, the information exchange between the US and international teams needed to maintain in an open, two-way dialogue track.  Being the prime architect, Payette Associates had to deal with (and sometimes temper the) constant changes from the client's perspective and expectations.  But, the team's success can be achieved in developing a team that will work cohesively and collaboratively.  To do so, constant (daily), active dialogue and purposeful attention had to occur among the team members.  Tom was actively engaged in the work sessions.  Tom asked a lot of questions to gain clarity and understanding of the subject.  Tom maintained his composure throughout the conference call, always paraphrasing what someone on the other end of the phone just said.

One of the big challenges the AKUFAS project team faced was the road alignment of the public "right-of-way" and its connection onto the university campus.  The team needed to identify connection points (i.e., entryways and driveways) that would provide vehicular and pedestrian access onto the university campus.  The issue was that the public "right-of-way" was not in the design/engineering scope of the AKUFAS Project Team as that scope of work was with another engineering team (in other words, not in the AKUFAS contract).  This meant that the team needed to coordinate the university campus master plan with the other engineering team and get confirmation on where the driveways would be located.  This was not an easy task for PAI, since the other engineering team was not contractually obligated to respond to PAI and its design/engineering team nor its design schedule.

Not knowing this information, the civil engineer on the AKUFAS team was unable to provide a recommendation on the connection points.  The civil engineer did not want to provide drawings based on guesswork and then later discover that the "right-of-way" was actually meant to be in another location.  The civil engineer did not want to re-do his work, because contractually, his engineering fees did not cover it.  I observed the frustration and negativity from the civil engineer, because he really wanted to complete his work, but he was unable to – and the delay was caused by external factors neither he nor PAI could control.

In effect, this negativity brought a somber mood to the team. Tom expressed to the civil engineer that "we" (i.e., AKUFAS Project Team) will find a way around the issue. Tom explained this so as not add stress to the civil engineer. Tom's leadership ability to "maintain interpersonal relations in a [team] and facilitate a climate satisfying to members and conducive to accomplishing the [team's] task" is a dimension of "process-leadership" (Beebe and Masterson 317). The following list presents specific process-leadership behaviors that enhance team climate, and in effect, also enhance team development:

- Releasing tension. An example would be during the conference call/work sessions, where Tom would say after a hearty team discussion "Let's take short break," recognizing social (verbal and physical) cues from the team that a break was needed.

- Gatekeeping. This implies there is coordinated team discussion among the individual members of the team. Tom ensured that everyone had an opportunity to ask questions.

- Encouraging. Offering encouragement is a leadership behavior aimed at increasing the self-esteem of [team] members and raising their hopes, confidence, and aspirations.

- Mediating is aimed at resolving conflict between [team] members and releasing any tension associated with the conflict (Beebe and Masterson 317).

**Figure 18: Juggling Needs – Task, Team, and Individual**



Source: (Heller 28).

Process-leadership is essential to maintaining healthy interpersonal relationships and positive team climate (Beebe and Masterson 314). In doing so, Tom also demonstrated the ability to juggle the needs of the team, individual, and tasks (Heller 28), as shown in the adjacent Figure 18: Juggling Needs.

Tom encouraged team members to share ideas and support one another. Tom monitored individual working conditions and helped staff develop their full potential. Tom determined the task objectives and considered the problems involved. The ability to effectively relate with individuals comes with perception, experience, and expectations in working with others.

Tom Payette's leadership role can best be described as process-oriented, demonstrating leadership behaviors that guide, influence, direct, or control others in a team.  The ability to encourage team members to take on larger responsibilities is a risk taken, but one given with trust in the team members and its performance.  The ability to be in two roles, one as a team leader and the other as a team contributor and mentor, speaks to an understanding in how to balance a team's strengths and weaknesses.  Tom was inclusive of people having different points of view.  Tom empowered those who were actively involved with the project and tasks.  Tom was driven by good values and high standards of expectations.  Tom was an exceptional leader.

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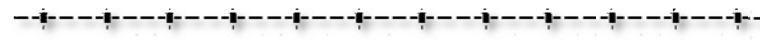
### Lived Experience #5 –Practicum Studio "B"

#### Background

For this lived experience, the study focused on the interpersonal relationships observed during Practicum Studio "B", where I was placed under the faculty mentorship of Lewis T. May, FASLA, and Vice President at an international-based architectural and engineering firm called PageSoutherlandPage in Houston, Texas.  The Practicum Studio is a required course in the Doctor of Architecture program at the UH Mānoa School of Architecture.  PSP accepted me as its first Practicum Student, and this was my first Practicum Studio experience.  Refer to Appendix I for an Executive Summary on the UH Mānoa SOA Practicum Studio.

Focused on a community-based client project, the project was in Phase Three (Implementation Phase) of a four-phase project, initiated in Fall 2003, when the City of Friendswood, Texas engaged PSP to develop a strategic plan implementing the Friendswood Main Street Project, the City's vision for a sustainable town center.  The collaborative relationship between PSP, its Project Team, and the community-based Client is the focus of this qualitative inquiry, investigating the leadership roles and decision making protocols of the architect and team.

The context of the study is found in the visioning and planning sessions held weekly at the offices of PSP.  Once a month, the Main Street Steering Committee would join the Project Team's planning sessions and participate in the programming process.  Approximately every two months, PSP and the Project Team would then present its

progress, provide a status, and field any questions from the Mayor and citizens of Friendswood at a public forum. Below is Figure 19: Lived Experience #5, illustrating a four-tier hierarchical relationship between the entities involved: 1) City Hall, 2) Steering Committee, 3) Architect, and 4) Project Team. Refer to Appendix J: Lived Experiences – Team Structure for additional information on the Project Team.

**Figure 19: Lived Experience #5 – Team Relationship**



Primary (direct) solid line of communication
    To provide/receive direction, send progress reports, ask questions, and give clarifications as it related to specific and/or daily project tasks.

Secondary (indirect) dashed line of communication
    To provide larger vision or scope of project's goals and objectives, clarify focus and direction of objectives, and maintain work schedule and budget.
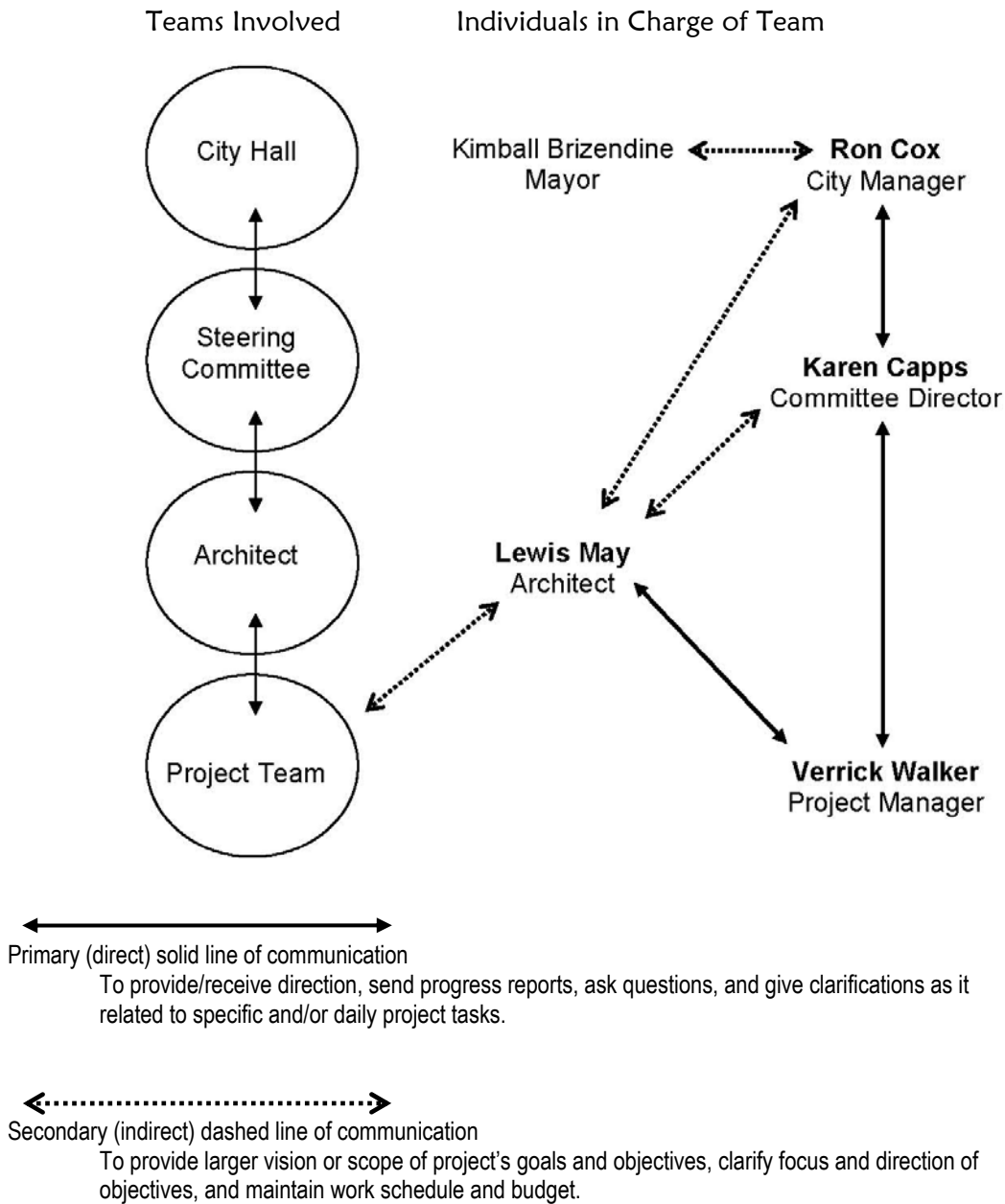
Source: (Salvador "Practicum Studio B: Friendswood Project Team Meeting Notes").

I was an active participant observer on the PSP Project Team and shadowed Lewis on many team coordination meetings with the client. I also assisted Verrick on a regular basis, providing administrative and research support for the project. Similar to the previous lived experience, we find a relatively new Project Manager, managing a large project with multiple facets. Verrick received project management training and mentoring from Lewis on a daily basis. For this qualitative inquiry, this lived experience will primarily focus on the relationship and interaction of Lewis May when engaged with the Steering Committee and Project Team.

The Client is best defined as a triad, a team of three authoritative bodies to create, implements, approves, and/or declines the Friendswood Main Street Project's Implementation Plan, and represented by:

- City of Friendswood (City Hall government)

- Steering Committee

- Public community of the City of Friendswood

These three entities had their own constituent's goals, needs, ideas, and objectives to address, which in turn created a multi-faceted and complex Client for the Architect and Project Team to engage with. The Friendswood Main Street initiative involved a variety of people from diverse disciplinary backgrounds, representing commercial and business owners, real estate developers, local government, and more importantly, the residents of the City of Friendswood.

Here, we find the Architect, represented by Lewis May, as the charismatic, motivational team leader, who personally connected with each entity: City Hall, Steering Committee, and the Project Team. The other three individuals, who had significant roles on this project, are: Ron Cox (City Manager), Karen Capps (Committee Director), and Verrick Walker (PSP Project Manager). Ron reported directly to the Honorable Major, Kimball Brizendine, and ultimately, to the citizens of the City of Friendswood. Karen reported to Ron, and led a committee of five individuals. Verrick managed the PSP Project Team, which comprised of an interdisciplinary team of specialty consultants of leading planning, real estate, development, marketing, and financial professionals.

During the implementation phase, PSP assembled a team of leading planning, real estate, development, marketing, and financial professionals to identify, review, and recommend various implementation tools, methods, and mechanisms. Through a series of highly interactive visioning and planning sessions, the Project Team collected,

organized, and analyzed data on a range of issues shaping the Friendswood Main Street Project. One of the difficult challenges for PSP and the Project Team was to remain true to and in alignment with the Client's vision, goals, and objectives. Because of the Project Team's make-up of different disciplines and the multiple public entities involved, a motivational leadership role from the architect was needed to facilitate and adapt to each unique individual.

## Analysis of Leadership Concepts and Lessons Learned

### Perceptions and Attitudes Impacts Relationships

The decision making process for reviewing and accepting the Implementation Plan rested in the Steering Committee, but the Committee depended on the recommendations and information evaluated by the Project Team. At intermittent meetings with the Committee, the Architect explained in detail the Project Team's creative analysis and recommendations. At the end of Phase Three, the Committee would have a comprehensive plan outlining the action steps to take next towards implementation. The important decision makers were represented by:

- City of Friendswood, Mayor Kimball Brizendine

  The Honorable Brizendine provided trust and confidence in the Steering Committee's guidance and direction in assisting the Project Team's planning process. Although his role was minimal during the third phase, his positive support encouraged the continued progress. His role in the primary decision chain was to ensure there would be capital budget for implementing the Plan.

- Steering Committee, Economic Development Director Karen Capps

  Karen was a vocal and community-minded individual, who was genuinely concerned in addressing the needs of the community as well as the goals of the Friendswood Main Street Initiative. Her tenacity and attention to detail brought a high-level of standards to meet at the worktable. Karen's role in the primary decision chain was to facilitate approval and support from the Steering Committee.

- Architect + Project Team, Lewis T. May, FALA

  Lewis was a visible spokesperson and held a significant role in leading and guiding both client and consultant teams towards creative endeavors in meeting the objectives. His leadership qualities and broad perspective over the greater scope of the project gave him a formidable presence in community presentations. Lewis's role in the primary decision chain was to validate the Project Team's recommendations to the Steering Committee.

The most significant identifying feature of this study is the levels of authorities involved, which participated in deciding, reviewing, and accepting the Implementation Plan. Consisting of the City of Friendswood, Steering Committee, and the community of Friendswood, these three bodies represented the Client, and each one yielded its own ideas, goals, objectives, needs, and responsibilities; and in turn, affected the influential leadership roles as well as impacted the relationship the architect held with the Client.

**Figure 20: Project Team Presentation to City of Friendswood**



A: Public Form Presentation
Presenters (left to right): Lewis May, Bill Peel., Kurt Neubek, and the Honorable Mayor Kimball Brizendine

B: Questions & Answers with the Community (In dark suits) Lewis May (left) and Kurt Neubek speaking with Friendswood residents

Source: (Salvador Main Street Implementation Plan: Status Review Meeting).
Photo Courtesy of A. B. Salvador, 2004.

The planning process was designed to spawn as many creative ideas as possible to generate historical, social, recreational, and economic value to the City of Friendswood. In Phase Three, the Project Team interacted primarily with members of the Steering Committee over a course of several brainstorming sessions and then engaged with the Public Community during open forum presentations to the Mayor, local government officials, and other community leaders, as shown above in Figure 20: Project Team Presentation to City of Friendswood.

The overall objective lay in the hands of the Steering Committee to ensure the Main Street Implementation Plan addressed its goals and objectives. Comprised of key community figures as well as City-elected officials, the driving force of the Steering Committee was behind its director, Karen Capps. As head of the Steering Committee,

Karen was the prime contact person to the Architect. She also reported directly to the City Manager. Because Karen was in charge of a very important and visible community project, she was anxious about the project's work progress and its Phase Three outcome. A business-minded and community-oriented individual, she brought a high-level of energy to the planning sessions. She urgently requested weekly progress updates from Verrick, which by contract, updates should have occurred once a month. Verrick addressed her concern and agreed to send Karen via electronic mail, updates at least twice a month. At one weak point in the project, Karen misunderstood a status report, concluding that the Project Team had not moved forward in its work and she threatened to pull the project from PSP. She questioned Verrick's project management abilities in leading the Project Team towards completing Phase Three work in a timely manner.

**Figure 21: PSP & Project Team – Visioning Sessions**



A:  Brainstorming Wall – Programming
(Left to right) Kurt Neubek and Verrick Walker

B:  Late Night Planning Session
(Left to right) Annette Salvador, Verrick Walker, and Bill Peel (front)

Source: (Salvador <u>Main Street Implementation Plan: Team Workshop</u>).
Photo Courtesy of A. B. Salvador, 2004.

Often times, the work of the team is done in abstract terms, where discussions occurred in brainstorming visioning sessions. Project Team discussions were documented on large index cards, pinned onto a "brainstorming wall" as a method of the firm's architectural programming process, as shown in image A on above in Figure 21: PSP & Project Team – Visioning Sessions. Although the team met in multiple creative planning sessions, a comprehensive summary report of the team's recommendations would be

provided at the very end of the Phase, as required contractually.  Lewis understood Karen's anxiety, because it represented a huge commitment to fulfilling a shared vision from a larger community body and not just an individual's selfish concerns.  Lewis clarified to Karen that planning sessions were not intended to produce a finished product after each session; rather it built upon each successive session.

The relationship between the Client (Karen) and the Architect (Lewis) would best be described as an influential relationship.  Because of Karen's highly-visible position on the Steering Committee, her attitude was that she needed frequent updates on the project to see that the Project Team was making progress.  Her perception was such that if she did not see progress on the status report, she understood that meaning no work was done on the task.  Having a face-to-face dialogue, Lewis managed Karen's perception of the Project Team.  Lewis's interpersonal skill to emphatically listen to the client's questions and concerns led to his ability to calm the client's misunderstanding.  Relating with Karen's concerns, Lewis clearly communicated step-by-step actions to be taken in reassuring progress is being made.  By having an in-person meeting with Karen, Lewis was sensitive to the relationship between PSP and the City, seeking meaningful dialogue that would not jeopardize the architect-client relationship.

### *Supporting a Relationship of Trust*

The Architect and Project Team can best be defined as an interdisciplinary collaborative team.  Leading an interdisciplinary consultant team, the Architect understood each consultant's field of expertise and the knowledge the individual brought to the discussion table.  PSP chose to work with these consultants, because of their previous successful projects the firm had worked on with each of them.  This team of individuals worked together in the best interests for the City of Friendswood.  At each public presentation with the City and community, Lewis was the voice and face of the Architect.  For each public presentation to the Friendswood community, Lewis opened and closed the presentations, acknowledged team members' contributions, addressed questions, and demonstrated an ability to humbly converse with all types of people from various backgrounds: public officials, business owners, and concerned residents.  His ability to relate with each of others as a common individual was a way to gain their respect, trust, and confidence.  Gaining the community's trust started several years earlier, when PageSoutherlandPage was contracted to assist with neighborhood visioning

workshops.  Lewis was one of the key persons from the get-go on the Friendswood Main Street Project initiative.  Being the frontline spokesperson in a highly visible community-based project is very important for consistency as well as history.

**Figure 22: Fostering Relationships by Interaction**



A:  PSP Principals in Charge (left to right):       B:  Coaching Session
Kurt Neubek, FAIA and Lewis May, FASLA       (Left to right) Lewis May, FASLA and Verrick Walker

Source: (Salvador Main Street Implementation Plan: Team Workshop).
Photo Courtesy of A. B. Salvador, 2004.

Internally, the team representing PageSoutherlandPage composed of two Principals, Lewis May and Kurt Neubek, FAIA, who are shown in the above, Figure 22: Fostering Relationships by Interaction, image A.  Lewis and Kurt communicated on a regular basis, if not daily, to manage and address any issues or challenges on the project. Because Kurt and Lewis were established architects in their own right, they both displayed a mutual respect for each other.  They both seek each other's opinion on matters concerning projects or the firm's operational processes, and sometimes one would change the perception of the other.  As a leader of PSP, Lewis exhibited a trust in those he worked with.  His trust in others assists in maintaining successful relationships.  In image B, Lewis is meeting with Verrick to discuss the project's "next steps" and issues.  Their weekly meetings were necessary, not only because it helped Verrick to stay on schedule and on top of tasks, but the in-person interaction was a learning opportunity for Verrick to be mentored by Lewis.  Leadership is a relational process, and between a supervisor and his staff person, a healthy relationship is built on respect and trust.  Here, the trust between Lewis and May begins to build and will develop over the course of the project.

In planning sessions with the Project Team, Verrick managed the team, who received Project Management mentoring from the two Principals. Kurt discussed the daily project operations (e.g. consultant contracts, scope of work, project schedule, and budget) with Verrick, but it was Lewis, who provided leadership depth in developing Verrick's relational skills in terms of managing the client as well as managing the team. Here, the relationship between the mentor (Lewis) and mentee (Verrick) was a trust-building relationship. Verrick was entrusted a leadership opportunity to learn how to manage a team of consultants and communicate the team's efforts to the Client. After meetings, Lewis offered Verrick constructive criticism on how to present him (and the firm) effectively in the future. Verrick may have been standing in the shadows of the two Principals, but being in a "learn-as-you-go" project management position, he handled the duties remarkably with an eagerness and willingness to learn.

As Phase Three unfolded, the project team faced several challenges:

- Inspiring creativity in a collaborative effort
- Staying focused and in alignment with the Client's vision and objectives
- Communicating the shared visions and ideas to the Client

Addressing these challenges was a key effort to the team's effectiveness in performance and productivity. Inspiring creativity came in the form of many lively discussions for the team. Often, questions led to researching precedents on how other town centers developed, and then the team would creatively think out of the box about possibilities. Staying focused on the Client's goals was constantly on each member's mind. A core set of programming note cards was always displayed in the room and reminded the team of the community's vision. The thinking process was cyclical, where questions would always return to the start to see if any ideas met the vision statement. Communicating with each other was a two-way interactive dialogue; it needed to be in order to clearly understand the ramifications and possibilities of each idea.

Although Verrick facilitated the planning sessions, Lewis regularly stepped in to summarize the creative thoughts and ideas. As a team contributor, Lewis challenged the consultant's ideas and asked out loud frequently if the ideas best represented the Client's goals. He asked a lot of questions, even if the questions led in an opposite direction away from the objectives. This was his way of getting information, knowledge that he tucked away at the back of his head, and when the moment arrived at a public forum, he would be able to answer the many questions from the community.

Lewis May's leadership role can best be described as influential and motivational, demonstrating the skills and knowledge in understanding how to deal effectively with different representative teams. "Leadership is always dependent on the context, but the context is established by the relationships we value" (Wheatley 144). The lessons learned from this study originate from the relationships Lewis valued and the relational skills he demonstrated with the Client and the Project Team. Engaging in everyday human relationships is a life-skill tool equally valuable as knowing how to lead a team of individuals towards goal accomplishment. Skills such as communicating clearly and effectively, empathetically listening to others, and respecting others for their knowledge and experiences are ways to gain trust and confidence.

The last of the six lived experiences will be presented as a learning opportunity to frame all three leadership concepts, *teamwork*, *collaboration*, and *relational skills* with an emphasis on *relational skills* in the context of learning and mentoring.

### *Lived Experience #6 – Architectural Internship*

#### *Background*

My place of work at Clifford Projects Inc. in Honolulu, Hawai`i provided me an opportunity to conduct an active participant observational study. With a design project underway in construction, my role as the Project Coordinator was to assist the Projects Architect (George Hogan) during the Construction Administration (CA) phase of the project. The NCARB defines Construction Administration as "facilitating project communication, maintaining project records, reviewing and certifying amounts due contractors, and preparing change order" during construction (Intern Development Program Guidelines 53).

