The Redesign of Studio Culture

A Report of the AIAS Studio Culture Task Force

The American Institute of Architecture Students

AIAS Studio Culture Task Force

Aaron Koch
Katherine Schwennsen, FAIA
Thomas A. Dutton
Deanna Smith

The Redesign of Studio Culture

A Report of the AIAS Studio Culture Task Force

December 2002

Introduction

Those who have studied architecture undoubtedly have vivid memories that characterize their design studio experience. Late nights, exciting projects, extreme dedication, lasting friendships, long hours, punishing critiques, unpredictable events, a sense of community, and personal sacrifice all come to mind. Those aspects are not usually written into the curriculum or even the design assignments, but they are likely the most memorable and influential. The experiences, habits, and patterns found within the architecture design studio make up what we have termed "studio culture."

Design studio teaches critical thinking and creates an environment where students are taught to question all things in order to create better designs

The design studio lies at the core of architectural education. In architecture schools, studio courses command the most credit hours, the largest workloads, the most intensive time commitment from educators and students, and supreme importance. Studio courses are intended as the point of integration for all other coursework and educational experiences. Accordingly, it is natural for studio courses and their environments to create their own culture. However, this culture too often becomes an all-consuming aspect in the lives of students.

Design studio teaches critical thinking and creates an environment where students are taught to question all things in order to create better designs. Critical questioning is encouraged, visionary schemes are rewarded, and design-thinking serves as the base for exploration. In this spirit, the Studio Culture Task Force of the American Institute of Architecture Students releases the following report: to offer a critique on the current practices in design studio education.

To analyze current studio practices, we have attempted to frame this examination much like a design problem. To address the critical issues facing architectural education, we must do what we do best: research, examine, critique, determine roles, and design.

it is natural for studio courses and their environments to create their own culture. However, this culture too often becomes an all-consuming aspect in the lives of students

The first part of this report, *Studio Culture Critiqued*, explores the current state of studio education, examines outside forces impacting architecture education, and calls for change in studio culture. *Describing Studio Culture* analyzes the historical roots of studio culture, states a series of myths prevalent within studio education, and discusses other elements that characterize this culture. In the section titled *Current Aspects of Studio Culture*, we provide a more in-depth commentary on twelve topics that we feel most be questioned in order to design a more successful studio culture. *New Visions, Shared Values* proposes five values, *Optimism, Respect, Sharing, Engagement, and Innovation* which we believe could serve as the foundation for necessary change. In the portion titled, *A Call to Action*, we have suggested roles that students, educators, administrators, and organizations can play in shaping a new future for architecture education. A *New Program for the Design of Studio Culture* lists a number of goals that can be embraced in creating change. Finally, the *Afterward* section includes a description of the process of the Studio Culture Task Force's efforts, acknowledgements to essential individuals, and a list of works cited.

As with any design problem, we must begin by identifying the roots of studio culture. How did we get to this point? What critical issues must we address? What context must we work within? What are the values that will guide future change? How can we accomplish desired results?

Studio Culture Critiqued

Throughout the years, educators, administrators, and universities have designed the curriculum, learning objectives, and the environments in which studio education is taught. These design decisions were made to create certain desirable outcomes in the development of students. We believe the use of design studios is an excellent educational model, and a number of scholars have documented this belief (Schön, 1983; Boyer and Mitgang, 1996). At its best, studio learning has many strengths. Few other disciplines have courses with such direct one-on-one interaction between faculty and students, whereby students receive immediate feedback on their work. The studio model offers tremendous potential for creative discovery, exploration of ideas, critical discussions, and risk-taking. As one faculty member suggested in his response to the our call for perspectives, "Promoting and supporting critical and synthetic thinking, exploring the relationship between the built environment and the larger cultural context, the ability to create amidst uncertainty, the joy of making, the rewards of building one's own sensibility as a designer, opportunities for collaboration and working with 'real life' situations are just a few attributes of successful design studios."