I had minimal knowledge and technical experience in CA, whereas George has over twenty years of architectural practice and technical experience in construction. As such, I yielded a lot of questions and uncertainty regarding design intent, technicality, materiality, and constructability. My working relationship with George presented itself as a learning opportunity – I, the adult novice, and George, the adult expert – to learn more about Construction Administration, and more importantly, to practice the leadership concepts of teamwork, collaboration, and relational skills.

**Figure 23: Lived Experience #6 – Team Relationship**
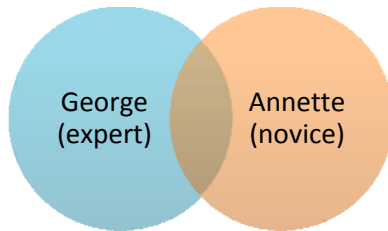


The adjacent Figure 23: Lived Experience #6 illustrates the relationship between expert (George) and novice (Annette). The overlap in the middle of the two circles represents the mentoring relationship between the two.

## *Analysis of Leadership Concepts and Lessons Learned*

### *Learning from a Mentoring Relationship*

As a young adult working in a professional practice, how I learn in the workplace directly relates to the level of social interaction I have with my colleagues from which a mentoring relationship experience is derived. Whether my colleague is a superior or a peer, we each bring to the setting our independent thinking of the shared experience. As described by Wertsch, this shared setting is described as a situation definition, "the way in which a setting or context is represented – that is, defined – by those who are operating in that setting". How two individuals define their common social context is important, because the joint social correspondence between two individuals create an environment for teaching and learning. This collaboration between two individuals is defined as the zone of proximal development (ZPD). Vygotsky defined the ZPD as "the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (Wertsch). My understanding of Vygotsky's ZPD is that it is a continuum between the level of assisted problem solving and the level of independent problem solving.

In a collaborative experience, semiotic mediation is an interactive process of shared and guided communication between two individuals, typically between an adult teacher and a child student. The exchange between two individuals is done by different means, such as linguistics, body language/gesture, voice/tone, and signs/symbols. Since my experience occurs in the workplace, the mediation is between an adult expert and an adult novice. As the novice, I immediately go to the resident expert, George, for help in answering questions from the Contractor. In an earlier stage of his guided assistance, and for my benefit, George would speak out loud as he dissects the question: Which discipline

(i.e. architect or engineer) is the question for?  What is the issue?  Are there other items to identify that may impact the resolution?  I offer answers, and George asks more questions.

Jointly, we go through a methodical process from "big picture thinking" (e.g., review of a floor plan) to "in the details" (e.g., review of a window component) as we review the construction drawings together in order to formulate a resolution to the question at hand.  Reflecting on the example above, the expert offers scaffolded instruction to the novice, so that they can perform and complete a complex task together (Tharp and Gallimore).  According to Tharp and Gallimore, scaffolding is a concept within the ZPD framework, and it is a way for the novice to gain "graduated assistance" from the expert.  In subsequent meetings between the expert and the novice, the level of assistance from the expert gradually decreases as the level of cognitive development increases as the novice begins to regulate her learning.

The joint problem solving experience between the expert and novice relates to another aspect of the ZPD: intersubjectivity, which is a social process between two individuals and could be defined as a "matter of degree to which separate world views coincide" (Bail "Social Context of Learning").  In other words, intersubjectivity may be viewed as an intersection or overlap between two individuals' perspectives. Intersubjectivity may occur at any level within the ZPD.  In the workplace, the novice has gained an understanding of the cognitive process to review the construction drawings, and therefore, begins to seek minimal guidance from the expert.  However, there remains evaluation and validation in the novice's task performance.  The novice presents her conclusion and seeks the expert's confirmation in the resolution.  If the novice is able to persuade the expert to agree with her resolution, then a negotiated intersubjectivity has occurred.  This results in a common understanding of the situation and is defined and shared by both the expert and novice.

As the adult novice continues to exercise her cognitive and linguistic skills through guided participation from the adult expert, the level of assisted problem solving gradually becomes a level of independent problem solving.  In other words, the "assistance from others" becomes "assistance by self" (Bail "Bandura's Social Cognitive Theory").  At this point, the cognitive problem solving is internalized, when the adult novice no longer requires assistance from the adult expert (Tharp and Gallimore).  Basically, the novice is able to exercise and perform the problem solving process on her own without the support from the expert.  Rogoff further describes this concept as appropriation, referring

"to how individuals change through their involvement in one or another activity, becoming prepared for subsequent involvement in other, related activities" (Rogoff). For example, in the workplace, since the novice has gained familiarity with the construction drawings and an understanding in problem solving (e.g., making assumptions, asking questions, reviewing materials, and offering a resolution), the novice internalizes the process and becomes accountable for her own performance. In other words, previous knowledge and the "know-how" on earlier activities prepare the novice to address a related situation on her own with mature thinking and personal accountability.

"According to Bandura, many of the behaviors people exhibit have been acquired through observing and modeling what others do" (Ormrod). Modeling primarily reflects a physical action or behavior where an observer attentively watches another person and mimics the motions or behavior of that person. Learning occurs in modeling through the eyes of the novice as she observes her superiors and peers' interaction amongst each other and within their environment. The novice also learns from their behaviors and mannerisms. Learning through the concept of modeling can occur at anytime and anywhere and it can be demonstrated by any individual. To successfully model the behavior of a person, four processes must occur: attention, retention, motor reproduction, and motivation (Ormrod).

Back to the workplace context, when my male superior consults with a client, I notice that he shakes hands with the client – at the start of a meeting and again at the end of a meeting. My attention to this friendly gesture tells me that is how professionals conduct business – by partaking in a handshake. I follow suit and shake hands with the same client. The behavior is simple to model, but I also notice that my hand-shaking method is inconsistent: the hands are not fully clasped, the "shake" is weak, or sometimes the grip is too tight. I do not necessarily know how my boss's handshake is performed, but I do observe the outcome is a genuine expression of confidence and trust between the two individuals modeling the handshake. Thus, my goal would be to perform a consistent, firm handshake and to give an impression of confidence to those around me.

However, in another setting, I observe a female superior shake hands with a client and offer a Hawaiian-style greeting of a gentle "A-frame" hug with a light cheek-to-cheek peck. I can model this behavior, but I am not motivated to do so; because I feel awkward, and I have no prior business relationship with the client. Motor reproduction occurs when I will be able to completely model the behavior of my superiors. This can

only happen through subsequent meetings and conversations with the client to develop a relationship with the client. Eventually, by practicing handshakes and forming a bond with the client, I would feel comfortable to model my female superior and reproduce a firm handshake and gently hug the client. I am motivated to model my superiors to gain their confidence in me. "Many behaviors, beliefs, and attitudes are acquired through modeling" (Ormrod). By observing my superiors' ways of business conduct and relationships with people, I can also begin to project self-confidence.

The concept of modeling fits very well in a workplace environment, because in a professional practice environment, the junior staff can easily observe, learn, and model the behaviors and mannerisms of the senior staff. The advantage of modeling is that no level of skill is required, just a set of attentive eyes and a value-based understanding. The disadvantage of modeling hinges on the value-based understanding of the observer, which may lead to a misinterpretation of the modeler's actions. This value-based understanding relates to a person's sociocultural background, which is impressed upon the person from the get-go in her nuclear family, through friends at school, and by the community at large. An individual's perception of their surroundings is learned and accentuated throughout the individual's life. I also note that one individual's observation may be interpreted differently from another individual's observation.


Mentoring emerges in literature and practice as a source of advice, support, sponsorship, coaching, modeling, guidance, teaching, challenge, protection, confidentiality, judgment, and friendship for both mentor and mentee (Odell 7). In this lived experience, my architectural internship at CPI provided a hands-on learning experience on self-awareness (learning to understand my strengths and weaknesses), self-regulation (learning to embrace conflict and change), motivation (learning to take initiative and strive for improvement), and empathy (learning to understand other perspectives and opinions). "In forming a mentoring relationship, the point is not to create a dependency but to promote self-responsibility, not to decide for someone but to encourage self-direction" (Ender and Newton 17).

Leadership in architecture develops through mentorship relationships, as observed in Practicum Studio and architectural internships.  Through mentoring relationships in a team (or within a firm), individuals are provided appropriate leadership training and nurtured in terms of their roles and responsibilities on projects.  This kind of relationship is a two-way dialogue.  You draw on your personal characteristics, experiences, and the settings in which you might be involved for different leadership purposes.  "Leading others to lead themselves is the key to tapping the intelligence, the spirit, the creativity, the commitment, and most of all, the tremendous, unique, potential of each individual" (Manz and Sims Jr. 225).  To recap this section on *relational skills*, below is Table 17 summarizing the leadership concepts and lessons learned as it relates to *relational skills*:

**Table 17: Relational Skills – Summary of Leadership Concepts**

| LIVED EXPERIENCE | RELATIONAL SKILLS: LEADERSHIP CONCEPTS AND LESSONS LEARNED |
|---|---|
| Lived Experience #4 Practicum Studio "A" Payette Associates Inc. | ▪ Communication as Shared Influence ▪ Team Development – Process Oriented |
| Lived Experience #5 Practicum Studio "B" PageSoutherlandPage | ▪ Perceptions and Attitudes Impacts Relationships ▪ Supporting a Relationship of Trust |
| Lived Experience #6 Architectural Internship Clifford Projects Inc. | ▪ Learning from a Mentoring Relationship |

### E.     Summary of Research Findings

Research findings are built upon the lived experiences of the active participant researcher, field notes and observations, and a review of selected literature.  The findings affirm that scholarly and practical learning experiences in architecture are about teamwork, collaboration, and relational skills, and in turn, emerge as leadership experiences.  These findings also indicate that there are personal descriptors, academic interventions, and leadership involvements that can significantly contribute to the leadership development of architecture students.

#### *Revisiting the Research Questions*

My journey of pursuing this doctorate project has been a compelling combination of exploration, self-discovery, and reflection in studying leadership in architecture.  I set out on this journey to answer the following three questions:

1.     **How do architectural education experiences provide opportunities to learn leadership in architecture?**

First, architecture students will encounter through their general architectural curriculum, specifically in the architectural design studio, the natural occurrence to work together in teams, collaborate with others, and along the way, develop interpersonal relationships with faculty and peers.  The output from what students learn in design studio is more than a grade; students are introduced to fundamental people's skills – leadership skills.  Based on that, students have opportunities in design studio to do teamwork, engage in collaboration, and practice their relational skills – through everyday normal means and methods that students do to complete their course assignments.  These normal activities the students undertake in team-based projects (e.g., delegating assignments, scheduling deadlines, and discussing roles and responsibilities) are generally done with no formal structure in combination to learn leadership in architecture.  However, there are processes in place, such as the "architectural design process" in which students receive formal theory and practice, but I believe learning leadership in architecture can also be a component of the "design process".  Learning in team-based projects occurs when there is constant dialogue with each team member and purposeful reflection on the shared experiences (Komives, Lucas and McMahon).

Second, we discovered a student organization, such as the AIAS Hawai`i Chapter, provided an excellent opportunity for architecture students to be involved in formal student leadership positions. Through active participation, students learn ways to meet the organization's goals and objectives (e.g., fundraising, community service). Through the AIAS, students are immersed in developing relationships with other entities, such as the American Institute of Architects, or connecting with the community, such as Habitat for Humanity. Here, students learn about community service and civic engagement, a realm that is linked with the profession of architecture. The key with student leadership development is the motivational factor – what motivates students to participate in extracurricular activities?. The opportunity is present for students to take it on.

Third, we discovered at the International Masonry Institute Masonry Camp a unique opportunity for architectural interns to put their knowledge, skills, and expertise to experimental practice by collaborating with mason apprentices on a design/build project. "Astin found that the more students are involved with campus life the more they will be influenced by this engagement to learn and shape their lives" (Astin; qtd. in Ender and Newton 33). This I believe, because I was involved with university campus life and after school extracurricular activities, I was motivated to engage more in self-discovery and self-growth. Hence, I looked for opportunities to learn, and I found Masonry Camp.

Lastly, we discovered at the UH Mānoa School of Architecture the Practicum Studio that offers a formal structured learning environment on leadership in architecture. Although this environment is set in a professional architectural practice, students have the special privilege of a one-on-one relationship with a senior leader of the firm. This interaction between an experienced leader and an inexperienced student is unique and can evolve into a mentoring relationship.

2.        What leadership lessons can be learned from architectural education experiences?

This qualitative inquiry rendered the lived experiences of the researcher, allowing for insight and understanding into the phenomenon of leadership in architecture.  The individual and personal experiences of the researcher as well as the study participants were explored to in order to identify the emergent leadership concepts: teamwork, collaboration, and relational skills.  Table 18 below summarizes the research findings for:

## Table 18: Summary of Research Findings

| No | TEAMWORK | COLLABORATION | RELATIONAL SKILLS | LIVED EXPERIENCE | LEADERSHIP CONCEPTS AND LESSONS LEARNED |
|---|---|---|---|---|---|
| 1 | √ | | | Architectural Design Studio | ▪ Openness – Goals and Ground Rules<br>▪ Supportiveness – Agreement and Endorsement<br>▪ Action Orientation – Stepping Up to Make Things Happen<br>▪ Personal Style – Positive Attitude |
| 2 | √ | | | AIAS Student Organization | ▪ Team Goals<br>▪ Interpersonal Communication<br>▪ Decision Making and Problem Solving to Reach Goals<br>▪ Evaluation – Seek Input and Feedback, Ask Questions |
| 3 | | √ | | IMI Masonry Camp | ▪ Create a Climate of Trust<br>▪ Facilitate Positive Interdependence – Team Building<br>▪ Support Face-to-Face Interaction |
| 4 | | | √ | Practicum Studio "A" Payette Associates Inc. | ▪ Communication as Shared Influence<br>▪ Team Development – Process Oriented |
| 5 | | | √ | Practicum Studio "B" PageSoutherlandPage | ▪ Perceptions and Attitudes Impacts Relationships<br>▪ Supporting a Relationship of Trust |
| 6 | √ | √ | √ | Architectural Internship Clifford Projects Inc. | ▪ Learning from a Mentoring Relationship |

3.    How do teamwork, collaboration, and relational skills provide value to the architecture student's personal and professional development in the context of leadership in architecture?

In the context of architectural education, the study of leadership in architecture hinges on three emergent leadership concepts: teamwork, collaboration, and relational skills.  Within all organizations and social systems, and throughout all walks of life, effective teams are the key setting in which things get done.  By the nature of the profession, architects work in teams in creative collaboration with other design professionals, engineering disciplines, specialty consultants, construction trades, owners, developers, and many others.  The need for knowledge of collaborative and relational skills in bringing value to being part of a team is more important than ever.  Learning basic leadership skills early in architecture is necessary for productive teamwork, team collaboration, and managing relationships; and it can provide a core building block for a student's future personal and professional development.

The value and significance of teamwork emerges through self-discovery, gaining an understanding of your attributes, strengths, and weaknesses.  The value and significance of collaboration develops through a climate of trust and positive interdependence.  The value and significance of relational skills is the ability to build trust in interpersonal relationships, based on respect, integrity, and credibility.  Teamwork, collaboration, and relational skills form a fundamental base for leadership in architecture.  Leadership skills are also people's skills.  When dealing with people in any manner of discipline, having the ability to influence people is beneficial to one's self-worth.

James P. Cramer believes architecture schools "should offer heavy doses of leadership education, entrepreneurial practice studies, and communications coaching.  If this happens, graduates would earn more, professional practices would contribute more to higher education, and architects and designers would have greater influence" (2009 American's Best Architecture & Design Schools 13).

Therefore, an architecture student's personal and professional development is to enhance the leadership learning process so that the average student can significantly increase their relational skills and performance capabilities to be collaborative team members, and more significantly, effective leaders when they enter the profession.

# IV.    Recommendations

## A.    Initial Concepts

Based on this qualitative inquiry, a recommendation to update the University of Hawai`i-Mānoa School of Architecture's mission statement would be the first step towards incorporating "leadership in architecture" into the architectural curriculum.  This recommendation is based on addressing the NAAB's Student Performance Criteria, where the SPC identifies leadership skills as a learning objective in an architectural curriculum.  The current (2009) School of Architecture mission statement is as follows:

> The School of Architecture offers a global collaborative approach to improving the build and natural environment founded on intellectual inquiry, creative problem solving, and outreach with a commitment to prominence in innovative architecture education, design excellence, sustainability, and research with a focus on Hawai`i, the Pacific, Asia ("University of Hawai`i-Mānoa School of Architecture - Mission Statement").

Next, a leadership course should have concentration areas.  There are four (4) concept areas to concentrate on: knowledge, community, advocacy, and culture.  The first three concepts were selected from the organizational structure of the American Institute of Architects.  The fourth concept, culture, was added as a focus objective unique to the culture of Hawai`i and the Asia Pacific Rim region.  These concepts would serve to frame the learning objectives of leadership in architecture.

### *Concept 1 – Knowledge*

This concept – knowledge – frames the student leader on learning and developing basic concepts of human development and re-frames it in an architectural context.  The leadership learning objective would focus on an individual's strengths, weaknesses, values, and goals.  The knowledge gained here is an extension of what is learned in education, psychology, sociology, and cultural anthropology.  Sharing knowledge will be through class discussions, team exercises, role-playing, personal reflections, and other appropriate learning ways.

### *Concept 2 – Community*

This concept – community – frames the student leader as an active person within the University of Hawai`i- Mānoa and School of Architecture as well as with the at-large public community.  The leadership learning objective would provide ways and means for student interaction at a school and university level, or community.  The AIAS Hawai`i Chapter would be an appropriate environment of study and learning, looking at small team goals, interpersonal relationships, and social interdependence.

### *Concept 3 – Advocacy*

This concept – advocacy – frames the student leader within the communities of the five architectural collateral organizations and within the public community.   The leadership learning objective would focus on student involvement in these organizations and the influence and impact an individual has on the public realm.  Case studies and guest lecturers will be employed here to enrich the learning process.

### *Concept 4 – Culture*

This concept – culture – frames the student leader within a diverse and multi-cultural community, such as Hawai`i and the Asia Pacific Rim.  The leadership learning objective will examine team interaction, composition, and reflection as it relates to the five architectural collateral organizations, interpersonal relationships, and teamwork.

## B.     Description of Context

Architecture schools can address leadership in architecture through three levels:

- Emerging Leadership in Architecture
- Developing Leadership in Architecture
- Engaging Leadership in Architecture

### *Emerging Leadership in Architecture*

Architecture students begin their personal growth and professional learning while in Architecture School.  Leadership in architecture can emerge in architecture school, permitting students to self-explore and discover relationships for meaningful and purposeful interaction.  Leadership emerges through self-discovery, understanding your attributes, strengths, and weaknesses.  "Leadership self-awareness grows when you can identify your personal strengths and weaknesses in working with others toward change" (Nicol and Pilling 110).  Relationships are a major concern of college students and an area

that causes many students to experience stress and anxiety.  Making and maintaining connections has a profound impact on a student's life (Ender and Newton).  During the early years in architecture school, the student may focus on finding a team to belong to and acquaintances to be engaged with in activities.  Developing interpersonal relational skills emerges through these initial relationships among peers.  Knowledge, skills, and personal integration by architecture students involved in leadership opportunities are more likely to be influenced by these experiences in shaping their future professional lives.

One evident way an architecture student learns about goal setting, values clarification, and team building is though voluntary membership in the Hawai`i Chapter of the American Institute of Architecture Students.  At the UH Mānoa SOA, student membership is motivated and energized in pursuing academic and community interests.  Here, students participate in educational and social activities, pursue fundraising goals, and plan community service projects.  The AIAS Hawai`i Chapter can be a platform for students to learn about the individual self, all the while learning to work creatively and collaboratively with each other.  Essentially, students leading students is a motivating and empowering building block to learn from.  With positive support from the UH Mānoa SOA, students emerge from an AIAS experience a step ahead of their fellow classmates.

As team members on a design team, firm principals identify individuals who exhibit enthusiastic energy, positive attitude, willingness to learn, and honest, personal attributes as leadership potential.  Role models serve as inspiration in a young professional's career development and can have a positive impact on fellow colleagues as well as developing team cohesion.

### *Developing Leadership in Architecture*

Architecture students develop their relational and collaborative team skills in architectural design studio.  Leadership in architecture develops in a collaborative team concept, where understanding team roles –and when to use them– is an important part of becoming a competent team contributor.  An upper-level design studio working in teams engages the student to develop communication skills.  Collaborating on projects should also include role-playing, which provides an awareness of real-life scenarios and relationships with clients and users.

In response to the question, "How is leadership developed?"  Bill Caudill stated that "apparently it must come from within the person.  About all we can do is to provide

the environment for growth" (Caudill "CRS Team - Leadership").  At the UH Mānoa SOA, the environment to grow in is found in the Practicum Studio, where architecture students can also develop their leadership skills through active participation in the Practicum Studio.  Here, student leadership goes beyond the individual, where the student learns by being an integral part of a design team – in a real-world practical experience.  Time management, problem solving, conflict resolution, and critical thinking are a few basic leadership skills learned through Practicum Studio.  Students learn by example (i.e. modeling behavior) in a mentoring relationship from the Faculty Mentor's leadership roles and responsibilities.

Leadership in architecture develops through mentorship relationships, as observed in the Practicum Studio and architectural internships.  Through mentoring relationships on a team (or within a firm), individuals are provided appropriate leadership training and nurtured in terms of their roles and responsibilities on projects.  This kind of relationship is a two-way dialogue.  You draw on your personal characteristics, experiences, and the settings in which you might be involved for different leadership purposes.

### *Engaging Leadership in Architecture*

Architecture students practice their leadership and interpersonal skills by engaging in school, profession, and/or community activities.  Knowledge, skills, and personal integration by architecture students involved in leadership opportunities are more likely to be influenced by these experiences in shaping their future professional lives.  Leadership in architecture is about encouraging the heart, sowing seeds to create future architect-leaders.  "On a more profound level, leadership should be practiced in such a way to be socially responsible" (Nicol and Pilling 14).  Social responsibility is a personal commitment to the well-being of people, our shared world, and the public good.

Emerging, developing, and engaging in leadership in architecture makes the most of opportunities to lead you through individual and teamwork, whether by observing others, through training, or through careful evaluation of practical experience.

Understanding the dynamics of leadership and team building is complex and multi-dimensional, that also looks at team behavior, individual attitudes, personalities, cultural diversity, and more.  Graduated students equipped with the right tool kit of leadership skills can apply it throughout their respective careers, in hopes of engaging with the profession and community as an architect-leader.

### *Conceptual Leadership Chart*

In Figure 24 below, a conceptual leadership chart illustrates the leadership framework based on the aforementioned concepts – knowledge, community, advocacy, and culture – for learning leadership in architecture.  As students matriculate through architecture school, students will build upon their leadership experiences through the levels of emerging, developing, and engaging.

- Emerging leadership in architecture highlights the "I, self person" where the individual focuses on self-growth and self-awareness.  The student interacts with SOA faculty and peers.  Involvement with the AIAS Hawai`i Chapter occurs.

- Developing leadership in architecture highlights the "I and Team" where the individual interacts with peers in architectural design studio or with Practicum Faculty Mentors in Practicum Studio.  Students can also begin their architectural internship.

- Engaging leadership in architecture continues with "I and Others" beyond architectural school and into the profession of architecture as well as the general community.  A commitment to lifelong learning is sought after.

**Figure 24: Conceptual Leadership Chart**
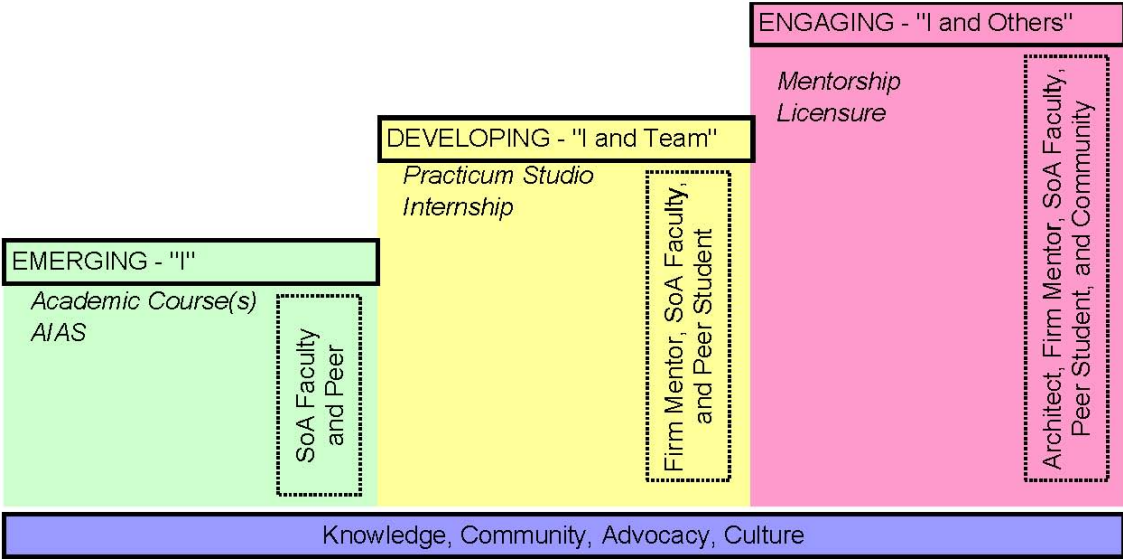
## C.    Proposed Course Syllabus

The following pages, Table 19: Proposed Course Syllabus, illustrate a proposed course titled *Leadership in Architecture: Teamwork, Collaboration, and Relational Skills.* The course is envisioned to be an elective course, earning three (3) credits, and is taken prior to the student entering the Practicum (Professional) Studio courses.  For architecture students who had little or no college leadership experience and are interested in the emergent, development, and engagement of interpersonal and leadership skills which can be applied to everyday life.  This course would be taken in the third year or later within the Doctor of Architecture degree program at the UH Mānoa School of Architecture.  A proposed semester schedule highlights suggested specific topics that relate to the three emerging leadership concepts of teamwork, collaboration, and relational skills.

The proposed course syllabus incorporates the three emerging leadership concepts: teamwork, collaboration, and relational skills.  The syllabus also addresses the NAAB Student Performance Criteria Learning Aspirations found in Realm A, Critical Thinking and Representation, and more importantly, Realm C, Leadership and Practice, as follows:

- **[NAAB A1] Speaking and Writing Skills:**  *Ability* to speak and write effectively.

- **[NAAB A5] Investigative Skills:**  *Ability* to raise clear and precise questions, use abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test them against relevant criteria and standards.

- **[NAAB C1] Collaborative Skills:**  *Understanding* to recognize the varied talent found in interdisciplinary design project teams in professional practice and work in collaboration with other students as members of a design team.

- **[NAAB C2] Human Behavior:**  *Understanding of* the theories and methods of inquiry that seek to clarify the relationship between human behavior and the physical environment.

-  **[NAAB C6] Leadership:**  *Understanding of* the need for architects to provide leadership in the building design and construction process and on issues of growth, development, and aesthetics in their communities.

-  **[NAAB C8] Ethics and Professional Judgment:** *Understanding of* the ethical issues involved in the formation of professional judgments in architecture design and practice.  (NAAB 2009 Conditions for Accreditation - Final Edition)

## Table 19: Proposed Course Syllabus

1.  NO. & TITLE:

    ARCH 3xx (3 credits): Leadership in Architecture: Teamwork, Collaboration, Relational Skills

2.  COURSE DESCRIPTION:

    This course is structured for both peer-support and student initiative. Students will learn and discuss leadership concepts, exercise leader and team member roles, and develop interpersonal techniques in processing and communicating information as a team and a leader.

3.  PREREQUISITES:

    ARCH 341 (or concurrent) or instructor's approval.

4.  GENERAL GOALS & OBJECTIVES OF THE COURSE:

    **TEAMWORK**

    Students will learn technical/analytical skills of members of a team, such as decision making, critical thinking, listening, questioning, and analyzing information to reach an established common goal as a team.

    **COLLABORATION**

    Students will participate with peers in team activities as well as real-life situations. They will collaborate with shared responsibilities and shared leadership, practicing assigned roles of a team and learning how to see information to contribute to the team's progress.

    **RELATIONAL SKILLS**

    Students will gain self-awareness and understanding of their personal strengths and weaknesses through interpersonal interactions with their peers, given the opportunities to learn about leadership. Students will learn and identify the personal qualities necessary for establishing supportive relationships and discover how these relationships are necessary in a leadership setting.

    **LEADERSHIP IN ARCHITECTIRE**

    Students will set personal leadership goals to work towards during the course. Students will become active participants/observers and recognize and understand their personal leadership role in the dynamics of a team.

**Table 19: Proposed Course Syllabus** *continued*

5.    NAAB CRITERIA AND STUDENT SKILLS & KNOWLEDGE
       ADDRESSED:

       **[NAAB A1] Speaking and Writing Skills:**  *Ability* to speak and write effectively.

       **[NAAB A5] Investigative Skills:**  *Ability* to raise clear and precise questions, use abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test them against relevant criteria and standards.

       **[NAAB C1] Collaborative Skills:**  *Understanding* to recognize the varied talent found in interdisciplinary design project teams in professional practice and work in collaboration with other students as members of a design team.

       **[NAAB C2] Human Behavior:**  *Understanding of* the theories and methods of inquiry that seek to clarify the relationship between human behavior and the physical environment.

       **[NAAB C6] Leadership:**  *Understanding of* the need for architects to provide leadership in the building design and construction process and on issues of growth, development, and aesthetics in their communities.

        **[NAAB C8] Ethics and Professional Judgment:** *Understanding of* the ethical issues involved in the formation of professional judgments in architecture design and practice.

6.    FORMAT AND ACTIVITIES:

       [Insert Class Meeting Day and Time]
       Team discussions and interactive workshops.  Students will spend time interacting in teams, while engaged in hands-on activities designed to promote team collaboration and leadership development.  Students will also interact and engage in dialogue with practicing professionals in their respective firms.

       Assignments/Grading:
       Evaluation of the quality, clarify, and timeliness of the following:
       Written, verbal, and graphic communication and assignments.
       Professional interaction and contribution to class discussion.
       Degree of individual progress and initiative.

       Student Evaluation: [insert]

7.    TEXTS:

       Required:  [Insert]
       Recommended:  [Insert]

### *Proposed Semester Schedule*

The concepts – knowledge, community, advocacy, and culture – will serve as concentration focus areas for students to find and validate their own leadership experiences.  Table 20: Proposed Semester Schedule below provides a general outline of a sixteen (16) week semester schedule.  Over the course of the semester, students will learn the three emerging concepts of *teamwork*, *collaboration*, and *relational skills*.

Table 20: Proposed Semester Schedule

| WEEK | TOPIC | ACTIVITY |
|---|---|---|
| 1 | Welcome and Introduction | Review Course Syllabus, Learning Objectives<br>Introduction to Leadership in Architecture |
| 2 | **Concept 1: Teamwork** | Supportiveness - Agreement and Endorsement<br>Openness - Goals and Ground Rules<br>Team Goals |
| 3 | | Action Orientation and Personal Style<br>Interpersonal Communication |
| 4 | | Decision Making and Problem Solving |
| 5 | | Individual Activity: Topic Essay 1<br>Team Activity: Peer (Pair) Report on Teamwork |
| 6 | **Concept 2: Collaboration** | Create a Climate of Trust |
| 7 | | Positive Interdependence<br>Support Face-to-Face Interaction |
| 8 | | Interpersonal Communication<br>Conflict Resolution |
| 9 | | Individual Activity: Topic Essay 2<br>Team Activity: (Team) Role Playing |
| 10 | **Concept 3: Relational Skills** | Communication as Shared Influence |
| 11 | | Perceptions and Attitudes Impact Relationships |
| 12 | | Team Development – Motivate with Credibility |
| 13 | | Coaching and Mentoring Relationships |
| 14 | | Individual Activity: Topic Essay 3<br>Team Activity: (Team) Structured Simulation |
| 15 | Course Wrap Up and Evaluations | Self-Critique (Individual) Reflection Paper |
| 16 | Final Examinations Week | |

The overall goals of this proposed leadership course are to (Javinar):

▪ Develop awareness of own skills, interests, and abilities;

▪ Develop an awareness of team dynamics and the value of diversity within a team;

▪ Provide theoretical framework for understanding an array of leadership related skills through experiential learning and application;

▪ Provide a foundation for the future application of effective leadership principles both in the community and in the participant's professional pursuits; and

▪ Explore leadership as a life long process critical to success in chosen career.

The proposed leadership course takes into account that each student will be at a different point in the development of their leadership skills and challenges the participants to take ownership of the process of self-discovery and self-development by identifying the areas in which they would like to grow and develop. The proposed course will include team discussions, workshops, invited guest speakers, and office visits to local architectural practice firms. Students learn by doing and role-playing. With the assistance of design peer tutors to model the teachings, students are in a supportive environment to learn from their shared experiences and from each other. Written assignments will include both individual and team assignments, which will utilize a web-based platform for students to exchange their ideas as well as hold a discussion forum. The web-based platform will be provided by the UH Mānoa.

### D.     Integration of Existing Courses

One of the keys in developing leadership skills such as team development is to provide opportunities for architecture students to experience real-life projects and clients, and be mentored by practicing architects skilled in successfully designing such projects and developing sustained positive relationships with real and varied clients.

#### *In Architectural Design Studio*

Architect Timothy J. Spence, Principal of BBH Design in Raleigh, North Carolina believes leadership is both learned and intuitive.  His own architectural education did not specifically teach leadership skills; but he remembers plenty of opportunities to learn about leadership in the [design] studio environment.  "The most teachable leadership attributes include effective communication techniques, team building, interpersonal relationships, specific skill sets, confrontation, and negotiation" (American Institute of Architects Living Your  Life as a Leader 71).  Undergraduate projects should introduce leadership concepts while students design and develop simple projects in collaborative exercises.

#### *In Practicum Studio Experience*

UH Mānoa SOA Practicum Faculty Jim Jonassen, FAIA and Managing Partner of NBBJ in Seattle, Washington, describes the D Arch program as a "unique program that engages students in high-level management discussions … giving them a broad based exposure to the architectural profession early in their careers and a perspective they simply wouldn't have otherwise" (University of Hawai`i-Mānoa School of Architecture The Practicum Studio).  D Arch students emerging from a Practicum Studio experience walk away with insight, clarity, and a basic understanding on how architects as leaders of an international firm operate and manage their design practices.

Significantly, Practicum students also witness teamwork, collaboration, team building, and network partnerships within the Practicum Firm.  Practicum students gain a broad-based exposure on architectural leadership and training through the relationships they share with their Practicum Faculty Mentors.  "Experiences allow individuals to learn, practice, and hone their skills and implement their knowledge" (Conger 34).

## E.      Conclusion

"The most influential components of the leadership training programs were reported to be opportunities for volunteer service, experiential activities, and active learning through collaboration" (Logue, Hutchens and Hector).  The next step in developing leadership in architecture is to embrace teamwork, encourage collaboration, and engage relational skills.  By doing so, an architecture student is better equipped with the knowledge that leadership first begins with the individual.

### *Embrace Teamwork*

Thomas Penney, FAIA, and 2003 AIA President observed that "if we want professionals to be confident, contributing leaders in society, we should take every care in making sure that the educational system encourages confidence (not defensiveness), empathy (not self-centeredness), and teamwork (not a star mentality)" (AIAS The Redesign of Studio Culture: A Report of the AIAS Studio Culture Task Force).

### *Encourage Collaboration*

Leadership in architecture develops "from a willingness to work collaboratively with other people, to be equally comfortable as team member or team leader" (Nicol and Pilling 137).  "Students need opportunities to collaborate with peers and adults, to lean and gain expertise, practice, and create" (Hamm and Adams 3).  In architecture school, "collaboration implies giving students' opportunities to talk together and participate actively in what's happening in the classroom" (Hamm and Adams 2).

### *Engage Relational Skills*

"Leadership in architecture emerges in relationships with people, actively interacting and fulfilling certain basic needs in how people can work more effectively together toward some outcome" (Komives, Lucas and McMahon 18).  Architecture students, interns, and professionals can benefit from emerging relationships that lead to ultimately developing leadership and interpersonal skills.  One of the positive outcomes in learning leadership opportunities is the personal impact to an individual's enhancement in knowledge and personal attributes.  Addressing any given changes during a project requires an architect to know what kind of leader to be at the given time.  Ultimately, knowing how to lead comes with experience, and the attitude demonstrated through leadership is an attitude towards the project team's interpersonal relationships.

"Leadership, when engaging others, is characterized as supporting open dialogue and problem solving as a way to create effective team management and design results that maintain the original vision" - Elizabeth Ericson, FAIA, Principal, Shepley Bulfinch Richardson and Abbott(Boston Society of Architects 30).

## *Recommendations for Future Research*

This phenomenological research study evaluated one aspect of leadership in architecture: architecture students and interns learning about emerging leadership concepts while in architecture school or within the early years of internship. Several related areas of research could build on this study. Essentially, a comprehensive study of lived experiences of architecture students and student leadership development, a study of emerging leadership concepts through the use of focus groups (i.e., SOA Practicum Students in practical settings), and the more comprehensive interviews with practitioners, faculty, and architecture students could provide an informed theory on learning leadership in architecture.

Another area of research could be to evaluate the leadership impact and influence of architecture students involved with the AIAS organization (either on a Chapter level or at the national level) and taking it a step further to learn where former AIAS Officers are currently today. As presented earlier in one of the lived experiences, active participation in the AIAS provided a motivational learning environment on student leadership development. It is important to consider that involvement in student leadership (e.g., AIAS) is an optional and self-directed process for an individual. A comprehensive study of architecture students and leadership motivation could provide a greater understanding on what motivates students to be in leadership positions or take on leadership responsibilities.

Recommendations are provided for further research:

- A study should be developed to survey architecture students to rank the importance of leadership development as well as to define "leader" and "leadership in architecture". Will the definition(s) from architectural students differ from practicing professionals who hold leadership positions in firms?

- A study should be conducted correlating the phenomenon of former AIAS Officers and where their leadership development has taken them after post-secondary graduation.

- A study should be conducted to examine in-depth the professional development leadership courses found in schools of architecture. Only schools of architecture in the West Region were described in this study but were not closely evaluated for effectiveness.

- A study should be conducted to compare the values and characteristics of "architect leader" and "leadership in architecture" used by experienced architects (more than ten years as a principal) and less experienced (less than five years as a principal) to develop learning objectives that could be taught in a leadership course in an architecture school.

- A study should be conducted to evaluate the architectural design studio as a learning environment in terms of learning leadership in architecture and examine the learning style(s) of architecture students.

- A study should be conducted to survey focus peer groups of architecture students to learn how students helping students actually bring value to student leadership development.

I encourage all architecture students to explore their leadership growth while still in architecture school. Leadership in architecture is actively engaging oneself into the architectural design process, committing to an individual's personal growth, and significantly increasing their performance capability in order to achieve authentic visions and strategies for addressing the shared concerns of a team, organization, profession, or community. Final words to close with: "Leadership in architecture has the capability of impacting people's lives" through teamwork, collaboration, and relational skills (Hults).

> Being a leader is the by-product of being the best that you can be. Know what you are doing. Think about what you are doing. Be willing to help others, to share with others and to look for others to help lead. At some point in time after you have accumulated enough experience, the confidence of the experience and your vision of the future will be articulated with passion. It is the passion that accompanies the vision that influences others to want to share the vision. (Noe "Committee for Leadership Education: Legacy for Leadership Interview")

# V.   Appendices

## Appendix A: Architectural Terms and Abbreviations

This section introduces architectural terms commonly used in architectural education and practice, followed by a listing of architectural abbreviations used in this study. It also introduces terminology mainly used in education. The terms are listed in alphabetical order.

Ability: "Proficiency in using specific information to accomplish a task, correctly selecting the appropriate information, and accurately applying it to the solution of a specific problem, while also distinguishing the effects of its implementation" (NAAB 2009 Conditions for Accreditation - Final Edition 21).

Architect: "a person who designs buildings and advises in their construction" ("Merriam-Webster's Collegiate Dictionary" 65). For the purposes of this study, an architect is an individual who has met the NCARB and the NAAB criteria.

Accreditation: "Architectural accreditation is the primary means by which programs assure quality to students and the public. Accredited status is a signal to students and the public that an institution or program meets at least minimal standards for its faculty, curriculum, students services and libraries" (NAAB "Accreditation").

Architectural Intern: "Intern is any person who by means of their education or experience has qualified to enter the Intern Development Program" (NCARB Intern Development Program Guidelines 5).

Architecture: Architecture is done by a collaborative team with "a thorough understanding of [the team's] goals, needs, and risks that will enable to build relationships and assemble the right team of design and construction professionals" (American Institute of Architects Building Relationships).

Awareness: "Familiarity with specific information, including facts, definitions, concepts, rules, examples, and procedures. Students can be expected to recall and correctly associate their knowledge with appropriate circumstances" (NAAB Conditions and Procedures 15).

Bachelor of Architecture (B Arch): "Accredited degree programs awarding the B Arch degree must require a minimum of 150 semester credit hours, or the quarter-hour equivalent, in academic coursework in general studies, professional studies, and electives" (NAAB 2009 Conditions for Accreditation - Final Edition 26).

Candidacy/Candidate: "Institutions seeking initial accreditation for a degree program must first be granted candidacy [status] by the NAAB" (NAAB 2009 Conditions for Accreditation - Public Comment Edition 5).

Collaboration: "To work with others in a common effort. It constitutes the cornerstone value of the [team] leadership effort because it empowers self and others through trust" (A Social Change Model of Leadership Development Guidebook 22-23).

Doctor of Architecture (D Arch): "Accredited degree programs awarding the D Arch degree must require either an undergraduate baccalaureate degree; or a minimum of 120 undergraduate semester credit hours; or the undergraduate-level quarter-hour equivalent, and a minimum of 90 graduate-level semester credit hours; or the graduate-level quarter-hour equivalent, in academic coursework in professional studies and electives" (NAAB 2009 Conditions for Accreditation - Final Edition 26).

Intern Development Program (IDP): "The [IDP] is a comprehensive training program created to ensure that interns in the architecture profession gain the knowledge and skills required for the independent practice of architecture upon completion of the program" (NCARB Intern Development Program Guidelines 4).

Internship: As a NCARB licensure required, internship is "completed through the Intern Development Program.  Primarily, the IDP validates a list of experience areas essential for the competent, comprehensive practice of architecture.  The *IDP Guidelines* describes the specific training requirements including eligibility to begin participation in the IDP, work setting, training categories, training areas, training unit minimums and maximums, timely reporting, and verification of training experiences, and the like." (NCARB Handbook for Interns and Architects 2009-2010 3).

Leader: A leader is a person, who is proficient in understanding people's basic needs and behaviors, and actively supports collaborative relationships to maximize performance or accomplish change (Komives, Lucas and McMahon 14)

Leadership: As viewed by Komives et al., "leadership is a relational process of people together attempting to accomplish change or make a difference to benefit the common good" (68).

Learning: Learning is the knowledge actively created by participants in a social context environment, which is shared (externalized) and rethought (internalized) by individuals through the production an activity or task (Bail "Lecture on Social Context of Learning").

Licensure: "All jurisdictions required individuals to be licensed (registered) before they may call themselves architects and contract to provide architectural services.  Licensing requirements included a professional degree in architecture, a period of practical training or internship, and passing the Architectural Registration Exam" (NCARB "NCARB: The Basics, Becoming an Architect").  Note: The terms *licensure* and *registration* are synonymous in the context of architectural registration.

Master of Architecture (M Arch): "Accredited degree programs awarding the M Arch degree must require a minimum of 168 semester credit hours; or the quarter-hour equivalent, of which at least 30 semester credit hours; or the quarter-hour equivalent, must be at the graduate level, in academic coursework in professional studies and electives" (NAAB 2009 Conditions for Accreditation - Final Edition 26).

Professional degree: "A professional degree program must include general studies in the arts, humanities, and sciences.  The core of the professional degree program consists of the required courses that satisfy the NAAB Student Performance Criteria and allow students to pursue their special interests" (NAAB 2009 Conditions for Accreditation - Final Edition 26).  A professional degree program consists of three components in its curricular requirements: general studies, professional studies, and electives.

Professional Studies: "The core of a professional degree program consists of the required courses that satisfy the NAAB Student Performance Criteria.  The accredited degree program has the flexibility to require the additional courses including electives to address its mission or institutional context" (NAAB 2009 Conditions for Accreditation - Final Edition 27).

Relational Skills: Relational skills in the broad context of leadership include communication, team development, motivation, conflict resolution, and coaching.  (Sperry 43).  Used interchangeably with interpersonal.

Team: "A team is a team of [coordinated individuals] with a high degree of interdependence [organized to work together and] geared toward the achievement of a [specific common] goal or completion of a task" (Beebe and Masterson 6; Parker 16).  According to Beebe and Masterson, "the terms *team* and *team* are used interchangeably.  All teams are small teams, but not all teams operate as a team" (6).

Teamwork: "Teamwork requires interdependence – the working together of a [team] with a shared objective" (Parker 16).

Understanding: "The capacity to classify, compare, summarize, explain and/or interpret information" (NAAB 2009 Conditions for Accreditation - Final Edition 21).