Our task force believes in the potential of the studio model in architectural education. We admit that we could produce an entire report focusing on the great values and strengths of studio learning. However, that is not the focus of our efforts. Our goal is to question aspects that we believe must be examined in order to strengthen studio culture.

one thing is clear: studio culture must change. We believe that change must begin now

The studio model has its own culture and values that are as influential in a student's education as the actual projects they complete. In many cases, the habits and patterns exhibited in this culture are not the intentional product, but a byproduct. These byproducts can be very positive, but they can also produce harmful results. Many scholars, like Thomas Dutton and Kathryn Anthony, have called the consequences of this culture the "hidden curriculum" of studio learning. In simple terms, the hidden curriculum refers to those unstated values, attitudes, and norms that stem from the social relations of the school and classroom as well as the content of the course (Dutton, 1991). Habits and culture are passed on throughout the years, and patterns are built upon generations of students, educators, and practitioners.

Throughout this century, design studio culture has largely remained the same. In fact, one of the roles of a culture is resistance to change (Fisher, 2000). At the very least, the changes that have occurred do not begin to keep pace with the changing nature of the world or the changing context of architecture practice. There are more changes than we could publish in a report, but we can say that the world is becoming more complex, boundaries are eroding, information is flowing faster, and globalization is a part of our everyday vocabulary. This directly affects studio culture.

Change is needed to produce healthier, more optimistic, and more engaging architecture school graduates

More specifically, architecture practice is undertaking large transformations. New technologies affect the way spaces are designed, construction documents are produced, and even the methods of building fabrication. Clients are demanding, and architects are delivering, an expanding set of services. In addition to traditional design and construction administration, architecture firms are offering services in business consulting, strategic planning, real estate development, web site design, and facility management, to name a few. The world of construction has also changed the options for delivering projects to clients. Design/build agreements with contractors are impacting the role and control that architects have on the entire design process. Through it all, the cultural values of architecture studios have largely withstood change.

Nevertheless, one thing is clear: studio culture must change. We believe that change must begin now.

Change is needed to produce healthier, more optimistic, and more engaging architecture school graduates. Change must occur to proactively address the changes in the world and practice. Change must happen to elevate the value of architectural education. This change is crucial for members of our discipline to increasingly serve communities and lead in the creation of the built environment.

Describing Studio Culture

Attempting to define a culture is never an easy thing to do. It is especially difficult to define studio culture, but we can learn a lot from describing it. Each design studio, each architecture program, and each school has a different culture. These differ from each other in significant ways. The discipline of architecture takes great pride in the diversity of its programs and teaching methodologies that exist at over 115 schools within the United States alone. Despite this great diversity, there are uniform patterns of behavior that transcend each program.

Perhaps nothing is more revealing of studio culture than the actions of its students to promote this culture.

How has this seemingly uniform studio culture formed? One method of getting at the answer is by examining the historical roots of design education. Many scholars and historians have documented the history of architectural education. It is commonly understood that prior to the mid 19th-century, architects were not educated in colleges or universities. Architectural education existed as an apprentice system where aspiring architects would serve under the guidance of an experienced architect. With the advent of the Ecole des Beaux Arts in Paris in 1850, a formal architectural education model developed. As many Americans graduated from the Ecole and returned to the U.S., they imported the philosophies to the first American schools, such as MIT and Columbia University. By the turn of the 20th-century, most schools had Beaux Arts-trained professors, and the pedagogies of the Ecole were dominant (ACSA, p. 1).

There were many other influences on architecture programs as they evolved throughout the early 20th century. As exists today, each campus had different conditions and cultural factors that impacted the evolution of each architecture program. However, with the advent of Modernism, American architecture schools were greatly impacted. The Bauhaus, the German architecture school that only lasted from 1919 until 1933, had a large impact on American education when many of its instructors immigrated from Nazi Germany. Most notably, Walter Gropius went on to serve as the head of the architecture school at Harvard University and Mies van der Rohe become the head of the architecture school at the Illinois Institute of Technology (ACSA, pp.1-2).