Abbreviations found within this document:

| | |
|---|---|
| ACSA | Association of Collegiate Schools of Architecture |
| AIA | American Institute of Architects |
| AIAS | American Institute of Architecture Students |
| AKUFAS | Aga Khan University, Faculty of Arts and Sciences |
| ARCH | Architecture |
| ARE | Architect Registration Exam |
| B Arch | Bachelor of Architecture |
| CA | Construction Administration |
| CPI | Clifford Projects Inc. |
| D Arch | Doctor of Architecture |
| FAIA | Fellow of the American Institute of Architects |
| FASLA | Fellow of the American Society of Landscape Architects |
| IDP | Intern Development Program |
| M Arch | Master of Architecture |
| NAAB | National Association of Accrediting Boards |
| NCARB | National Council of Architectural Registration Boards |
| PAI | Payette Associates Inc. |
| PSP | PageSoutherlandPage |
| SOA | School of Architecture |
| SPC | Student Performance Criteria |
| ZPD | Zone of Proximal Development |

## Appendix B: Collateral Organizations in Architecture

### *Association of Collegiate Schools of Architecture*

1735 New York Avenue NW
Washington, DC 20006
(202) 785-2324
www.acsa-arch.org

The ACSA is a nonprofit, membership association founded in 1912, representing over 200 architectural education programs worldwide, including all of the accredited degree programs in the US and Canada, candidate membership schools seeking accreditation, and affiliate membership schools with two-year and international programs.  The ACSA promotes the quality of architectural education and facilitates architectural research through service and activities for schools and their faculty (ACSA "About the Association of Collegiate Schools of Architecture, Fact Sheet").

### *American Institute of Architects*

1735 New York Avenue NW
Washington, DC 20006
(202) 626-7300
www.aia.org

In the US, the AIA, [founded in 1857], is the principal professional organization of [registered] architects on a voluntary basis and to other interested citizens.  Acting collectively through the AIA, architects can affect public and private decisions about the built environment in the US.  By publishing the standard contract forms used by owners, contractors, and architects, AIA shapes the principal relationships in the construction industry in America (American Institute of Architects "About the American Institute of Architects; NCARB Architectural Organizations and the Practice of Architecture in the United States 5).

### *American Institute of Architecture Students*

1735 New York Avenue NW
Washington, DC 20006
(202) 626-7472
www.aias.org

Founded in 1956, the AIAS is the largest American organization for students of architecture.  It represents over 6,000 students and other emerging professionals at more than 130 chapters (in North America and several foreign countries).  The AIAS mission statement is "to promote excellence in architecture education, training, and practice, to foster an appreciation of architecture and related disciplines, to enrich communities in a spirit of collaboration, and to organize students and combine their efforts to advance the art and science of architect" (AIAS "About the American Institute of Architecture Students").

The [AIAS] organization has also taken the lead in working with NAAB to improve the quality of the instruction and the learning environment in school-based design studios.  Furthermore, it works with AIA and NCARB to improve the mentoring of future architects (NCARB Architectural Organizations and the Practice of Architecture in the United States).

### National Architectural Accrediting Board

1735 New York Avenue NW
Washington, DC 20006
(202) 783-2007
www.naab.org

NAAB was founded in 1940, to "produce and maintain current a list of accredited schools of architecture in the United States and its possessions, with the general objective that a well integrated and coordinated program of architecture education be developed that is national in scope and afford opportunity for architecture schools with varying resources and operating conditions."  Since 1975, NAAB has accredited professional degree programs rather than schools or universities and only accredits the first professional degree program offered by any institution.  The mission of the NAAB is leadership in, and the establishment of, educational quality assurance standards to enhance the value, relevance, and effectiveness of the architectural profession.

The NAAB is the only agency recognized by registration boards in the US to accredit professional degree programs in architecture.  Because most US registration boards require a candidate for licensure to have earned a NAAB-accredited degree, obtaining such a degree is an essential part of gaining access to the licensed practice of architecture (NAAB 2009 Conditions for Accreditation - Final Edition 4).

### National Council of Architectural Registration Boards

1801 K Street, Suite 1100K
Washington, DC 20006
(202) 783-6500
www.ncarb.org

NCARB is the federation of the architectural registration boards of the fifty states, the District of Columbia, Guam, Puerto Rico, and the US Virgin Islands.  Each jurisdiction has a governmental authority that registers and regulates architects.  Without registration issued by the board, no one may engage in the practice of architecture nor use the title "architect" within that jurisdiction.  In addition to issuing registration to persons the board considers qualified to practice architecture, each board watches over the practice of architecture within its boundaries and disciplines architects whose practice does not meet minimum standards of professional conduct established by the board (NCARB Architectural Organizations and the Practice of Architecture in the United States 3).

## Appendix C: Overview of Architectural Education

Architectural education in the US spans over a hundred and forty years with continuous evolvement and modifications in architectural degree programs. Thomas Jefferson, the only architect to be US President, proposed that a professional curriculum in architecture be established in the school of mathematics of the University of Virginia in 1814. However, the establishment of a formal architectural educational program did not occur, and it was nearly fifty years before a formal program was developed. The first architectural program started in 1865 at the Massachusetts Institute of Technology, followed by the University of Illinois at Urbana in 1867, and by Cornell University in 1871. These architectural programs, initially four years of study, were with a technical orientation or within a mathematics/engineering discipline, that is, for example, these programs yielded a Bachelor of Science in Architecture degree. Some fifty years later, in 1914, architectural education was re-defined at the University of Oregon, aligning architecture with the allied arts and crafts and introducing design into the curriculum. Sometime in the 1940's Cornell University extended its first professional accredited degree, the Bachelor of Architecture architectural curricula to five years to include work in crafts and fine arts along with more defined mechanical and structural courses.

The next substantive shift of direction in architectural curriculum occurred in the mid 1960s when the AIA issued the so-called "Princeton Report" (also referred to as the Geddes Report" since it was authored by Robert Geddes of Princeton University) calling for more program flexibility and the incorporation of more liberal arts into the architectural curriculum to better prepare architects to address humanistic issues facing the profession. Subsequent to the AIA report, the University of California at Berkeley developed a four-year liberal arts plus two-year preparatory study in environmental design. This "4+2" curriculum yielded a Master of Architecture degree, and it became the first professional accredited M Arch degree. In the 1970s, led by the University of Michigan and Texas A&M University, architectural curricula introduced a multi-model approach, a dual emphasis on professional practice and research.

The multi-model approach has since evolved in the past two decades; and following precedence in American schools of law and medicine, architecture students at the UH Mānoa, enter the Doctor of Architecture program and find a rigorous interdisciplinary curriculum, combining architectural and professional studies with general

education studies.  The first of its kind in the nation, the D Arch is a first professional accredited degree program, integrating international practice experience with classroom and overseas studies while "developing architectural leaders with a global perspective" (University of Hawai`i-Mānoa School of Architecture <u>The Practicum Studio</u>).

In a 1996 Keynote Presentation at the National Architecture Education Conference in Bangkok, Thailand, former University of Hawai`i-Mānoa School of Architecture Dean W. H. Raymond Yeh, FAIA, stated that:

> This multi-model approach is due in part to the great variety of institutions in which American architecture programs are based.  They range from major publicly supported comprehensive research universities to small private independent colleges.  The great differences in policies within these institutions helped dictate the variations of architecture degree programs.  The situation has become chaotic and often confusing.

> The situation caused the presidents of the professional organizations in architecture (AIA, NCARB, NAAB, ACSA, and AIAS) to pass a joint resolution in 1991 to standardize the professional degrees in the United States by the year 2000.  Searching for guidance and believing it was time to examine architecture education in the US; these organizations contracted the Carnegie Foundation for the Advancement of Teaching to conduct a study two years later.  The completed study concluded in what is known as the Boyer Report successfully avoided giving any specific curricular solution for standardization but further encouraged a diversity of approaches pointing out the need for more sensitivity to student needs and community opportunities available to the individual programs.

> Consequently, architecture education in the US will continue to endure the lack of standardization.  In other words, while there is a US approach to architecture education, there will not likely be a singular US model representing all the professional programs in American schools of architecture anytime in the near future.

## Appendix D: Accredited Architecture Programs in the United States

Established by the ACSA and recognized by the NAAB, the six (6) regions are East Central (red), Northeast (teal), Southeast (aqua), Southwest (purple), West Central (blue), and West (green).  Below is Figure 25, a US regional map illustrating the six regions identified by the ACSA.

### Figure 25: ACSA Regional Map of the US



1.  East Central
2.  Northeast
3.  Southeast
4.  Southwest
5.  West Central
6.  West
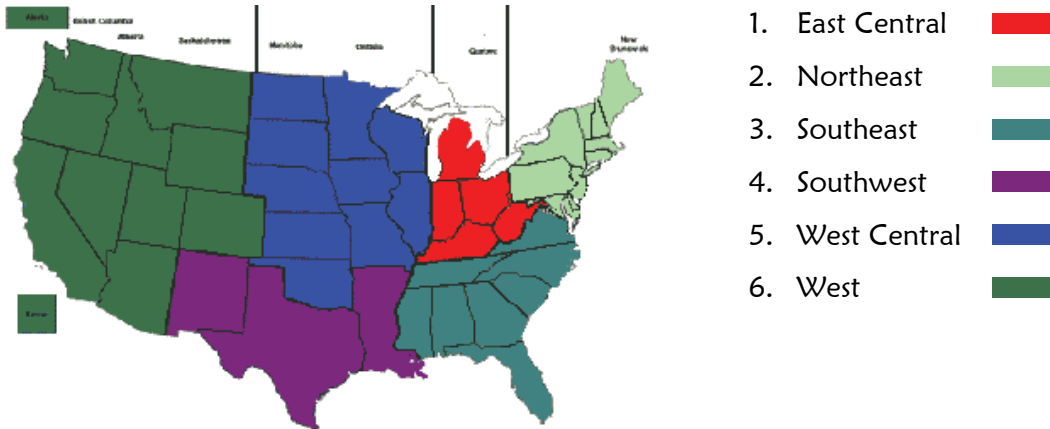
Source: (ACSA "Map of Schools by Region").

An initial listing of all schools that offer an accredited architectural education in the US was acquired from the NAAB website.  The initial list, as of April 2009, included 122 NAAB-accredited architecture schools offering 156 degree programs within the US, including the District of Columbia and Puerto Rico.  Of the 156 programs, five (5) B Arch programs are currently being phased out by the end of 2010, and six (6) M Arch programs are candidates seeking NAAB accreditation.  Table 21: NAAB-Accredited Architectural Programs in the United States, on the following page, summarizes the information collected.  The table also identifies the states within each region that have accredited architecture schools along with the type of accredited degree program offered.

In the East Central region, 10 schools offer 12 degree programs.  The Northeast region tops the list with 34 schools offering 44 degree programs.  In the Southeast region, 21 schools offer 27 degree programs, while the Southwest region has 18 schools offering 23 degree programs.  For the West Central region, 15 schools offer 20 degree programs, and finally, the West region has 24 schools offering 30 degree programs.  With the exception of the UH Mānoa, which is the only academic institution in the US offering the D Arch degree, most architecture schools offer both the B Arch and M Arch.

## Table 21: NAAB-Accredited Architectural Programs in the United States

B Arch = Bachelor of Architecture; M Arch = Master of Architecture; D Arch = Doctor of Architecture

| No. | Region | State/US Territory | No. of Schools | No. of Programs | Degree Offered | | |
|---|---|---|---|---|---|---|---|
| | | | | | B Arch | M Arch | D Arch |
| 1 | East Central | Indiana | 2 | 3 | • | • | |
| | | Michigan | 4 | 4 | | • | |
| | | Ohio | 4 | 5 | • | • | |
| 2 | Northeast | Connecticut | 2 | 2 | | • | |
| | | District of Columbia | 2 | 2 | • | • | |
| | | Maryland | 2 | 2 | | • | |
| | | Massachusetts | 7 | 8 | • | • | |
| | | New Jersey | 2 | 3 | • | • | |
| | | New York | 10 | 15 | • | • | |
| | | Pennsylvania | 6 | 7 | • | • | |
| | | Rhode Island | 2 | 4 | • | • | |
| | | Vermont | 1 | 1 | | • | |
| 3 | Southeast | Alabama | 2 | 2 | • | | |
| | | Florida | 6 | 8 | • | • | |
| | | Georgia | 3 | 3 | • | • | |
| | | Kentucky | 1 | 1 | | • | |
| | | Mississippi | 1 | 1 | • | | |
| | | North Carolina | 2 | 4 | • | • | |
| | | South Carolina | 1 | 1 | | • | |
| | | Tennessee | 2 | 3 | • | • | |
| | | Virginia | 3 | 4 | • | • | |
| 4 | Southwest | Arkansas | 1 | 1 | • | | |
| | | Louisiana | 5 | 7 | • | • | |
| | | Minnesota | 1 | 1 | | • | |
| | | New Mexico | 1 | 1 | | • | |
| | | Puerto Rico | 2 | 2 | • | • | |
| | | Texas | 8 | 11 | • | • | |
| 5 | West Central | Illinois | 6 | 7 | • | • | |
| | | Iowa | 1 | 2 | • | • | |
| | | Kansas | 2 | 4 | • | • | |
| | | Missouri | 2 | 2 | • | • | |
| | | North Dakota | 1 | 1 | | • | |
| | | Oklahoma | 2 | 3 | • | • | |
| | | Wisconsin | 1 | 1 | | • | |
| 6 | West | Arizona | 3 | 3 | • | • | |
| | | California | 10 | 15 | • | • | |
| | | Colorado | 1 | 1 | | • | |
| | | Hawai'i | 1 | 1 | | | • |
| | | Idaho | 1 | 1 | | • | |
| | | Montana | 1 | 1 | | • | |
| | | Nebraska | 1 | 1 | | • | |
| | | Nevada | 1 | 1 | | • | |
| | | Oregon | 2 | 3 | • | • | |
| | | Utah | 1 | 1 | | • | |
| | | Washington | 2 | 2 | | • | |

Source: (NAAB "NAAB Accredited Architecture Programs in the United States", April 2009).

## Worksheets for Table 21 – NAAB-Accredited Architectural Programs

| No. | Region | State | Duration (Years) | First Professional Degree | Degree | University | College/School | NAAB Accredited |
|---|---|---|---|---|---|---|---|---|
| 1 | Northeast | PA | 0 | N | B Arch | Carnegie Mellon University | School of Architecture | Y |
| 2 | Southeast | FL | 0 | N | B Arch | Florida A & M University | School of Architecture | Y |
| 3 | Southeast | GA | 0 | N | B Arch | Southern Polytechnic State University | School of Architecture, Civil Engineering Technology and Construction | Y |
| 4 | Southeast | NC | 0 | N | B Arch | North Carolina State University | College of Design | Y |
| 5 | Southwest | LA | 0 | N | B Arch | Louisiana State University | College of Art and Design | Y |
| 6 | Southwest | TX | 0 | N | B Arch | University of Texas at Austin | School of Architecture | Y |
| 7 | Southwest | TX | 0 | N | B Arch | Rice University | School of Architecture | Y |
| 8 | West | CA | 0 | N | B Arch | California College of the Arts | School of Architecture | Y |
| 9 | West Central | IL | 0 | N | B Arch | Illinois Institute of Technology | College of Architecture | Y |
| 10 | West Central | OK | 0 | N | B Arch | Oklahoma State University | School of Architecture | Y |
| 11 | East Central | IN | 5 | Y | B Arch | University of Notre Dame | School of Architecture | Y |
| 12 | Northeast | MA | 7 | Y | B Arch | Boston Architectural College | School of Architecture | Y |
| 13 | Northeast | NJ | 5 | Y | B Arch | New Jersey Institute of Technology | School of Architecture | Y |
| 14 | Northeast | NY | 5 | Y | B Arch | City College of the City University of New York | School of Architecture, Urban Design and Landscape Architecture | Y |
| 15 | Northeast | NY | 5 | Y | B Arch | Cooper Union, The | The Irwin S. Chanin School of Architecture | Y |
| 16 | Northeast | NY | 5 | Y | B Arch | Cornell University | College of Architecture, Art and Planning | Y |
| 17 | Northeast | NY | 5 | Y | B Arch | New York Institute of Technology | School of Architecture and Design | Y |
| 18 | Northeast | NY | 5 | Y | B Arch | Pratt Institute | School of Architecture | Y |
| 19 | Northeast | NY | 5 | Y | B Arch | Rensselaer Polytechnic Institute | School of Architecture | Y |
| 20 | Northeast | NY | 5 | Y | B Arch | Syracuse University | School of Architecture | Y |
| 21 | Northeast | PA | 6 | Y | B Arch | Drexel University | Department of Architecture | Y |
| 22 | Northeast | PA | 5 | Y | B Arch | Philadelphia University | Department of Architecture | Y |
| 23 | Northeast | PA | 5 | Y | B Arch | Temple University | The Architecture Department of the Tyler School of Art | Y |
| 24 | Northeast | PE | 5 | Y | B Arch | Pennsylvania State University | School of Architecture | Y |
| 25 | Northeast | RI | 5 | Y | B Arch | Rhode Island School of Design | Dept of Architecture | Y |
| 26 | Northeast | WDC | 5 | Y | B Arch | Howard University | School of Architecture and Design | Y |
| 27 | Southeast | AL | ? | Y | B Arch | Auburn University | College of Architecture, Design and Construction | Y |
| 28 | Southeast | AL | 5 | Y | B Arch | Tuskegee University | College of Engineering, Architecture and Physical Sciences | Y |
| 29 | Southeast | FL | 5 | Y | B Arch | University of Miami | School of Architecture | Y |
| 30 | Southeast | MS | 5 | Y | B Arch | Mississippi State University | School of Architecture | Y |
| 31 | Southeast | NC | 5 | Y | B Arch | University of North Carolina at Charlotte | College of Arts and Architecture | Y |
| 32 | Southeast | PR | 5 | Y | B Arch | Polytechnic University of Puerto Rico | The New School of Architecture | Y |
| 33 | Southeast | TN | 5 | Y | B Arch | University of Tennessee-Knoxville | College of Architecture and Design | Y |
| 34 | Southeast | VA | 5 | Y | B Arch | Virginia Tech | School of Architecture and Design | Y |
| 35 | Southeast | FL | 5 | Y | B Arch | Florida Atlantic University | School of Architecture | Y |
| 36 | Southwest | AR | 5 | Y | B Arch | University of Arkansas | Fay Jones School of Architecture | Y |
| 37 | Southwest | LA | 5 | Y | B Arch | Southern University and A & M College | School of Architecture | Y |
| 38 | Southwest | TX | 5 | Y | B Arch | University of Houston | Gerald D. Hines College of Architecture | Y |
| 39 | West | AZ | 5 | Y | B Arch | University of Arizona | College of Architecture and Landscape Architecture | Y |
| 40 | West | CA | 5 | Y | B Arch | California Polytechnic State University, San Luis Obispo | College of Architecture and Environmental Design | Y |

## Table 21: NAAB-Accredited Architectural Programs *continued*

| No. | Region | State | Duration (Years) | First Professional Degree | Degree | University | College/School | NAAB Accredited |
|---|---|---|---|---|---|---|---|---|
| 41 | West | CA | 5 | Y | B Arch | NewSchool of Architecture and Design | NewSchool of Architecture and Design | Y |
| 42 | West | CA | 5 | Y | B Arch | Southern California Institute of Architecture | Southern CA Institute of Architecture | Y |
| 43 | West | CA | 5 | Y | B Arch | University of Southern California | School of Architecture | Y |
| 44 | West | CA | 5 | Y | B Arch | Woodbury University | School of Architecture | Y |
| 45 | West | OR | 5 | Y | B Arch | University of Oregon | School of Architecture and Allied Arts | Y |
| 46 | West | CA | 5 | Y | B Arch | California Polytechnic State University, Pomona | Department of Architecture | Y |
| 47 | West Central | IA | 5 | Y | B Arch | Iowa State University | Department of Architecture | Y |
| 48 | West Central | MO | 5 | Y | B Arch | Drury University | Hammons School of Architecture | Y |
| 49 | West Central | OK | 5 | Y | B Arch | University of Oklahoma | Division of Architecture | Y |
| 50 | West | HI | 7 | Y | D Arch | University of Hawaii-Manoa | School of Architecture | Y |
| | | | | 10 | No | | | |
| | | | | 40 | Yes, First Professional B Arch / D Arch | | | |
| | | | | 50 | | | | |
| | | | | 1 | Yes, B Arch programs in East Central | | | |
| | | | | 15 | Yes, B Arch programs in Northeast | | | |
| | | | | 9 | Yes, B Arch programs in Southeast | | | |
| | | | | 3 | Yes, B Arch programs in Southwest | | | |
| | | | | 3 | Yes, B Arch programs in West Central | | | |
| | | | | 8 | Yes, B Arch programs in West | | | |
| | | | | 1 | Yes, D Arch program in West | | | |
| | | | | 40 | | | | |

## Table 21: NAAB-Accredited Architectural Programs *continued*

| No. | Region | State | Duration (Years) | First Professional Degree | Degree | University | College/School | NAAB Accredited |
|---|---|---|---|---|---|---|---|---|
| 1 | East Central | IN | 0 | N | M Arch | University of Notre Dame | School of Architecture | Y |
| 2 | East Central | MI | 0 | N | M Arch | Andrews University | School of Architecture | Y |
| 3 | East Central | MI | 0 | N | M Arch | Lawrence Technological University | College of Architecture and Design | Y |
| 4 | East Central | MI | 0 | N | M Arch | University of Michigan | Taubman College of Architecture and Urban Planning | Y |
| 5 | East Central | OH | 0 | N | M Arch | Kent State University | College of Architecture and Environmental Design | Y |
| 6 | East Central | OH | 0 | N | M Arch | Miami University | School of Fine Arts | Y |
| 7 | East Central | OH | 0 | N | M Arch | Ohio State University | Knowlton School of Architecture | Y |
| 8 | East Central | OH | 0 | N | M Arch | University of Cincinnati | College of Design, Architecture, Art, and Planning | Y |
| 9 | Northeast | MA | 0 | N | M Arch | Boston Architectural College | School of Architecture | Y |
| 10 | Northeast | CT | 0 | N | M Arch | University of Hartford | College of Engineering, Technology, and Architecture | Y |
| 11 | Northeast | MA | 0 | N | M Arch | Harvard University | Graduate School of Design | Y |
| 12 | Northeast | MA | 0 | N | M Arch | University of Massachusetts Amherst | Dept of Art, Architecture, and Art History | Y |
| 13 | Northeast | MA | 0 | N | M Arch | Wentworth Institute of Technology | Dept of Architecture | Y |
| 14 | Northeast | NY | 0 | N | M Arch | Parsons School of Design | Dept of Architecture, Interior Design, and Lighting | Y |
| 15 | Northeast | NY | 0 | N | M Arch | State University of New York at Buffalo | School of Architecture and Planning | Y |
| 16 | Northeast | NY | 0 | N | M Arch | Syracuse University | School of Architecture | Y |
| 17 | Northeast | RI | 0 | N | M Arch | Roger Williams University | School of Architecture, Art and Historic Preservation | Y |
| 18 | Northeast | VT | 0 | N | M Arch | Norwich University | School of Architecture and Art | Y |
| 19 | Southeast | NC | 0 | N | M Arch | University of North Carolina at Charlotte | College of Arts and Architecture | Y |
| 20 | Southeast | FL | 0 | N | M Arch | University of Florida | College of Design, Construction, and Planning | Y |
| 21 | Southeast | GA | 0 | N | M Arch | Georgia Institute of Technology | College of Architecture | Y |
| 22 | Southeast | GA | 0 | N | M Arch | Savannah College of Arts and Design | Department of Architecture | Y |
| 23 | Southeast | KY | 0 | N | M Arch | University of Kentucky | College of Design | Y |
| 24 | Southwest | TX | 0 | N | M Arch | University of Houston | Gerald D. Hines College of Architecture | Y |
| 25 | Southwest | LA | 0 | N | M Arch | Louisiana Tech University | School of Architecture | Y |
| 26 | Southwest | LA | 0 | N | M Arch | University of Louisiana at Lafayette | College of the Arts | Y |
| 27 | Southwest | TX | 0 | N | M Arch | Rice University | School of Architecture | Y |
| 28 | West | CA | 0 | N | M Arch | Southern California Institute of Architecture | Southern CA Institute of Architecture | Y |
| 29 | West Central | IA | 0 | N | M Arch | Iowa State University | Department of Architecture | Y |
| 30 | West Central | KS | 0 | N | M Arch | Kansas State University | College of Architecture, Planning and Design | Y |
| 31 | West Central | OK | 0 | N | M Arch | University of Oklahoma | Division of Architecture | Y |
| 32 | East Central | IN | 3.5 | Y | M Arch | Ball State University | College of Architecture and Planning | Y |
| 33 | East Central | MI | 5 | Y | M Arch | University of Detroit Mercy | School of Architecture | Y |
| 34 | Northeast | CT | 3 | Y | M Arch | Yale University | School of Architecture | Y |
| 35 | Northeast | NY | 3 | Y | M Arch | Pratt Institute | School of Architecture | Y |
| 36 | Northeast | NY | 3.5 | Y | M Arch | Rensselaer Polytechnic Institute | School of Architecture | Y |
| 37 | Northeast | MA | 3.5 | Y | M Arch | Massachusetts Institute of Technology | School of Architecture and Planning | Y |
| 38 | Northeast | MA | 5 | Y | M Arch | Northeastern University | College of Arts and Sciences | Y |
| 39 | Northeast | MD | 3 | Y | M Arch | University of Maryland | School of Architecture, Planning, and Preservation | Y |
| 40 | Northeast | NJ | 3 | Y | M Arch | New Jersey Institute of Technology | School of Architecture | Y |

## Table 21: NAAB-Accredited Architectural Programs *continued*

| No. | Region | State | Duration (Years) | First Professional Degree | Degree | University | College/School | NAAB Accredited |
|---|---|---|---|---|---|---|---|---|
| 41 | Northeast | NJ | 3 | Y | M Arch | Princeton University | School of Architecture | Y |
| 42 | Northeast | NY | 3 | Y | M Arch | City College of the City University of New York | School of Architecture, Urban Design and Landscape Architecture | Y |
| 43 | Northeast | NY | 3 | Y | M Arch | Columbia University | Graduate School of Architecture, Planning, and Preservation | Y |
| 44 | Northeast | PA | 3 | Y | M Arch | University of Pennsylvania | School of Design | Y |
| 45 | Northeast | RI | 3 | Y | M Arch | Rhode Island School of Design | Dept of Architecture | Y |
| 46 | Northeast | WDC | 3 | Y | M Arch | The Catholic University of America | School of Architecture and Planning | Y |
| 47 | Northeast | MD | ? | Y | M Arch | Morgan State University | Institute of Architecture and Planning | Y |
| 48 | Southeast | FL | 3.5 | Y | M Arch | University of Miami | School of Architecture | Y |
| 49 | Southeast | NC | 3 | Y | M Arch | North Carolina State University | College of Design | Y |
| 50 | Southeast | TN | 3 | Y | M Arch | University of Tennessee-Knoxville | College of Architecture and Design | Y |
| 51 | Southeast | VA | 3 | Y | M Arch | Virginia Tech | School of Architecture and Design | Y |
| 52 | Southeast | FL | 3.5 | Y | M Arch | Florida A & M University | School of Architecture | Y |
| 53 | Southeast | FL | 5 | Y | M Arch | University of South Florida | School of Architecture and Community Design | Y |
| 54 | Southeast | SC | 3 | Y | M Arch | Clemson University | College of Architecture, Art, and Humanities | Y |
| 55 | Southeast | VA | 5.5 | Y | M Arch | Hampton University | School of Engineering and Technology | Y |
| 56 | Southeast | VA | 3 | Y | M Arch | University of Virginia | School of Architecture | Y |
| 57 | Southeast | FL | 3.5 | Y | M Arch | Florida International University | College of Architecture and the Arts | Y |
| 58 | Southwest | LA | 3 | Y | M Arch | Louisiana State University | College of Art and Design | Y |
| 59 | Southwest | TX | 3 | Y | M Arch | University of Texas at Austin | School of Architecture | Y |
| 60 | Southwest | LA | 3 | Y | M Arch | Tulane University | School of Architecture | Y |
| 61 | Southwest | NM | 3.5 | Y | M Arch | University of New Mexico | School of Architecture and Planning | Y |
| 62 | Southwest | TX | 2 | Y | M Arch | Prairie View A & M University | School of Architecture | Y |
| 63 | Southwest | TX | 6 | Y | M Arch | Texas A & M University | College of Architecture | Y |
| 64 | Southwest | TX | ? | Y | M Arch | Texas Tech University | College of Architecture | Y |
| 65 | Southwest | TX | 3.5 | Y | M Arch | University of Texas at Arlington | Architecture Program | Y |
| 66 | Southwest | TX | 3 | Y | M Arch | University of Texas at San Antonio | College of Architecture | Y |
| 67 | West | CA | 3 | Y | M Arch | California College of the Arts | School of Architecture | Y |
| 68 | West | CA | 3 | Y | M Arch | California Polytechnic State University, Pomona | Department of Architecture | Y |
| 69 | West | CA | 7 | Y | M Arch | NewSchool of Architecture and Design | NewSchool of Architecture and Design | Y |
| 70 | West | CA | 7 | Y | M Arch | University of Southern California | School of Architecture | Y |
| 71 | West | OR | 3.5 | Y | M Arch | University of Oregon | School of Architecture and Allied Arts | Y |
| 72 | West | AZ | 3 | Y | M Arch | Arizona State University | College of Design | Y |
| 73 | West | AZ | 3 | Y | M Arch | Frank Lloyd Wright | School of Architecture | Y |
| 74 | West | CA | 4 | Y | M Arch | Academy of Art University | School of Architecture | Y |
| 75 | West | CA | 2 | Y | M Arch | University of California at Berkeley | College of Environmental Design, Dept. of Architecture | Y |
| 76 | West | CA | 3 | Y | M Arch | University of California at Los Angeles | Dept of Architecture and Urban Design | Y |
| 77 | West | CO | ? | Y | M Arch | University of Colorado at Denver/Boulder | College of Architecture and Planning | Y |
| 78 | West | ID | 6 | Y | M Arch | University of Idaho | College of Art and Architecture | Y |
| 79 | West | MT | 5 | Y | M Arch | Montana State University | College of Arts and Architecture | Y |
| 80 | West | NV | 3 | Y | M Arch | University of Nevada-Las Vegas | College of Fine Arts | Y |

## Table 21: NAAB-Accredited Architectural Programs *continued*

| No. | Region | State | Duration (Years) | First Professional Degree | Degree | University | College/School | NAAB Accredited |
|---|---|---|---|---|---|---|---|---|
| 81 | West | UT | 2 | Y | M Arch | University of Utah | College of Architecture and Planning | Y |
| 82 | West | WA | 2 | Y | M Arch | University of Washington | College of Architecture and Urban Planning | Y |
| 83 | West | WA | 2.5 | Y | M Arch | Washington State University | College of Architecture and Engineering | Y |
| 84 | West Central | IL | 3 | Y | M Arch | Illinois Institute of Technology | College of Architecture | Y |
| 85 | West Central | KS | 5 | Y | M Arch | University of Kansas | School of Architecture and Urban Planning | Y |
| 86 | West Central | IL | 3 | Y | M Arch | Judson University | School of Art, Design, and Architecture | Y |
| 87 | West Central | IL | 4 | Y | M Arch | University of Illinois at Urbana-Champaign | College of Fine and Applied Arts | Y |
| 88 | West Central | IL | 3 | Y | M Arch | University of Illinois of Chicago | College of Architecture and the Arts | Y |
| 89 | West Central | MN | 3 | Y | M Arch | University of Minnesota | College of Design | Y |
| 90 | West Central | MO | 2 | Y | M Arch | Washington University in St. Louis | Sam Fox School of Design and Visual Arts | Y |
| 91 | West Central | ND | 5 | Y | M Arch | North Dakota State University | College of Engineering and Architecture | Y |
| 92 | West Central | NE | 2 | Y | M Arch | University of Nebraska-Lincoln | College of Architecture | Y |
| 93 | West Central | WI | 2 | Y | M Arch | University of Wisconsin-Milwaukee | School of Architecture and Urban Planning | Y |

| Count | First Professional Degree |
|---|---|
| 31 | No |
| 62 | Yes, First Professional M Arch |
| 93 | |
| 2 | Yes, M Arch programs in East Central |
| 14 | Yes, M Arch programs in Northeast |
| 10 | Yes, M Arch programs in Southeast |
| 9 | Yes, M Arch programs in Southwest |
| 10 | Yes, M Arch programs in West Central |
| 17 | Yes, M Arch programs in West |
| 62 | |

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NAAB Accredited Architecture Programs in the US

Source: (NAAB "NAAB Accredited Architecture Programs in the United States") and each school's website.

Note: The preceding worksheets found in Table 21 were generated through online web research with the following list of NAAB-accredited architecture degree programs in the US.

**ALABAMA (2)**

AUBURN UNIVERSITY
College of Architecture, Design and Construction
104 Dudley Hall
Auburn, AL 36849-5316
Phone: 334-844-4516 | Fax: 334/844-5419
www.cadc.auburn.edu/soa/
B Arch

TUSKEGEE UNIVERSITY
Dept of Architecture, Room # 115, Wilcox C Building
Tuskegee, AL 36088
Phone: 334.727.8329 | Fax: 334.724.4196
www.tuskegee.edu/ceaps/
B Arch

**ALASKA - None**

**ARIZONA (3)**

ARIZONA STATE UNIVERSITY
School of Architecture + Landscape Architecture
P.O. Box 871905, North Architecture Building, Room 162
Tempe, AZ 85287-1605
Phone: 480.965.3536 | Fax: 480.965.0968
www.design.asu.edu/
M Arch

UNIVERSITY OF ARIZONA
School of Architecture
1040 N. Olive Road, P.O. Box 210075
Tucson, AZ 85721-0075
Phone: 520.621.6752 | Fax: 520.621.8700
www.architecture.arizona.edu/
B Arch

FRANK LLOYD WRIGHT SCHOOL OF ARCHITECTURE,
TALIESIN WEST
P.O. Box 4430
Scottsdale, AZ 85261
Phone: 480.860.2700 | Fax: 480.391.4014
www.taliesin.edu
M Arch

**ARKANSAS (1)**

UNIVERSITY OF ARKANSAS
School of Architecture
120 Vol Walker Hall
Fayetteville, AR 72701
Phone: 479/575-4705 | Fax: 479/575-7429
www.architecture.uark.edu
B Arch

**CALIFORNIA (10)**

ACADEMY OF ART UNIVERSITY
School of Architecture
79 New Montgomery Street
San Francisco, CA 94105
Phone: 415.618.3564 | Fax: 415.618.3566
www.academyart.edu/architecture-school
M Arch

UNIVERSITY OF CALIFORNIA, BERKELEY
Dept of Architecture College of Environmental Design
232 Wurster Hall
Berkeley, CA 94720-1800
Phone: 510.642.4942
www.arch.ced.berkeley.edu
M Arch

UNIVERSITY OF CALIFORNIA, LOS ANGELES
Dept of Architecture and Urban Design
1317 Perloff Hall
Los Angeles, CA 90095-1467
Phone: 310/825-7857 | Fax: 310/825-8959
www.aucl.ucla.edu
M Arch

CALIFORNIA COLLEGE OF THE ARTS
School of Architecture
1111 Eighth Street
San Francisco, CA 94107
Phone: 415.703.9562 | Fax: 415.703.9524
www.cca.edu/
B Arch; M Arch

CALIFORNIA POLYTECHNIC STATE UNIVERSITY
College of Architecture & Environmental Design Architecture
One Grand Avenue
San Luis Obispo, CA 93407
Phone: 805.756.1316 | Fax: 805.756.1500
www.arch.calpoly.edu/
B Arch

CALIFORNIA STATE POLYTECHNIC UNIVERSITY, POMONA
Dept of Architecture College of Environmental Design
3801 West Temple Avenue
Pomona, CA 91768
Phone: 909.869.2683 | Fax: 909.869.4331
www.csupomona.edu/~arc
B Arch; M Arch

NEWSCHOOL OF ARCHITECTURE AND DESIGN
1249 F Street
San Diego, CA 92101
Phone: (619) 235-4100 x200 | Fax: 619.235.9893
www.newschoolarch.edu
B Arch; M Arch

SOUTHERN CALIFORNIA INSTITUTE OF ARCHITECTURE
960 E. Third Street
Los Angeles, CA 90013
Phone: 213/613-2200 | Fax: 213/613-0524
www.sciarc.edu
B Arch; M Arch

UNIVERSITY OF SOUTHERN CALIFORNIA
School of Architecture
University Park, Watt Hall - Room 204
Los Angeles, CA 90089-0291
Phone: 213.740.2723 | Fax: 213.740.8884
www.arch.usc.edu
B Arch; M Arch

WOODBURY UNIVERSITY
School of Architecture
7500 Glenoaks Blvd, PO Box 7846
Burbank, CA 91510-7846
Phone: 818.767.0888 | Fax: 818.504.9320
www.woodbury.edu
B Arch

## COLORADO (1)

UNIVERSITY OF COLORADO
College of Architecture and Planning
Campus Box 126, P.O. Box 173364
Denver, CO 80217-3364
Phone: 303.556.3382 | Fax: 303.556.3687)
www.cudenver.edu/aandp
M Arch

## CONNECTICUT (2)

UNIVERSITY OF HARTFORD
Dept of Architecture, 200 Bloomfield Avenue
West Hartford, CT 06117
Phone: 860 768-4371
www.uhaweb.hartford.edu/architect/
M Arch

YALE UNIVERSITY
School of Architecture
P.O. Box 208242 (180 York St.)
New Haven, CT 06520-8242
Phone: 203.432.2288 | Fax: 203.432.7175
www.architecture.yale.edu
M Arch

## DELAWARE – None

## DISTRICT OF COLUMBIA (2)

CATHOLIC UNIVERSITY OF AMERICA
School of Architecture and Planning
620 Michigan Avenue, NE
Washington, DC 20064
Phone: 202.319.5188 | Fax: 202.238.2023
www.architecture.cua.edu
M Arch

HOWARD UNIVERSITY
School of Architecture & Design
2366 6th Street NW
Washington, DC 20059
Fax: 202.462.2158
www.howard.edu/ceacs/departments/architecture
B Arch

## FLORIDA (6)

FLORIDA AGRICULTURAL AND MECHANICAL UNIVERSITY
School of Architecture
1938 S. Martin Luther King Jr. Blvd.
Tallahassee, FL 32307-4200
Phone: 850.599.3244 | Fax: 850.599.3436
www.famusoa.net/
B Arch; M Arch

FLORIDA ATLANTIC UNIVERSITY
School of Architecture
111 East Las Olas Boulevard
Fort Lauderdale, FL 33301
Phone: 954.762.5654 | Fax: 954.762.5367
www.fau.edu/arch
B Arch

FLORIDA INTERNATIONAL UNIVERSITY
Architecture Dept, PCA 272
Miami, FL 33199
Phone: 305.348.3181 | Fax: 305.348.2650
www.soa.fiu.edu/
M Arch

UNIVERSITY OF FLORIDA
College of Design, Construction and Planning
231 ARCH, PO Box 115702
Gainesville, FL 32611-5702
Phone: 352.392.0205 | Fax: 352.392.4606
www.arch.ufl.edu
M Arch

UNIVERSITY OF MIAMI
School of Architecture
P.O. Box 249178
Coral Gables, FL 33124-5010
Phone: 305.284.5000 | Fax: 305.284.5245
www.arc.miami.edu
B Arch, M Arch

UNIVERSITY OF SOUTH FLORIDA
School of Architecture & Community Design
4202 E. Fowler Avenue
Tampa, FL 33620
Phone: 813.974.4031 | Fax: 813.974.2557
www.arch.usf.edu
M Arch

## GEORGIA (3)

GEORGIA INSTITUTE OF TECHNOLOGY
College of Architecture
247 4th Street, NW
Atlanta, GA 30332-0155
Phone: 404/894-4885 | Fax: 404/894-0572
www.coa.gatech.edu/arch
M Arch

SAVANNAH COLLEGE OF ART AND DESIGN
School of Building Arts
229 Martin Luther King Blvd., PO Box 3146
Savannah, GA 31402-3146
Phone: 912.525.6876
www.scad.edu/architecture/
M Arch

SOUTHERN POLYTECHNIC STATE UNIVERSITY
Dept of Architecture
1100 South Marietta Parkway
Marietta, GA 30060-2896
Phone: 770.528.7253 | Fax: 770.528.7228
www.architecture.spsu.edu/
B Arch

**HAWAI`I (1)**

UNIVERSITY OF HAWAI'I AT MĀNOA
School of Architecture
2410 Campus Road
Honolulu, HI 96822
Phone: 808.956.7225 | Fax: 808.956.7778
www.arch.hawaii.edu
D Arch

**IDAHO (1)**

UNIVERSITY OF IDAHO
College of Art and Architecture
Moscow, ID 83844-2451
Phone: 208.885.6781 | Fax: 208.885.9428
www.caa.uidaho.edu/arch/
M Arch

**ILLINOIS (6)**

ILLINOIS INSTITUTE OF TECHNOLOGY
College of Architecture
3360 South State Street, S. R. Crown Hall
Chicago, IL 60616
Phone: 312.567.3263 | Fax: 312.567.5820
www.iit.arch.edu
B Arch; M Arch

UNIVERSITY OF ILLINOIS AT CHICAGO
School of Architecture
845 West Harrison, Room 3100
Chicago, IL 60607
Phone: 312.996.3335 | Fax: 312.413.4488
www.arch.uic.edu
M Arch

UNIVERSITY OF ILLINOIS, URBANA-CHAMPAIGN
School of Architecture
117 Temple Hoyne Buell Hall, 611 Taft Drive
Champaign, IL 61820-6921
Phone: 217.333.1330 | Fax: 217.244.2900
www.arch.uiuc.edu/
M Arch

JUDSON UNIVERSITY
School of Art, Design & Architecture
1151 North State Street
Elgin, IL 60123-1498
Phone: 847.628.1010 | Fax: 847.695.3353
www.judson0-il.edu
M Arch

SCHOOL OF THE ART INSTITUTE OF CHICAGO
Dept of Architecture, Interior Architecture, & Designed Objects
36 S. Wabash Ave. #1257
Chicago, IL 60603
Phone: 312.629.6650 | Fax: 312.578.0960
www.saic.edu
M Arch - Candidate

SOUTHERN ILLINOIS UNIVERSITY
School of Architecture
410 Quigley Hall MC 4337, 875 S. Normal Avenue
Carbondale, IL 62901-4303
Phone: 618-453-3734
www.siuc.edu/~arc_id
M Arch – Candidate

**INDIANA (2)**

BALL STATE UNIVERSITY
Dept of Architecture, College of Architecture & Planning
Muncie, IN 47306
Phone: 765.285.1900 | Fax: 765.285.1765
www.bsu.edu/architecture/
M Arch

UNIVERSITY OF NOTRE DAME
School of Architecture
110 Bond Hall
Notre Dame, IN 46556
Phone: 574.631.6137 | Fax: 574.631.8486
www.architecture.nd.edu
B Arch; M Arch

**IOWA**

IOWA STATE UNIVERSITY
Dept of Architecture, 156 College of Design
Ames, IA 50011-3093
Phone: 515.294.2557 | Fax: 515.294.1440
www.arch.iastate.edu
B Arch; M Arch

**KANSAS (2)**

KANSAS STATE UNIVERSITY
College of Architecture, Planning & Design
211 Seaton Hall
Manhattan, KS 66506-2901
Fax: 785/532-6722
www.capd.ksu/edu/arch
B Arch (thru 12/09); M Arch

UNIVERSITY OF KANSAS
School of Architecture & Urban Planning
205 Marvin Hall, 1465 Jayhawk Blvd.
Lawrence, KS 66045-2250
Phone: 785.864.4281 | Fax: 785.864.5393
B Arch (thru 12/10); M Arch

**KENTUCKY (1)**

UNIVERSITY OF KENTUCKY
College of Design, School of Architecture
117 Pence Hall
Lexington, KY 40506-0041
Phone: 859.257.3030 | Fax: 859.323.1990
www.uky.edu/design/
M Arch

**LOUISIANA (5)**

UNIVERSITY OF LOUISIANA - LAFAYETTE
School of Architecture and Design College of the Arts
P.O. Box 42811
Lafayette, LA 70504-2811
Phone: 337.482.6225 | Fax: 337.482.1128

LOUISIANA STATE UNIVERSITY
School of Architecture
136 Atkinson Hall
Baton Rouge, LA 70803
Phone: 225.578.6885 | Fax: 225/388-2168
www.design.lsu.edu/architecture
B Arch; M Arch

LOUISIANA TECH UNIVERSITY
School of Architecture
P.O. Box 3147, 305 Wisteria Rd.
Ruston, LA 71272
Phone: 318/257-2816 | Fax: 318/257-4687
www.arch.latech.edu
B Arch (thru 12/10); M Arch

SOUTHERN UNIVERSITY AND A&M COLLEGE
School of Architecture
P.O. Box 11947
Baton Rouge, LA 70813
Phone: 225/771.3015 | Fax: 225/771-4709
www.susa.subr.edu
B Arch

TULANE UNIVERSITY
School of Architecture
Richardson Memorial Hall
New Orleans, LA 70118-5671
Phone: 504.865.5389 | Fax: 504.865.6722
www.architecture.tulane.edu
M Arch

**MAINE - None**

**MARYLAND (2)**

UNIVERSITY OF MARYLAND
School of Architecture, Planning & Preservation
College Park, MD 20742-1411
Phone: 301.405.8000 | Fax: 301.314.9583
www.arch.umd.edu/architecture
M Arch

MORGAN STATE UNIVERSITY
School of Architecture and Planning
2201 Argonne Drive, Montebello D103
Baltimore, MD 21251
Phone: 443.885.3225Fax: 443.885.8233
www.morgan.edu
M Arch