Studio culture can also be characterized by the myths it perpetuates. These myths influence the mentality of students and promote certain behaviors and patterns

The fundamental ideas embedded within these primary influences have shaped and sustained studio culture. Thomas Fisher, in an essay entitled, "Critiquing the Design Culture," analyzed the larger philosophies that serve as the base for studio learning (Fisher, 2000). In his analysis of the influence of the Ecole des Beaux Arts and the Bauhaus, Fisher states:

> Studio culture pedagogy originates, in part, from 18th and 19th century French rationalism, which held that through the analysis of precedent and the application of reason we could arrive at a consensus about the truth in a given situation. This rationalism underlays the teaching methods of the Ecole des Beaux Arts, brought to the first schools of architecture in the United States by architects such as William Ware and Richard Morris Hunt…. Many of the features of today's design studio – the unquestioned authority of the critic, the long hours, the focus on schematic solutions, the rare discussion of users or clients – were begotten by that 150 year-old system (pp. 69-70).

> Overlaying this rational French tradition in the architectural culture is an idealistic German one…. The attention paid to star designers, the focus on current styles, the striving for freedom from constraints, the historicist nature of architectural theory, and the tendency to polarize education and practice all echo the Hegelian beliefs that history moves through the work of a few great individuals, that every period has its characteristic styles, that history is moving towards maximizing the freedom of every person, and that cultures progress by a process of synthesizing polarities (p. 70).

Studio culture can also be characterized by the myths it perpetuates. These myths influence the mentality of students and promote certain behaviors and patterns. The following are myths that prevail within many design studios if not within every school:

- Architectural education should require personal and physical sacrifice
- The creation of architecture should be a solo, artistic struggle
- The best students are those who spend the most hours in studio
- Design studio courses are more important than other architecture or liberal arts courses
- Success in architecture school is only attained by investing all of your energy in studio
- It is impossible to be a successful architect unless you excel in the design studio
- Students should not have a life outside of architecture school
- The best design ideas only come in the middle of the night
- Creative energy only comes from the pressure of deadlines
- The best design ideas only come in the middle of the night
- Creative energy only comes from the pressure of deadlines
- Students must devote themselves to studio in order to belong to the architecture community
- Collaboration with other students means giving up the best ideas
- It is more important to finish a few extra drawings than sleep or mentally prepare for the design review
- It is possible to learn about complex social and cultural issues while spending the majority of time sitting at a studio desk
- Students do not have the power to make changes within architecture programs or the design studio

We believe that these myths, in particular, should be ideas of the past. Embracing the ideas encompassed within these myths is sure to lead to emotional, physical, and cultural deprivation.

Perhaps nothing is more revealing of studio culture than the actions of its students to promote this culture. Issues of studio culture are commonly made into items that students use to create humor. From time to time, students will even forward emails to each other detailing "101 Ways to Know You Are an Architecture Student." At the top of one list are, "you know all of the 24 hour food places by heart", "you spend your Friday nights in studio", and "you slice your finger and the first thing you think

about is whether you'll be able to finish your model." If you walk through any architecture school, it is common to see students in t-shirts proclaiming slogans such as, "Architects do it all night long." Why do architecture students so proudly display these aspects of studio culture to friends, families, and others on campus?

All of these myths and byproducts reinforce Fisher's notion about the fraternity aspect of studio, as described in his 1991 editorial, "Patterns of Exploitation." A component of this fraternity aspect is the reputation that non-architecture students hold of architecture students. For many on campus, there is a belief that those who study architecture are the crazy students who spend all of their time sequestered in that one building that is always well-lit.

In the past year, two major publications have printed articles explicitly about the studio culture that exists within our schools. The first was an article in *The Chronicle of Higher Education* titled, "The Insane Little Bubble of Nonreality" (Monaghan, 2001). The other, "For Would-Be Architects, Grad School Like Boot Camp" was published in the *Chicago Tribune* (Temkin, 2002). These titles almost speak for themselves. As one would imagine, the articles focused on the intense workloads of architecture school, isolation of architecture students, and the disconnection of architectural education from larger society.

The issues discussed up to this point of the report are only a few that concern us. From the start of our investigation, we have focused our research and questioning on twelve topics that we felt were crucial to the success of architectural education. The following section provides a closer analysis of these topics and poses critical questions on additional topics. The viewpoints and ideas were formulated through extensive dialogue with education and professional leaders, through observations at architecture schools, and through research by experts in the architecture discipline.