**MASSACHUSETTS (7)**

BOSTON ARCHITECTURAL COLLEGE
320 Newbury Street
Boston, MA 02115
Phone: 617.585.0200 | Fax: 617.585.0111
www.the-bac.edu
B Arch; M Arch

HARVARD UNIVERSITY
Graduate School of Design
48 Quincy Street
Cambridge, MA 02138
Phone: 617.495.2591 | Fax: 617.495.8916
www.gsd.harvard.edu
 M Arch

UNIVERSITY OF MASSACHUSETTS, AMHERST
Architecture + Design Program
457 Fine Arts Center, 151 Presidents Drive, OFC1
Amherst, MA 01003
Phone: 413.577.1575 | Fax: 413.545.3929
www.umass.edu/architecture
M Arch

MASSACHUSETTS COLLEGE OF ART AND DESIGN
Dept of Architecture, 621 Huntington Avenue
Boston, MA 02115
Phone: 617.879.7669 | Fax: 617.879.7773
www.massart.edu
M Arch - Candidate

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
School of Architecture and Planning
Dept of Architecture, Bldg. 7, 7-337, 77 Massachusetts Avenue
Cambridge, MA 02139-4307
Phone: 617.253.7791 | Fax: 617.253.8993
www.architecture.mit.edu
M Arch

NORTHEASTERN UNIVERSITY
School of Architecture
360 Huntington Avenue, 151 Ryder Hall
Boston, MA 02115
Phone: 617.373.4637 | Fax: 617.373.7080
www.architecture.neu.edu
M Arch

WENTWORTH INSTITUTE OF TECHNOLOGY
Dept of Architecture, 550 Huntington Avenue
Boston, MA 02115
Phone: 617.989.4450 | Fax: 617.989.4591
www.wit.edu/arch
M Arch

**MICHIGAN (4)**

ANDREWS UNIVERSITY
School of Architecture
Berrien Springs, MI 49104-0450
Phone: 269.471.6003 | Fax: 269.471.6261
www.andrews.edu/arch
M Arch

UNIVERSITY OF DETROIT MERCY
School of Architecture
4001 West McNichols Road
Detroit, MI 48221-3038
Phone: 313.993.1532 | Fax: 313.993.1512
www.arch.udmercy.edu
M Arch

LAWRENCE TECHNOLOGICAL UNIVERSITY
College of Architecture & Design
21000 West Ten Mile Road
Southfield, MI 48075-1058
Phone: 248.204.2805 | Fax: 248.204.2900
www.ltu.edu/architecture_and_design
M Arch

UNIVERSITY OF MICHIGAN
A. Alfred Taubman College of Arch. & Urban Planning
2000 Bonisteel Blvd
Ann Arbor, MI 48109-2069
Phone: 734.764.1300 | Fax: 734.763.2322
www.tcaup.umich.edu/arch
M Arch

**MINNESOTA (1)**

UNIVERSITY OF MINNESOTA
College of Design
101 Rapson Hall, 89 Church St. SE
Minneapolis, MN 55455
Phone: 612.624.7866 | Fax: 612.625.7525
www.arch.cdes.umn.edu
M Arch

**MISSISSIPPI (1)**

MISSISSIPPI STATE UNIVERSITY
College of Architecture, Art, and Design
899 Collegeview Street, P.O. Box AQ
Mississippi State, MS 39762-5541
Phone: 662.325.2202 | Fax: 662.325.8872
www.caad.msstate.edu/sarc
B Arch

**MISSOURI (2)**

DRURY UNIVERSITY
Hammons School of Architecture
900 North Benton Avenue
Springfield, MO 65802
Phone: 417.873.7288 | Fax: 417.873.7446
www.drury.edu
B Arch

WASHINGTON UNIVERSITY IN ST. LOUIS
Sam Fox School of Design & Visual Arts / Architecture
Campus Box 1079, One Brookings Drive
St. Louis, MO 63130-4899
Phone: 314.935.6200 | Fax: 314.935.7656
www.arch.wustl.edu
M Arch

**MONTANA (1)**

MONTANA STATE UNIVERSITY
School of Architecture
160 Cheever Hall, P.O. Box 173760
Bozeman, MT 59717-3760
Phone: 406.994.4255 | Fax: 406.994.4257
www.arch.montana.edu
M Arch

**NEBRASKA (1)**

UNIVERSITY OF NEBRASKA-LINCOLN
College of Architecture
232 Architecture Hall West
Lincoln, NE 68588-0107
Phone: 402.472.9233 | Fax: 402.472.3806
www.architecture.unl.edu
M Arch

**NEVADA (1)**

UNIVERSITY OF NEVADA, LAS VEGAS
School of Architecture
4505 Maryland Pkwy,, Box 454018
Las Vegas, NV 89154-4018
Phone: 702.895.3031 | Fax: 702.895.1119
www.architecture.unlv.edu
M Arch

**NEW HAMPSHIRE – None**

**NEW JERSEY (2)**

NEW JERSEY INSTITUTE OF TECHNOLOGY
School of Architecture
University Heights, Weston Hall, Room 320
Newark, NJ 07102
Phone: 973/596-3080 | Fax: 973/596-8296
www.architecture.njit.edu
B Arch; M Arch

PRINCETON UNIVERSITY
School of Architecture
S-116 Architecture Building
Princeton, NJ 08544-5264
Phone: 609.258.3741 | Fax: 609.258.4740
www.soa.princeton.edu
M Arch

**NEW MEXICO (1)**

UNIVERSITY OF NEW MEXICO
School of Architecture & Planning
2401 Central Avenue NE, MSC04 2530
Albuquerque, NM 87131-0001
Phone: 505.277.2903 | Fax: 505.277.0076
www.saap.unm.edu
M Arch

**NEW YORK (10)**

CITY COLLEGE OF NEW YORK
School of Urban Design and Landscape Architecture
New York, NY 10031
Fax: 212.650.6566
www1.ccny.cuny.edu/prospective/architecture
B Arch; M Arch

COLUMBIA UNIVERSITY
Graduate School of Architecture, Planning and Preservation
400 Avery Hall/1172 Amsterdam Ave.
New York, NY 10027
Fax: 212.864.0410
www.arch.columbia.edu
M Arch

THE COOPER UNION
Irwin S. Chanin School of Architecture
Cooper Square, 7 East 7th Street
New York, NY 10003
Phone: 212.353.4220 | Fax: 212.353.4009
www.cooper.edu
B Arch

CORNELL UNIVERSITY
College of Architecture, Art & Planning
143 E. Sibley Hall
Ithaca, NY 14853-6701
Phone: 607.255.5236 | Fax: 607.255.0291
www.aap.cornell.edu/arch
B Arch; M Arch - Candidate

NEW YORK INSTITUTE OF TECHNOLOGY
School of Architecture & Design
Old Westbury, NY 11568
Phone: 516.686.7659 | Fax: 516.686.7921
www.iris.nyit.edu/architecture
B Arch

PARSONS THE NEW SCHOOL FOR DESIGN
School of Constructed Environments
25 East 13th Street
New York, NY 10003
Phone: 212.229.8955 | Fax: 212.229.8937
www2.parsons.edu/architecture
M Arch

PRATT INSTITUTE
School of Architecture
200 Willoughby Avenue
Brooklyn, NY 11205
Phone: 718/399-4305 | Fax: 718/399-4315
www.pratt.edu/arch
B Arch; M Arch

RENSSELAER POLYTECHNIC INSTITUTE
School of Architecture
Troy, NY 12180-3590
Phone: 518/276-6466 | Fax: 518/276-3034
www.arch.rpi.edu
B Arch; M Arch

UNIVERSITY AT BUFFALO, SUNY
School of Architecture & Planning
3435 Main Street, Hayes Hall Rm. 112
Buffalo, NY 14214-3087
Phone: 716.829.3483 | Fax: 716/829-3256
www.ap.buffalo.edu/architecture
M Arch

SYRACUSE UNIVERSITY
School of Architecture
201 Slocum Hall
Syracuse, NY 13244-1250
Phone: 315.443.2256 | Fax: 315.443.5082
www.soa.syr.edu
B Arch; M Arch

**NORTH CAROLINA (2)**

UNIVERSITY OF NORTH CAROLINA AT CHARLOTTE
School of Architecture
9201 University City Blvd.
Charlotte, NC 28223-0001
Phone: 704.687.2358 | Fax: 704.687.3353
www.soa.uncc.edu
B Arch; M Arch

NORTH CAROLINA STATE UNIVERSITY
School of Architecture, College of Design
Campus Box 7701
Raleigh, NC 27695-7701
Phone: 919.515.8350 | Fax: 919.515.7330
www.ncsudesign.org
B Arch; M Arch

**NORTH DAKOTA (1)**

NORTH DAKOTA STATE UNIVERSITY
Dept of Architecture & Landscape Architecture
NDSU Downtown, 650 NP Avenue
Fargo, ND 58102
Phone: 701.231.5789 | Fax: 701.231.7342
www.ala.ndsu.edu
M Arch

**OHIO (4)**

UNIVERSITY OF CINCINNATI
The School of Architecture & Interior Design
P.O. Box 210016
Cincinnati, OH 45221-0016
Phone: 513.556.6426 | Fax: 513.556.1230
www.daap.uc.edu/said/
M Arch

KENT STATE UNIVERSITY
College of Architecture & Environmental Design
Kent, OH 44242
Phone: 330/672-2789 | Fax: 330/672-3809
www.saed.kent.edu
B Arch (thru 12/09); M Arch

MIAMI UNIVERSITY
Dept of Architecture & Interior Design
101 Alumni Hall
Oxford, OH 45056
Phone: 513/529-7210 | Fax: 513/529-7009
www.muohio.edu/architure
M Arch

OHIO STATE UNIVERSITY
Austin E. Knowlton School of Architecture
275 W. Woodruff Avenue
Columbus, OH 43210
Phone: 614.292.1012 | Fax: 614.292.7106
www.knowlton.osu.edu
M Arch

**OKLAHOMA (2)**

OKLAHOMA STATE UNIVERSITY
School of Architecture
101 Donald W. Reynolds
Stillwater, OK 74078-5051
Phone: 405.744.6043 | Fax: 405.744.6491
www.architecture.ceat.okstate.edu
B Arch

UNIVERSITY OF OKLAHOMA
College of Architecture
830 Van Vleet Oval, Gould Hall, Rm 162
Norman, OK 73019-0265
Phone: 405.325.3990 | Fax: 405.325.0108
www.arch.ou.edu
B Arch; M Arch

**OREGON (2)**

UNIVERSITY OF OREGON
Dept of Architecture, 1206 University of Oregon
Eugene, OR 97403-1206
Phone: 541.346.3656 | Fax: 541.346.3626
www.architecture.uoregon.edu
B Arch; M Arch

PORTLAND STATE UNIVERSITY
Dept of Architecture, P.O. Box 751, 235 Shattuck Hall
Portland, OR 97207-0751
Phone: 503.725.8405 | Fax: 503.725.8318
www.pdx.edu/architecture
M Arch - Candidate

**PENNSYLVANIA (6)**

CARNEGIE MELLON UNIVERSITY
School of Architecture College of Fine Arts
Pittsburgh, PA 15213
Phone: 412.268.2355 | Fax: 412.268.7819
www.arc.cmu.edu
B Arch

DREXEL UNIVERSITY
Antoinette Westphal College of Media Arts & Design
3201 Arch Street, Suite 110
Philadelphia, PA 19104
Fax: 215.895.4921
www.drexel.edu/westphal/architecture
B Arch

PENNSYLVANIA STATE UNIVERSITY
Dept of Architecture, 121 Stuckeman Family Building
University Park, PA 16802
Phone: 814/865-9535 | Fax: 814/865-3289
www.arch.psu.edu
B Arch

UNIVERSITY OF PENNSYLVANIA
Dept of Architecture, 207 Meyerson Hall, 210 South 34th Street
Philadelphia, PA 19104-6311
Phone: 215.898.5728 | Fax: 215.573.2192
www.upenn.edu/gsfa/arch
M Arch

PHILADELPHIA UNIVERSITY
School of Architecture
4201 Henry Avenue
Philadelphia, PA 19144-5497
Phone: 215/951-2896 | Fax: 215/951-2110
www.philau.edu/schools
B Arch

TEMPLE UNIVERSITY
Architecture Dept, Tyler School of Art
1947 N. 12th Street
Philadelphia, PA 19122-6077
Phone: 215/204-8813 | Fax: 215/204-5481
www.temple.edu/architecture
 B Arch; M Arch (Fall 2010)

**PUERTO RICO (2)**

POLYTECHNIC UNIVERSITY OF PUERTO RICO
The New School of Architecture
Box 192017
San Juan, PR 00919-2017
Phone: 787.622.8000 | Fax: 787.767.0607
www.pupr.edu
B Arch

UNIVERSIDAD DE PUERTO RICO
School of Architecture
P.O. Box 21909
San Juan, PR 00931-1909
Phone: 787.250.8581 | Fax: 787.763.5377
www.archweb.uprrp.edu
M Arch

**RHODE ISLAND (2)**

RHODE ISLAND SCHOOL OF DESIGN
Two College Street
Providence, RI 02903
Phone: 401/454-6281 | Fax: 401/454-6299
www.risd.edu
B Arch; M Arch

ROGER WILLIAMS UNIVERSITY
School of Architecture, Art and Historic Preservation
1 Old Ferry Road, Bristol, RI 02809-2921
Phone: 401.254.3605 | Fax: 401.254.3565
www.rwu.edu
B Arch (thru 12/09); M Arch

**SOUTH CAROLINA (1)**

CLEMSON UNIVERSITY
School of Architecture
Box 340503, 145 Lee Hall
Clemson, SC 29634-0503
Phone: 864.656.3896 | Fax: 864.656.1810
www.virtual.clemson.edu/caah/architecture
M Arch

**SOUTH DAKOTA – None**

**TENNESSEE (2)**

UNIVERSITY OF MEMPHIS
Dept of Architecture, Jones Hall - Room 404
Memphis, TN 38152
Phone: 901.678.2724 | Fax: 901.678.1755
www.architecture.memphis.edu
M Arch - Candidate

UNIVERSITY OF TENNESSEE-KNOXVILLE
College of Architecture & Design
1715 Volunteer Boulevard, Rm 224
Knoxville, TN 37996-2400
Phone: 865/974-5265 | Fax: 865/974-0656
www.arch.utk.edu
B Arch; M Arch

**TEXAS (8)**

UNIVERSITY OF HOUSTON
Gerald D. Hines College of Architecture
122 College of Architecture Bldg.
Houston, TX 77204-4000
Phone: 713/743-2400 | Fax: 713/743-2358
www.arch.uh.edu
B Arch; M Arch

PRAIRIE VIEW A&M UNIVERSITY
School of Architecture
P.O. Box 519, Mail Stop 2100
University Dr. @ L.W. Minor St.
Prairie View, TX 77446
Phone: 936.261.9800 | Fax: 936.261.9826
www.pvamu.edu
M Arch

RICE UNIVERSITY
School of Architecture
6100 Main Street
Houston, TX 77005-1892
Phone: 713/348-4864 | Fax: (713)348-5277
www.arch.rice.edu
B Arch; M Arch

TEXAS A&M UNIVERSITY
Dept of Architecture, Langford Building A - Room 411
College Station, TX 77843-3137
Phone: 979.845.1015 | Fax: 979.842.1571
www.archone.tamu.edu
M Arch

UNIVERSITY OF TEXAS AT ARLINGTON
School of Architecture
Box 19108, 601 W. Nedderman Drive
Arlington, TX 76019
Phone: 817/272-2801 | Fax: 817/272-5098
www.uta.edu/architecture
M Arch

UNIVERSITY OF TEXAS AT AUSTIN
School of Architecture
Goldsmith Hall 2.308, 1 University Station, B7500
Austin, TX 78712-0222
Phone: 512.471.1922 | Fax: 512.471.0716
www.soa.utexas.edu
B Arch; M Arch

UNIVERSITY OF TEXAS AT SAN ANTONIO
College of Architecture
501 W. Durango Blvd.
San Antonio, TX 78207
Phone: 210.458.3010 | Fax: 210.458.3016
www.utsa.edu/architecture
M Arch

TEXAS TECH UNIVERSITY
College of Architecture
Box 42091
Lubbock, TX 79409-2091
Phone: 806/742-3136 | Fax: 806/742-2855
www.arch ttu.edu/architecture
M Arch

**UTAH (1)**

UNIVERSITY OF UTAH
College of Architecture and Planning
375 S. 1530 E Room 235
Salt Lake City, UT 84112-9154
Phone: 801.581.8254 | Fax: 801.581.8217
www.arch.utah.edu
M Arch

**VIRGINIA (3)**

HAMPTON UNIVERSITY
School of Engineering and Technology, Dept of Architecture
Hampton, VA 23668
Phone: 757.727.5440 | Fax: 757.728.6680
www.hampton.edu/academics/schools/engineering
M Arch

VIRGINIA TECH
School of Architecture + Design
201 Cowgill Hall (0205)
Blacksburg, VA 24061-0205
www.archdesign.vt.edu
B Arch; M Arch

UNIVERSITY OF VIRGINIA
School of Architecture
Campbell Hall, PO Box 400122
Charlottesville, VA 22904-4122
Phone: 434.924.1493 | Fax: 434.982.2678
www.arch.viriginia.edu/architecture
M Arch

**VERMONT (1)**

NORWICH UNIVERSITY
School of Architecture and Art
Chaplin Hall, 158 Harmon Drive
Northfield, VT 05663-1035
Fax: 802/485-2623
www.norwich.edu
 M Arch

**WASHINGTON (2)**

UNIVERSITY OF WASHINGTON
Dept of Architecture, 208 Gould Hall, Box 355720
Seattle, WA 98195-5720
Phone: 206.543.4180 | Fax: 206.616.4992
www.arch.washington.edu
M Arch

WASHINGTON STATE UNIVERSITY
School of Architecture & Construction Management
P.O. Box 642220
Pullman, WA 99164-2220
Phone: 509.335.5539 | Fax: 509.335.6132
www.arch.wsu.edu
M Arch

**WEST VIRGINIA – None**

**WISCONSIN (1)**

UNIVERSITY OF WISCONSIN-MILWAUKEE
School of Architecture & Urban Planning
P.O. Box 413
Milwaukee, WI 53201
Phone: 414/229-4014 | Fax: 414/229-6976
www.uwm.edu/sarup/architecture
M Arch

**WYOMING – None**

Source: (NAAB "NAAB Accredited Architecture Programs in the United States").

## Appendix E: NAAB-Accredited First Professional Degree Programs

The initial information collected in Appendix D was filtered to omit candidate programs and programs being phased out.  A modified list of 143 NAAB-accredited degree programs remained.  General college catalogs and course descriptions obtained from each architecture school's website were then reviewed and evaluated to answer the following questions:

- Is the NAAB accredited degree a first professional degree?
- If yes, does the program offer a leadership course in professional studies as it relates to learning leadership in architecture?

Below Figure 26 depicts 41 (29%) architectural programs are <u>not</u> a first professional degree program and 102 (71%) architectural programs are a first professional degree program (NAAB "NAAB Accredited Architecture Programs in the United States").

### Figure 26: NAAB-Accredited First Professional Degree Programs
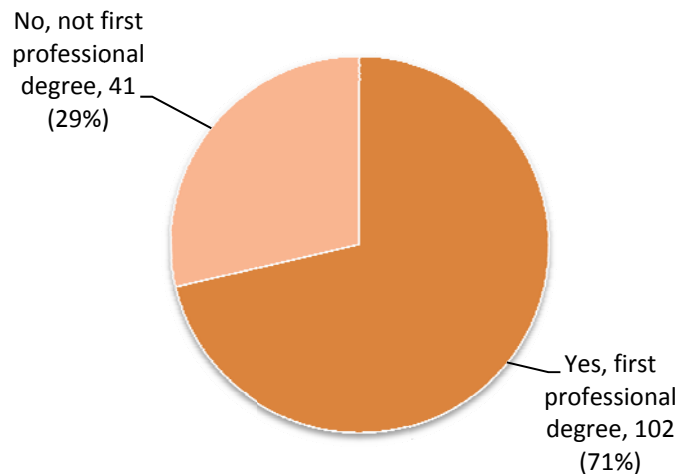


Source: (NAAB "NAAB Accredited Architecture Programs in the United States").

Furthermore, of these 102 first professional degree programs, 39 (38%) programs offer the B Arch, while 62 (61%) programs offer the M Arch, and one (1%) program offers the D Arch, as shown in Figure 27 on the following page (NAAB "NAAB Accredited Architecture Programs in the United States").

**Figure 27: First Professional Degree Programs by Type of Degree**
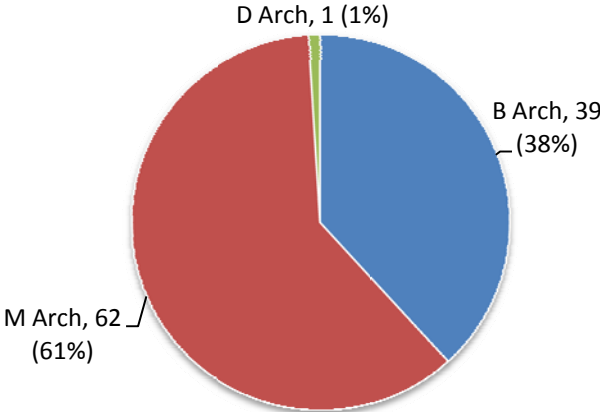


Source: (NAAB "NAAB Accredited Architecture Programs in the United States").

Further review of the first professional degree programs by type of degree is illustrated in Table 22 below, which breaks down the type of degree offered (B Arch, M Arch, and D Arch) across the six US regions.  East Central has 3 (3%) programs; Southeast has 19 (19%) programs; Southwest has 12 (12%) programs; West Central has 13 (13%) programs, and West has 26 (25%) programs (NAAB "NAAB Accredited Architecture Programs in the United States").

**Table 22: First Professional Degree Programs by Region and Type of Degree**

|  | East Central | Northeast | Southeast | Southwest | West Central | West |
|---|---|---|---|---|---|---|
| B Arch | 1 | 15 | 9 | 3 | 3 | 8 |
| M Arch | 2 | 14 | 10 | 9 | 10 | 17 |
| D Arch | 0 | 0 | 0 | 0 | 0 | 1 |

Source: (NAAB "NAAB Accredited Architecture Programs in the United States").

With the primary focus of this qualitative inquiry central to scholarly and practical learning experiences at the UH Mānoa, research continued with architecture schools located in the same region as the UH Mānoa SOA – West Region – and considered only schools that offer first professional degrees.  General college catalogs and course descriptions obtained from each architecture school's website were reviewed and evaluated to answer the following two questions:

- Does the school offer a professional practice course in professional studies?
- Does the professional practice course description mention any of the following leadership concepts: *leadership*, *teamwork*, *collaboration*, or *relationships*?

In response to the first question, the next three tables (Table 23, Table 24, and Table 25) lists each degree program (B Arch, M Arch, and D Arch, respectively) and answers "Yes" or "No" if that particular degree program offers a Professional Practice course at its respective architecture school. In response to the second question, refer to Appendix G, which provides architectural curriculum information on professional practice coursework.

**Table 23: West Region – Bachelor of Architecture Degree Programs**

| No. | State | Degree | University Institution School/College/Department | Offers Professional Practice Course |
|---|---|---|---|---|
| 1 | AZ | B Arch | University of Arizona College of Architecture and Landscape Architecture | Yes |
| 2 | CA | B Arch | California Polytechnic State University, Pomona Department of Architecture | Yes |
| 3 | CA | B Arch | California Polytechnic State University, San Luis Obispo College of Architecture and Environmental Design | Yes |
| 4 | CA | B Arch | NewSchool of Architecture and Design | Yes |
| 5 | CA | B Arch | Southern California Institute of Architecture Southern CA Institute of Architecture | Yes |
| 6 | CA | B Arch | University of Southern California School of Architecture | Yes |
| 7 | CA | B Arch | Woodbury University School of Architecture | Yes |
| 8 | OR | B Arch | University of Oregon School of Architecture and Allied Arts | Yes |

Source: (NAAB "NAAB Accredited Architecture Programs in the United States").

In Table 23: West Region – Bachelor of Architecture Degree Programs, above, all eight (31%) B Arch programs offer Professional Practice courses (NAAB "NAAB Accredited Architecture Programs in the United States"). Representing three states (Arizona, California, and Oregon), the schools are University of Arizona, California Polytechnic State University at Pomona, California Polytechnic State University at San Luis Obispo, NewSchool of Architecture and Design, Southern California Institute of Architecture, University of Southern California, University of Oregon, and Woodbury University.

**Table 24: West Region – Master of Architecture Degree Programs**

| No. | State | Degree | University Institution School/College/Department | Offers Professional Practice Course |
|---|---|---|---|---|
| 1 | AZ | M Arch | Arizona State University College of Design | Not Available |
| 2 | AZ | M Arch | Frank Lloyd Wright School of Architecture | Not Available |
| 3 | CA | M Arch | Academy of Art University School of Architecture | Yes |
| 4 | CA | M Arch | California College of the Arts School of Architecture | Yes |
| 5 | CA | M Arch | California Polytechnic State University, Pomona Department of Architecture | Yes |
| 6 | CA | M Arch | NewSchool of Architecture and Design | Yes |
| 7 | CA | M Arch | University of California at Berkeley College of Environmental Design Dept of Architecture | Yes |
| 8 | CA | M Arch | University of California at Los Angeles Dept of Architecture and Urban Design | Yes |
| 9 | CA | M Arch | University of Southern California School of Architecture | Yes |
| 10 | CO | M Arch | University of Colorado at Denver/Boulder College of Architecture and Planning | Yes |
| 11 | ID | M Arch | University of Idaho College of Art and Architecture | Yes |
| 12 | MT | M Arch | Montana State University College of Arts and Architecture | Yes |
| 13 | NV | M Arch | University of Nevada-Las Vegas College of Fine Arts | Yes |
| 14 | OR | M Arch | University of Oregon School of Architecture and Allied Arts | Yes |
| 15 | UT | M Arch | University of Utah College of Architecture and Planning | Yes |
| 16 | WA | M Arch | University of Washington College of Architecture and Urban Planning | Yes |
| 17 | WA | M Arch | Washington State University College of Architecture and Engineering | Yes |

Source: (NAAB "NAAB Accredited Architecture Programs in the United States").

In the above Table 24: West Region – Master of Architecture Degree Programs, fifteen (58%) M Arch programs offer Professional Practice courses (NAAB "NAAB Accredited Architecture Programs in the United States"). Representing eight states

(California, Colorado, Idaho, Montana, Nevada, Oregon, Utah, and Washington), the schools are Academy of Art University, California College of the Arts, California Polytechnic State University at Pomona, NewSchool of Architecture and Design, University of California at Berkeley, University of California at Los Angeles, University of Southern California, University of Colorado at Denver/Boulder, University of Idaho, Montana State University, University of Nevada-Las Vegas, University of Oregon, University of Utah, University of Washington, and Washington State University.

The remaining two schools (Arizona State University and the Frank Lloyd Wright School of Architecture at Taliesin) did not provide descriptions for Professional Practice coursework online, and therefore, these schools are excluded from further review in this study.

**Table 25: West Region – Doctor of Architecture Degree Program**

| No. | State | Degree | University Institution School/College/Department | Offers Professional Practice Course |
|-----|-------|--------|--------------------------------------------------|-------------------------------------|
| 1 | HI | D Arch | University of Hawaiʻi-Mānoa School of Architecture | Yes |

Source: (NAAB "NAAB Accredited Architecture Programs in the United States").

In Table 25: West Region – Doctor of Architecture Degree Program, above, one (1%) D Arch program, found at the University of Hawai`i-Mānoa School of Architecture, offers Professional Practice courses (NAAB "NAAB Accredited Architecture Programs in the United States").

## Appendix F: Realms of the NAAB Student Performance Criteria

### *Realm A: Critical Thinking and Representation*

Realm A describes the ability to build abstract relationships and understand the impact of ideas based on research and analysis of multiple theoretical, social, political, economical, cultural, and environmental contexts.  This realm has eleven (11) learning aspirations that describe specific areas of learning as it relates to critical thinking and representation:

1. A1 – Communication Skills: *Ability* to read, write, speak and listen effectively.

1. A2 – Design Thinking Skills: *Ability* to raise clear and precise questions, use abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test alternative outcome against relevant criteria and standards.

2. A3 – Visual Communication Skills: *Ability* to use appropriate representational media, such as traditional graphic and digital technology skills, to convey essential formal elements at each stage of the programming and design process.

3. A4 – Technical Documentation: *Ability* to make technically clear drawings, write outline specifications, and prepare models illustrating and identifying the assembly of materials, systems, and components appropriate for a building design.

4. A5 – Investigative Skills: *Ability* to gather, assess record, apply, and comparatively evaluate relevant information within architectural coursework and design processes.

5. A6 – Fundamental Design Skills: *Ability* to effectively use basic architectural and environmental principles in design.

6. A7 – Use of Precedents: *Ability* to examine and comprehend the fundamental principles present in relevant precedents and to make choices regarding the incorporation of such principles into architecture and urban design projects.

7. A8 – Ordering Systems Skills: *Understanding* of fundamentals of both natural and formal ordering systems and the capacity of each to inform two-and three-dimensional design.

8. A9 – Historical Traditions and Global Culture: *Understanding* of parallel and divergent canons and traditions of architecture, landscape and urban design including examples of indigenous, vernacular, local, regional, national settings from the Eastern, Western, Northern, and Southern hemispheres in terms of their climatic, ecological, technological, socioeconomic, public health, and cultural factors.

Realm A: *continued*

9.    A10 – Cultural Diversity: *Understanding* of the diverse needs, values, behavioral norms, physical abilities, and social and spatial patterns that characterize different cultures and individuals and the implications of this diversity on the societal roles and responsibilities of architects.

10.    A11 – Applied Research: *Understanding* the role of applied research in determining function, form, and systems and their impact on human conditions and behavior.

Source: (2009 Conditions for Accreditation - Final Edition 23).

### *Realm B: Integrated Building Practices, Technical Skills and Knowledge*

Realm B describes the technical aspects, systems and materials, their role in the implementation of design, and their impact on the environment.  This realm has twelve (12) learning aspirations that describe specific areas of learning as it relates to integrated building practices, technical skills, and knowledge:

1.    B1 – Pre-Design: *Ability* to prepare a comprehensive program for an architectural project, such as preparing an assessment of client and user needs, an inventory of space and equipment requirements, an analysis of site conditions (including existing buildings), a review of the relevant laws and standards and assessment of their implications for the project, and a definition of site selection and design assessment criteria.

2.    B2 – Accessibility: *Ability* to design sites, facilities, and systems to provide independent and integrated use by individuals with physical (including mobility), sensory, and cognitive disabilities.

3.    B3 – Sustainability: *Ability* to design projects that optimize, conserve, or reuse natural and built resources, provide healthful environments for occupants/users and reduce the environmental impacts of building construction and operations on future generations through means such as carbon-neutral design, bioclimatic design, and energy efficiency.

4.    B4 – Site Design: *Ability* to respond to site characteristics such as soil, topography, vegetation, and watershed in the development of a project design.

5.    B5 – Life Safety: *Ability* to apply the basic principles of life-safety systems with an emphasis on egress.

Realm B: *continued*

6.     B6 – Comprehensive Design: *Ability* to produce a comprehensive architectural project that demonstrates each student's capacity to make design decisions across scales with integrating the following SPC: A2 Design Thinking Skills: A4 Technical Documentation: A5 Investigative Skills; A8 Ordering Systems Skills; A9 Historical Traditions and Global Culture; B2 Accessibility; B3 Sustainability; B4 Site Design; B5 Life Safety; B8 Environmental Systems; and B9 Structural Systems.

7.     B7 – Financial Considerations: *Understanding* of the fundamentals of building costs, such as acquisition costs, project financing and funding, financial feasibility, operational costs, and construction estimating with an emphasis on life-cycle cost accounting.

8.     B8 – Environmental Systems: *Understanding* the principles of environmental systems' design such as embodied energy, active and passive heating and cooling, indoor air quality, solar orientation, daylighting and artificial illumination, and acoustics; including the use of appropriate performance assessment tools.

9.     B9 – Structural Systems: *Understanding* of the basic principles of structural behavior in withstanding gravity and lateral forces and the evolution, range, and appropriate application of contemporary structural systems.

10.     B10 – Building Envelope Systems: *Understanding* of the basic principles involved in the appropriate application of building envelope systems and associated assemblies relative to fundamental performance, aesthetics, moisture transfer, durability, and energy and material resources.

11.     B11 – Building Service Systems: *Understanding* of the basic principles and appropriate application and performance of building service systems such as plumbing, electrical, vertical transportation, security, and fire protection systems.

12.     B12 – Building Materials and Assemblies: *Understanding* of the basic principles utilized in the appropriate selection of construction materials, products, components, and assemblies, based on their inherent characteristics and performance, including their environmental impact and reuse.

Source: (NAAB 2009 Conditions for Accreditation - Final Edition 24).

### *Realm C: Leadership and Practice*

Realm C describes collaborative, business, and leadership skills. This realm has nine (9) learning aspirations that describe specific areas of learning as it relates to leadership and practice:

1.  C1 – Collaboration: *Ability* to work in collaboration with others and in multidisciplinary teams to successfully complete design projects.

2.  C2 – Human Behavior: Understanding of the relationship between human behavior, the natural environment and the design of the built environment.

3.  C3 – Client Role in Architecture: *Understanding* of the responsibility of the architect to elicit, understand, and reconcile the needs of the client, owner, user teams, and the public and community domains.

4.  C4 – Project Management: *Understanding* of the methods for competing for commissions, selection consultants and assembling teams, and recommending project delivery methods.

5.  C5 – Practice Management: *Understanding* of the basic principles of architectural practice management such as financial management and business planning, time management, risk management, mediation and arbitration, and recognizing trends that affect practice.

6.  C6 – Leadership: *Understanding* of the techniques and skills use to work collaboratively in the building design and construction process and on environmental, social, and aesthetic issues in their communities.

7.  C7 – Legal Responsibilities: *Understanding* of the architect's responsibilities to the public and the client as determined by registration law, building codes and regulations, professional service contracts, zoning and subdivision ordinances, environmental regulation, and historic preservation and accessibility laws.

8.  C8 – Ethics and Professional Judgment: *Understanding* of the ethical issues involved in the formation of professional judgment regarding social, political and cultural issues in architectural design and practice.

9.  C9 – Community and Social Responsibility: *Understanding* of the architect's responsibility to work in the public interest, to respect historic resources, and to improve the quality of life for local and global neighbors.

Source: (NAAB <u>2009 Conditions for Accreditation - Final Edition</u> 25).

## Appendix G: West Region Architectural Schools – Professional Practice

This appendix section is a continuation of the information collected from Appendix E: NAAB-Accredited First Professional Degree Programs.  Less the two architecture schools that did not provide online information on professional studies coursework (Arizona State University and the Frank Lloyd Wright School of Architecture at Taliesin), a review of the remaining twenty-four (24) West region NAAB-accredited architecture schools are provided in this section.  Note that four schools are duplicated in this exercise, because they offer both the B Arch and M Arch degree programs.  The four architecture schools are 1) California Polytechnic State University at Pomona, 2) NewSchool of Architecture and Design, 3) University of Southern California, and 4) University of Oregon.  Thus, on the following pages, Table 26: West Region Architectural Schools – Professional Practice Courses, it lists twenty (20) architecture schools and descriptions of the Professional Practice course(s) it offers.

A review of each school's Professional Practice course descriptions provided an overview and an understanding of the professional studies coursework offered in its curriculum.  It is important to realize if leadership is a learning objective currently being taught in architecture schools.  If any of the leadership concepts – *leadership, teamwork, collaboration,* and *relationships* – are used in the course description, then that particular Professional Practice course was highlighted as a leadership course in architecture.

These leadership courses are highlighted in light blue with the leadership concepts underlined in red-bold text, as shown on the following pages in Table 26: West Region Architectural Schools – Professional Practice Courses.

## Table 26: West Region Architectural Schools – Professional Practice Courses

Note: Course descriptions highlighted with concepts leadership, teamwork, collaboration, and relationships.

| No. | UNIVERSITY | DEGREE | COURSE No - COURSE DESCRIPTION (CREDIT/UNIT) |
|---|---|---|---|
| | **ARIZONA** | | |
| 1 | University of Arizona | B Arch | **459/559 - ETHICS & PRACTICE (2)**<br>The purpose of the course is to acquaint the advanced student in the professional program in architecture with the ethical and practical issues which the architect faces in professional practice.  The intent is to present these issues in such a way to assist the student in understanding the ethical commitment to self, client, and society at large that an architectural practice demands; to assist in planning for a student's initial employment; and to help students learn how to prepare professional practice plans for their future careers whether traditional or otherwise.<br><br>Source: (University of Arizona School of Architecture). |
| | **CALIFORNIA** | | |
| 2 | Academy of Art University | M Arch | **614 - ARCHITECTURAL PROFESSIONAL PRACTICES (3)**<br>This course exposes students to the business of conducting an architectural practice.  Emphasis is placed on understanding the licensing of architects, how professional architectural firms are organized and administered, methods of project management, agreements and contracts, fees and compensation, ethics, insurance, the land use process, and **relationships with consultants and contractors**.<br><br>Source: (Academy of Art University). |
| 3 | California College of the Arts | M Arch | **419 - PROFESSIONAL PRACTICE (N/A)**<br>This course covers the business of conducting an architecture practice and includes information on how professional firms are organized and administered, strategies for acquiring new clients, methods and project management, agreements and contracts, fees and compensation, ethics, and **relationships with consultants and contractors**.<br><br>Source: (California College of the Arts). |
| 4 | California Polytechnic State University, Pomona | B Arch<br>M Arch | **471 - ARCHITECTURAL PRACTICE (3)**<br>The administrative, legal, ethical aspects of the architectural profession and the relationship between profession and the construction industry.<br><br>10.    Source: (California Polytechnic State University at Pomona). |
| 5 | California Polytechnic State University, San Luis Obispo | B Arch | **443 - PROFESSIONAL PRACTICE (4)**<br>A critical analysis of the roles and responsibilities of the architect in providing comprehensive services to the client from project acquisition and inception to project delivery and closeout and the process and requirements for internship development and attaining registration.<br><br>Source: (California Polytechnic State University at San Luis Obispo). |

## Table 26: Professional Practice Courses *continued*

Note: Course descriptions highlighted with concepts leadership, teamwork, collaboration, and relationships.

| No. | UNIVERSITY | DEGREE | COURSE No - COURSE DESCRIPTION (CREDIT/UNIT) |
|---|---|---|---|
| | **CALIFORNIA** | | |
| 6 | NewSchool of Architecture and Design | B Arch, M Arch | **252 - INTRODUCTION TO PROFESSIONAL PRACTICE (1)**<br>This course provides an introduction to major areas of architectural practice such as: the responsibility and role of architectural profession in society; project organization and documentation; time and project management; and the phases of architectural services. A field trip to an architectural office allows students to examine and discuss professional practice issues with working architects.<br><br>**553 - PROFESSIONAL PRACTICE (2)**<br>The course explores areas related to the practice of architecture, including the architect's ethical responsibilities, role in society, organization and management of the firm, project organization & documentation, contracts and AIA documents, and approaches to personal, financial and risk management.<br><br>Source: (NewSchool of Architecture and Design). |
| 7 | Southern California Institute of Architecture | B Arch | **3050 - PRACTICE ENVIRONMENTS: CONTRACTS, LIABILITY, BUSINESS MODELS (N/A)**<br>The goal of this course is to provide students with a comprehensive knowledge of the perfectible craft of construction documentation, a standardization language developed to clearly communicate complex designs to a third party and the architect's legal responsibilities, including the AIA Code of Ethics and Regulations Statutes. Attention is place on student's understanding of registration law, building codes and regulations, professional service contracts, zoning and sub-division ordnances, environmental regulations and other licensure concerns. This class also introduces students to the basics of costs analysis and construction management.<br><br>Source: (Southern California Institute of Architecture). |
| 8 | University of California at Berkeley | M Arch | **107 - INTRODUCTION TO THE PRACTICE OF ARCHITECTURE (3)**<br>Introduction to the business of architecture including **client, developer, and contractor relations**, design proposals, competitions, and other marketing approaches as well as ethical issues of professional practice.<br><br>Source: (University of California at Berkeley). |
| 9 | University of California at Los Angeles | M Arch | **461 - ARCHITECTURAL PRACTICE (4)**<br>Historical development of profession; role of architect in contemporary society, current forms of practice and emerging trends. Contractual **relationships**, ethical responsibility, office management and promotion.<br><br>Source: (University of California at Los Angeles). |

## Table 26: Professional Practice Courses *continued*

Note: Course descriptions highlighted with concepts leadership, teamwork, collaboration, and relationships.

| No. | UNIVERSITY | DEGREE | COURSE No - COURSE DESCRIPTION (CREDIT/UNIT) |
|---|---|---|---|
| | **CALIFORNIA** | | |
| 10 | University of Southern California | B Arch, M Arch | **525 - PROFESSIONAL PRACTICE: PRE-DESIGN, PROJECT & OFFICE ADMINISTRATION (3)** Design methodology, typology programming, site analysis, budget formulation and pro-forma procedures.  Office management, emphasizing professional service and professional ethics as well as project management focusing on the architect's responsibilities. <br><br>**526 - PROFESSIONAL PRACTICE: PRE-DESIGN, PROJECT & OFFICE ADMINISTRATION (N/A)** The laws and regulations that affect the practice of architecture and building economics and the development of comprehensive project documentation, detailing, specifications, drawing formats and organizations. <br><br>Source: (University of Southern California). |
| 11 | Woodbury University | B Arch | **250 - PROFESSIONAL PRACTICE 1: DOCUMENTATION AND CODES (3)** Legal codes and regulations that affect architecture and influence design are reviewed, including a study of energy, accessibility, egress, and life-safety. The development of project documentation based on local codes is studies, with an emphasis on technical documentation, drawing format organization and outline specifications. <br><br>**448 - PROFESSIONAL PRACTICE 2: RESEARCH & PRE-DESIGN (3)** Theory and techniques for analyzing and integrating design methodologies, client or user needs, and site conditions into criteria for preparing for an architectural project are studied.  The theoretical and practical context for the degree project is researched and developed.  Along with the completion of a substantiated written position of intent, a project site is selected, program written and design methodology articulated. <br><br>**450 - PROFESSIONAL PRACTICE 3: DOCUMENTS & PROJECT ADMINISTRATION (3)** Design delivery and project and firm management are studied, including understanding the client role in architecture, program preparation, an analysis of documents, services, professional contracts and fees, project budget and cost estimating, global markets, and professional ethics. <br><br>Source: (Woodbury University). |
| | **COLORADO** | | |
| 12 | University of Colorado at Denver/Boulder | M Arch | **4005 - DESIGN & PLANNING LAW (3)** Teaches students how to research the various codes and to draft laws. Covers environmental, water quality, property, zoning, and building codes. <br><br>**4365 - SPECIAL TOPICS: TECHNOLOGY AND PRACTICE (1)** Provides an advanced seminar on new technologies and issues of professional practice in the environmental design professions. <br><br>Source: (University of Colorado at Denver/Boulder). |

## Table 26: Professional Practice Courses *continued*

Note: Course descriptions highlighted with concepts leadership, teamwork, collaboration, and relationships.

| No. | UNIVERSITY | DEGREE | COURSE No - COURSE DESCRIPTION (CREDIT/UNIT) |
|---|---|---|---|
| | **HAWAI'I** | | |
| 13 | University of Hawai'i-Mānoa | D Arch | **200 - PROFESSIONAL PRACTICE OF ARCHITECTURE (3)** Investigation of disciplines that address contemporary transformative issues. Emphasis on the role of architecture and the **use of multi-disciplinary and collaborative** methods to address critical issues.<br><br>**433 - PROFESSIONAL PRACTICE, LAW AND ETHICS (3)** Exploration of the practice of architecture including: professionalism; office organization and administration; **public, client, consultant, and other contractor relations**; project administration, procedure and compensation; construction law and contract administration.<br><br>Source: (University of Hawai'i-Mānoa School of Architecture "Architecture Courses"). |
| | **IDAHO** | | |
| 14 | University of Idaho | M Arch | **575 - PROFESSIONAL PRACTICE (3)** The architect's duties and responsibilities in practice (construction documents and contracts), project supervision, office administration, and comprehensive services; specification writing, unit costs, and building estimation.<br><br>Source: (University of Idaho). |
| | **MONTANA** | | |
| 15 | Montana State University | M Arch | **313 - PROFESSIONAL PRACTICE (3)** Architecture as a social practice, emphasis includes developmental strategies: political, managerial, legal, economic, **interdisciplinary teams, community teams and client relations**. Topics include marketing, business planning, project management, delivery methods, technology, regulation, accessibility and trends of practice.<br><br>Source: (Montana State University). |
| | **NEVADA** | | |
| 16 | University of Nevada-Las Vegas | M Arch | **756 - DESIGN PRACTICE MANAGEMENT II (3)** Investigation of professional management and organizational issues in the practice of architecture including project delivery, strategic business and financial planning.<br><br>Source: (University of Nevada-Las Vegas). |
| | **OREGON** | | |
| 17 | University of Oregon | B Arch, M Arch | **417/517 - CONTEXT OF THE PROFESSION (N/A)** This course is an introduction to the professional practice of architecture and related careers. Through projects and presentations students learn about the legal and regulatory environment, firm organization and management, marketing and contractual issues and the construction process.<br><br>Source: (University of Oregon). |

**Table 26: Professional Practice Courses** *continued*

Note: Course descriptions highlighted with concepts leadership, teamwork, collaboration, and relationships.

| No. | UNIVERSITY | DEGREE | COURSE No - COURSE DESCRIPTION (CREDIT/UNIT) |
|-----|------------|--------|----------------------------------------------|
| | **UTAH** | | |
| 18 | University of Utah | M Arch | **6700 - ARCHITECTURAL PRACTICE AND PHILOSOPHY I (1.5)** Project Management **6702 - ARCHITECTURAL PRACTICE AND PHILOSOPHY II (1.5)** Client Services **6720 - PROJECT FINANCE AND ECONOMICS (1.5)** Interrelationship between economics and design that directly affects the role of architects and their services. Source:(University of Utah). |
| | **WASHINGTON** | | |
| 19 | University of Washington | M Arch | **573 - PROFESSIONAL PRACTICE (3)** Operation of an architectural office and professional practice. **577 - ETHICAL PRACTICE (3)** Helps students develop ethical reasoning skills. Examines the sociology of professional practice. Source: (University of Washington). **576 - COMMUNITY LEADERSHIP PRACTICES (4)** Examines how to facilitate community design processes. Explores theories and methods of participation and applies them to creating community visioning tools. These tools are put to use during the spring charrette when city officials, neighborhood residents, K-12 students, and others create a shared vision for their community. Source: (University of Washington). |
| 20 | Washington State University | M Arch | **573 - ETHICS AND PRACTICE (3)** Ethical and professional practice issues related to the business and practice of architecture; investigations into marketing client and business orientation. Source: (Washington State University). |

We discovered through a review of each of these school's current online course catalogs and course descriptions that a total of seven (7) degree programs (out of the twenty-four (24) programs considered in this exercise) offer a Professional Practice course with a focus on learning leadership in architecture. It appears then that in the West region, 29% of the NAAB-accredited first professional degree programs offer leadership as a learning objective in architectural education.

## Appendix H: Overview of Leadership Theory

According to Bass and Stogdill's *Handbook of Leadership*, the word leader appeared in the English language in 1300 (Bass). Since then, hundreds of books and literature is devoted to the topic of leadership, and still leadership is not completely understood as its definitions are many and continuously evolving through the decades of scholarly research. "There are almost as many definitions of leadership as there are leadership theories" (Antonakis, Cianciolo and Sternberg 5; Bass 11). Northouse noted, "Despite the abundance of writing on the topic, leadership has presented a major challenge to practitioners and researchers interested in understanding the nature of leadership. It is a highly valued phenomenon that is very complex" (10).

Many scholars who have researched and made contributions to the study of leadership have been influenced by the historical movements that have influenced leadership literature. These movements include the "great man" theory from the mid 1800s to the early 1900s, trait theory in the 1940s and 1950s, behavior theory in the 1950s and 1960s, situational theory in the 1960s and 1970s, transformational theory in the 1990s, and relational/emotional theory of this decade (Bass; Komives, Lucas and McMahon; Northouse; Rost).

### *Great Man Theory*

The "great man" leadership theory of the 19th century assumed that men, and only men, were born with natural abilities of power and influence, and was in essence, based on a matter of heredity (Bass 37; Komives, Lucas and McMahon 35). Historically, scholars identified exceptional individuals of greatness, who helped to shape the course of history or were viewed as heroes from the masses. The "great man" theory earned its name, because research on leaders at that time focused on individuals who had achieved greatness (Daft).

### *Trait Theory*

The trait leadership theory, according to Bass, stated that "if the leader is endowed with superior qualities that differentiate him from his followers, it should be possible to identify these qualities," and out of this assumption, trait theories of leadership were studied (38). Komives et al. concluded that the trait theory supposes that leaders are born with exceptional traits, possess a natural ability to lead, and have superior qualities and characteristics that differentiate them from followers (38). Scholars focused

on identifying traits, characteristics, and qualities that differentiated leaders from non-leaders.  Certain traits associated with leadership were consistently identified, such as intelligence, dominance, self-confidence, determination, integrity, and sociability (Antonakis, Cianciolo and Sternberg 6; Bass 59; Northouse 35).

### *Behavior Theory*

As described by Northouse, the behavior theory "suggests that leaders engaged in two primary types of behaviors: task behaviors and relationship behaviors" (Northouse 87).  Behavior leadership theory "focused on the behaviors that leaders enacted and how they treated followers," studying the interaction between leaders and the teams they influenced, particularly the behavioral exchange (Antonakis, Cianciolo and Sternberg 7).

### *Situational Theory*

Situational theory stated that "the leader is the product of a situation" and suggested to be successful, leaders must vary their approach depending on the situation (Bass 38; Komives, Lucas and McMahon; Northouse).  Within the situational theory, two styles of leadership are recognized: task motivated, in which leaders are most concerned with goal attainment, and relationship motivated, in which leaders concentrate on developing interpersonal relationships (Northouse).

### *Transformational Theory*

Transformational theory, according to Burns, is a transforming process in which "leaders and followers raise one another to higher levels of morality and motivation" (Burns 20).  Leaders are recognized adapting to the needs and motives of the followers, and who empowers the followers to meet higher standards (Northouse).  "It has strong intuitive appeal, it emphasizes the importance of followers in the leadership process" and includes the personal growth of the followers (Northouse 234).

### *Relational Theory*

Komives et al. view leadership "as a relational process of people together attempting to accomplish change or make a difference to benefit the common good" (68).  They believed that leadership is a relational process and that it is accomplished within a context of relationships.

# Appendix I: The Practicum Studio Executive Summary

UNIVERSITY OF HAWAI'I AT MANOA
School of Architecture

## THE PRACTICUM STUDIO: EXECUTIVE SUMMARY

### A. Introduction

The University of Hawai'i School of Architecture (SoA) Practicum Studio is designed to provide supervised, practical application of academic knowledge within an office setting to equip students to become leaders in the practice of architecture in a global community. Principal architects of Hawaii, the continental United States, and/or Asia Pacific firms teach the two-studio (one studio per semester) sequence.

### B. Practicum Studio Master Plan

*Approaches*

The Practicum Studio systematically links *Practical Experience, Scholarly Pursuit,* and *Professional/Community Service*. This linkage provides an exceptional opportunity for exploration, development, and demonstration of basic architectural proficiencies and research methodologies, leadership skills and personal character, and to thoroughly explore the interrelationship between theoretical knowledge and its real-life application.

*Practical Experience*

- Six to eight basic proficiency areas are explored each semester, in addition to one week each of orientation and evaluation activities
- Practical experience is gained either through directly participating in an architectural activity—the preferred method—or by observing and assisting professionals engaged in the activity

*Scholarly Pursuit*

This area includes a variety of structured activities, some formal and some self-directed, including:
- Scholarly assignments related to the basic proficiency areas
- Semester-long comprehensive research project or architectural case study
- Consultations with Practicum and SoA Faculty
- Presentations, seminars, lectures, or other distance learning activities on topics relevant to the Practicum
- Discussion of readings from a list of books, professional journals, and other periodicals and publication

*Service*

To instill the value of service as an important personal and professional contribution, a minimum of 30 hours of semester-long involvement in professional or community service is required. This activity should be a sustained involvement that allows students to participate in community, educational or professional service activities and engage in the culture of the locale.

## Practicum Studio Executive Summary: *continued*

### Studio Focus

Each 18-week semester studio concentrates on a group of related basic proficiencies—Studio A on Project Definition and Studio B on Project Execution. Both explore office and project management procedures and techniques of the host firm, allowing students to experience alternative management perspectives. The studios may be taken in either order, but both are required.

Studio Focus Chart

| Wk | Unit | Studio A—Project Definition Sequence | Unit | Studio B—Project Execution Sequence |
|---|---|---|---|---|
| 1 | AO | Orientation | BO | Orientation |
| 2-3 | A1 | Office Management | B1 | Office Management |
| * | A2 | Project Management | B2 | Project Management |
| * | A3 | Programming | B3 | Design Development |
| * | A4 | Site and Environmental Analysis | B4 | Construction Documents |
| * | A5/3 | Schematic Design/ Design Development | B5 | Specifications and Materials Research |
| * | A6 | Engineering Systems Coordination | B6 | Document Checking and Coordination |
| * | A7 | Building Cost Analysis | B7 | Construction Procurement |
| * | A8 | Code Research | B8 | Construction Contract Administration— Office & Field |
| 2-17 | AS | Professional or Community Service (throughout semester) | BS | Professional or Community Service (throughout semester) |
| 2-17 | AP | Semester-long Comprehensive Project (Design Research Project or Architectural Case Study) | BP | Semester-long Comprehensive Project (Design Research Project or Architectural Case Study) |
| 18 | AE | Evaluation | BE | Evaluation |

\*     *Indicates Unit duration range of one to four weeks*

### C.    Time Requirements and Relationship to the Intern Development Program (IDP)

An important Practicum Studio benefit is the opportunity for students to gain high quality, valuable credit toward fulfilling the IDP requirement of most US states and territories. The Studio's emphasis on scholarly assignments related to practical experience, however, makes it more than just IDP. The Practicum is structured to meet the minimum IDP training requirement of 35 hours per week and requires that scholarly assignments and service activities of 35 minimum additional hours per week occur after business hours. The dual nature of this experience requires that the distinction between training and scholarly activities be clearly understood and appropriately documented.

Criteria which underlie the practical experience portion of the Practicum Studio were developed with input from NCARB to connect as much as possible with current IDP training areas and core competencies. Students enrolled in the Practicum Studio who desire eventual US architectural licensure must establish an NCARB Council Record to officially document their Practicum Studio training experience.

## Practicum Studio Executive Summary: *continued*

### D.   Program Delivery Overview

The Practicum utilizes a variety of experiences and interactions to address leadership learning, and makes use of state-of-the-art communication and collaboration tools and techniques suited not only to the Practicum experience, but also to future global practice.

- **Semester-long programs in Hawaii, US mainland and/or international Practicum Firms** — students train and study basic proficiencies in two different firms to experience diverse geographic and political locales, cultures, practice settings, and practice approaches
- **Training in the basic proficiencies in the firm augmented by supplemental scholarly study** — investigation, reflection, and critical thinking activities are integrated to reinforce training assignments and other office activities, structured scholarly modules address a variety of topics including time management, organization, and professional responsibility
- **Firm principals, who are licensed practitioners, serve as Practicum Faculty** — principal architects guide students in professional attitudes and behavior, as well as skills, from a position of leadership within their firms, communities, and profession *(acting as teachers, NOT employers)*
- **Firm members, with a particular area of expertise, serve as Unit Mentors** — guidance and daily supervision in the basic proficiency units are provided by Practicum Faculty or designated staff who are experts in a particular area of service delivery or management
- **Group interaction with other Practicum participants and SoA** — distance communication and learning techniques are utilized to explore issues relevant to scholarly modules while allowing interaction with SoA on-campus students and Practicum participants in other firms
- **Individual interaction between Practicum Students in different locales** — experiences are shared with students in different, but parallel, situations
- **Individual communication with SoA Instructor** — Instructor provides counsel, monitors progress, and evaluates the Student's accomplishments for the final course grade

### E.   Summary

The Practicum Studio is a key component of the SoA's mission to "be the center for the study of Asia Pacific architecture, committed to the aggressive pursuit and establishment of the knowledge base for this regional architecture…" It provides students with first hand exposure and experience with professional responsibilities, opportunities, and comprehensive skills to support development of their professional leadership abilities.

Students have the opportunity — and are challenged — to integrate scholarly learning with the basic proficiencies required for practice as licensed architects, on both a technical and an ethical level. Students also gain an understanding of the concepts and principles underlying contemporary architectural practice in a global community, especially in the Asia Pacific region. The Practicum Studio provides the student with a foundation for making informed and more focused career choices.

Source: (School of Architecture The Practicum Studio: Executive Summary).

## Appendix J: Lived Experiences – Team Structure

For lived experience #1 (Architectural Design Studio), the students were given free reign to assign themselves to teams of four or five members. As shown in Table 27: Lived Experience #1 below, the team was comprised of five (5) fifth-year architecture students:

### Table 27: Lived Experience #1 Architectural Design Studio – Team Structure

| | |
|---|---|
| ▪ Annette | 5th Year Female Architecture Student |
| ▪ Anthony | 5th Year Male Architecture Student |
| ▪ Derrick | 5th Year Male Architecture Student |
| ▪ Brett | 5th Year Male Architecture Student |
| ▪ Phyllis | 5th Year Female Architecture Student |

Note: The names of the actual team members have been changed.

For lived experience #2, (AIAS student organization), the AIAS Hawai`i Chapter leadership was governed by a five-student member Executive Council, comprised of elected student Officers. As shown below in Table 28: Lived Experience #2, the team structure was comprised of one (1) fourth-year architecture student and four (4) fifth-year architecture students:

### Table 28: Lived Experience #2 Student Organization – Team Structure

| | |
|---|---|
| ▪ President | 5th Year Female Architecture Student (2-year term) |
| ▪ Vice President/President-Elect | 4th Year Female Architecture Student (2-year term) |
| ▪ Corresponding Secretary | 5th Year Female Architecture Student (1-year term) |
| ▪ Recording Secretary | 5th Year Female Architecture Student (1-year term) |
| ▪ Treasurer | 5th Year Male Architecture Student (1-year term) |

For lived experience #3 (IMI Masonry Camp), Masonry Camp brought together approximately forty camp participants: architectural interns and craftworkers (also referred to as mason apprentices). We were divided up into five (5) teams of eight (8) members each. I was a member on the Orange Team. As shown on the following page in Table 29: Lived Experience #3, the Orange Team was comprised of four (4) architectural interns and four (4) mason apprentices:

**Table 29: Lived Experience #3 Masonry Camp – Team Structure**

| | |
|---|---|
| ▪ Jennifer | Female Architectural Intern |
| ▪ Annette | Female Architectural Intern |
| ▪ Mark | Male Architectural Intern |
| ▪ Craig | Male Architectural Intern |
| ▪ Trina | Female Mason Apprentice (brick layer) |
| ▪ Robert | Male Mason Apprentice (marble/tile setter) |
| ▪ David | Male Mason Apprentice (brick layer) |
| ▪ Chris | Male Mason Apprentice (brick layer) |

Note: The names of the actual team members have been changed.

For lived experience #4 (Practicum Studio "A"), the Payette team was comprised of eleven (11) individuals: two (2) Principals, three (3) middle management individuals, five (5) designers, and one (1) Practicum Student, as shown below in Table 30: Lived Experience #4.
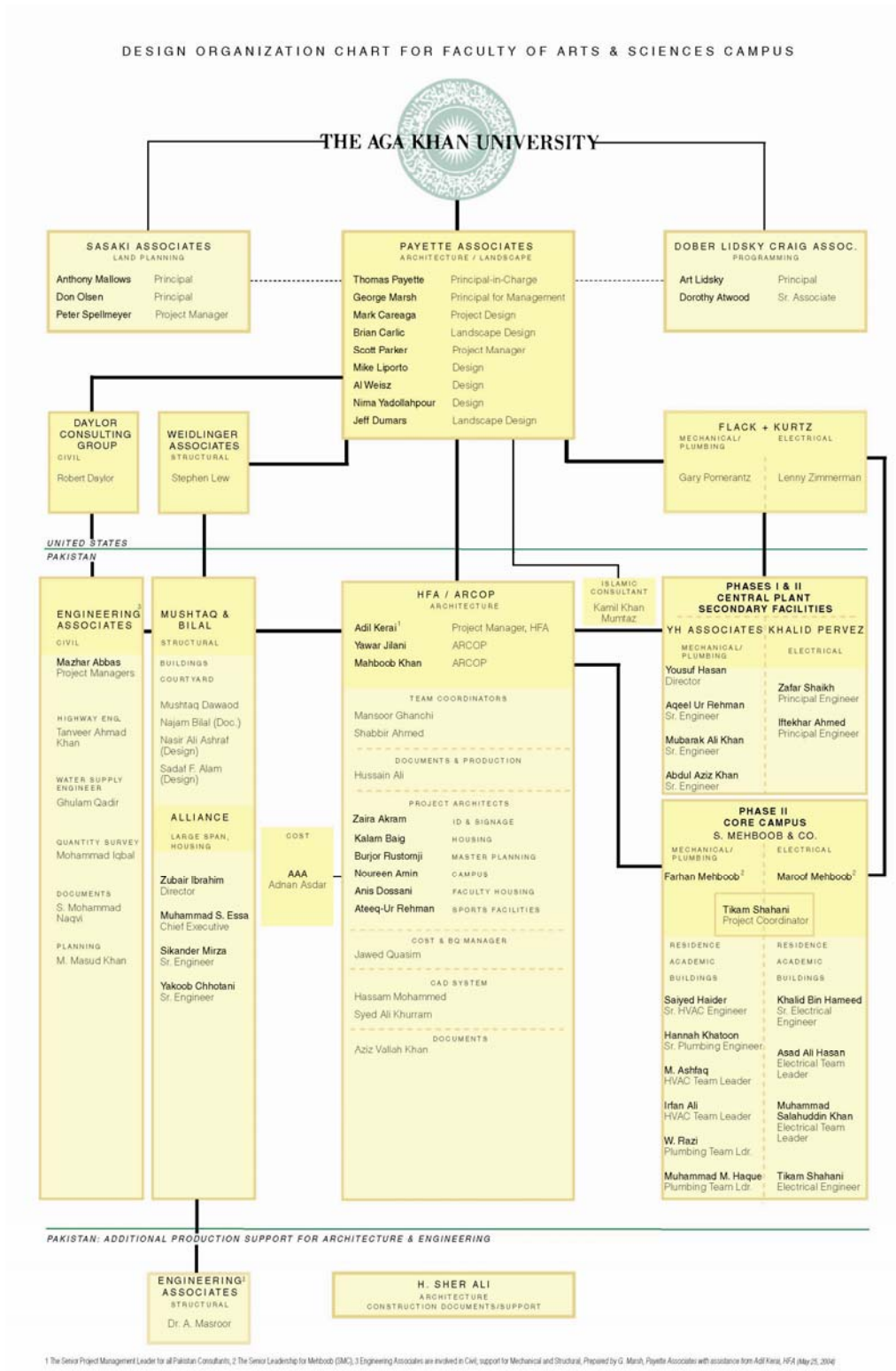
**Table 30: Lived Experience #4 Practicum Studio "A" – Team Structure**

| | |
|---|---|
| ▪ Thomas M. Payette, FAIA | Principal-in-Charge |
| ▪ George E. Marsh Jr., AIA | Accounts Managing Principal (Principal in Management) |
| ▪ Scott D. Parker, AIA | Project Manager, Associate Principal |
| ▪ Mark Careaga | Project Design, Associate |
| ▪ Brian Carlic, ASLA | Project Landscape Designer |
| ▪ Daniel Gorini, AIA | Architectural Designer |
| ▪ Mike Liporto | Architectural Designer |
| ▪ Al Weisz | Architectural Designer |
| ▪ Nima Yadollahpour | Architectural Designer |
| ▪ Jeffrey Dumars | Landscape Designer |
| ▪ Annette B. Salvador | SOA Practicum Student |

Source: (Salvador "Practicum A: Project Team Meeting Notes").

On the following page, Figure 28 is an organizational chart for the AKUFAS project. This shows the multiple layers of smaller teams within a larger team. As the primary consultant to the Aga Khan University, Payette Associates was in the leadership position to manage and maintain the collaborative efforts and relationships of the *entire* team.

## Figure 28: Design Organization Chart for the AKUFAS Project



Source: (Payette Associates <u>The Aga Khan University Faculty of Arts and Sciences Campus Master Plan and Design</u>)

For lived experience #5 (Practicum Studio "B"), PageSoutherlandPage assembled a project team of leading planning, real estate, development, marketing, and financial professionals.  As shown in Table 31: Lived Experience #5 below, the overall team structure was comprised of five smaller teams that included 1) Client, 2) Procurement Authority, 3) Accepting Authority, 4) Architect, and 5) Project Team.  The PSP Architect Team is comprised of five individuals, as listed under Architect below.

**Table 31: Lived Experience #5 Practicum Studio "B" – Team Structure**

| | |
|---|---|
| ▪ CLIENT (User) | Citizens of the City of Friendswood |
| ▪ PROCUREMENT AUTHORITY | City of Friendswood (local government)<br>     Honorable Kimball Brizendine, Mayor<br>     Ron Cox, City Manager |
| ▪ ACCEPTING AUTHORITY | Main Street Steering Committee<br>     Karen Capps, Economic Development Director<br>     Tony Banfield<br>     Bill Finger<br>     Carol Jones<br>     Christal Kliewer<br>     Diana Steelquist |
| ▪ ARCHITECT | PageSoutherlandPage<br>     Lewis May, FASLA, Director of Planning, Principal in Charge<br>     Kurt Neubek, FAIA, Director of Strategic Consulting, Principal<br>     Verrick D. Walker, Ph.D., Programmer/Planner, Intern<br>     Ricardo Lozano, Designer/Planner, Intern<br>     Annette B. Salvador, SOA Practicum Student |
| ▪ PROJECT TEAM<br>(Directed by Architect) | CDS Market Research (Marketing) Kent Dussair<br>Crosswell-Torian (Real Estate Investment) Ned Torian<br>Goswick Marketing (Marketing) David Goswick<br>M2 Consulting (Real Estate Development) Monique McGilbra<br>Spillette Consulting (Urban Development) Steve Spillette<br>Walter P. Moore (Civil Engineering) David Finklea, P.E.<br>William L. Peel, Jr., Consultant (Real Estate Development) Bill Peel, Jr. |

Source: (Salvador "Practicum Studio B: Friendswood Project Team Meeting Notes").

## Appendix K: Summary of Mentorship Conference

Note: This form was utilized for the Practicum Studio at the UH Mānoa SOA.



Source: (Salvador "Summary of Mentorship Conference").

## Appendix L: Questionnaire for Practicum Firms: Faculty Mentors

Note: This form was electronically submitted to the Spring 2006 SOA Practicum Faculty.

## Questionnaire for Practicum Firms: Faculty Mentors

24 January 2006

By: Annette B. Salvador, Architecture Doctorate Degree Candidate
School of Architecture, University of Hawaii-Manoa

1.      What does "leadership in architecture" mean to you?

Reply #1

2.      As a firm leader, how do you identify persons within your firm who demonstrate
        emerging leadership potential?

Reply #2

3.      What strategies do you as a firm leader employ to develop these emerging leaders within the
        project teams and/or firm?  How do you encourage leadership development?

Reply #3

4.      Outside of your practice, do you engage within the profession and/or public community?
        If yes, describe a position or an activity that demonstrates your active engagement.

Reply #4

5.      List at least 3-5 leadership qualities and/or group skills significantly important for architecture
        students (and young architects) to learn and develop when collaborating in project teams.

Reply #5

Last Name              email
First Name
Title

Thank you for your time and responses.
Please submit completed form via electronic mail to: salvad@hawaii.edu.                    Submit by Email

Source: (Salvador "Electronic Questionnaire for Practicum Faculty Mentors").

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