Current Aspects of Studio Culture

STUDENTS SHOULD LEAD BALANCED LIVES

The AIAS Studio Culture Task Force was formed in December of 2000 shortly after most schools in the country concluded final reviews for the semester. After one such review, a student died in a tragic car accident while driving home after spending two consecutive sleepless nights working on his final project. He fell asleep at the wheel of his car and collided head-on with a truck. This terrible tragedy was not the first time an architecture student died in a car accident due to sleep deprivation. Nearly ten years ago, Fisher described a frighteningly similar occurrence in the aforementioned, "Patterns of Exploitation." In that article, Fisher wrote, "At issue is not the value or even the necessity of hard work, commitment or dedication. There has never been, and probably never will be, a lack of that among students and recent graduates who are serious about becoming architects. The question is: When do we cross the fine line between hard work and exploitation?" (Fisher, 1991)

If we want professionals to lead balanced, healthy lives, we should not expect them to put off practicing that mindset until later in life

Ten years later, our discipline is still asking that difficult question. When such exploitation does occur, the source is not always clear. So, who or what is doing the exploiting? Is it the studio instructors? Could it be that students are doing it to themselves? Or is there something deep within the culture that promotes unhealthy work habits?

Unhealthy work habits help define studio culture at too many schools

Fisher goes on to write, "There is the fraternity aspect of architecture, where the pressure on students and interns, in particular, becomes a kind of rite of passage or, less generously, a weeding out of those unfit for membership in the club." (Fisher, 1991) Architectural education based on the notion of survival and rite of passage should be an idea of the past. Within architectural education, we have witnessed a student culture that takes pride in dysfunctional behavior. Students brag about the number of consecutive "all-nighters" they survive, Exacto knife scars are shown off like a badge of honor, and the "cool" students are those who spend the most time in studio.

Unhealthy work habits help define studio culture at too many schools. In our examinations and visits to architecture schools, students consistently reported long hours in studio, poor sleeping habits, unhealthy eating patterns, and high levels of stress. While schools and educators may not have intentionally created unhealthy studio environments, it is not apparent that there are many efforts to promote *against* these consequences. As Kathryn Anthony stated in her landmark book *Design Juries on Trial*, "While no one is forcing students to stay up all night, the current studio subculture encourages it. Studios are usually accessible 24 hours a day. Well-meaning professors sometimes offer criticism so late in the process that students have to stay up all night just to address their concerns (p. 40)."

When do we cross the fine line between hard work and exploitation?

Architectural education should be challenging, rigorous, and time-consuming. However, as one noted practitioner stated, "If we want professionals to lead balanced, healthy lives, we should not expect them to put off practicing that mindset until later in life." Do our current practices promote successful habits? Is too much focus placed on the time spent in the design studio? Despite the difficulty of these questions, the answers must be sought and considered. The consequences of not doing so have been fatal.

TIME IS MORE THAN A CONSTANTLY ENDANGERED RESOURCE

Studio courses compose a learning model that is based heavily on time emersion. Studio projects involve site analysis, research, designing, drawing, modeling, reflection, and group discussions; all of which are critical elements that are very time intensive. The nature of studio coursework is time consuming, therefore it is essential to examine the critical aspect of time. At issue are the attitudes and values that architectural education places on the notion of time.

We believe that the consideration of time forces designers to be more creative in their process

The majority of schools in this country, for example, give their students access to studios and computer facilities 24 hours a day, seven days a week. With the ability for students to work on their projects at any point, time can quickly become a quantity that seems limitless. With most students, if they are given a day to complete a project; they therefore think they have 24 hours to finish the necessary work.

To eliminate this unhealthy mentality, many have suggested that schools turn off the lights and lock the doors at a reasonable time of night. This may be a successful tactic, but such a move tends to address the symptoms of the problem without addressing the underlying roots of the issues. If studios were locked at night, what would prevent students from finding an alternative space or working at home? To get at the core of the issue of time, examination must focus on student workloads and the attitude towards time.

Many responses to our task force have also proposed that a major solution to several of these issues would be to teach time management skills. Most schools place little emphasis on teaching these skills, and even fewer have classes directly dedicated to this topic. Students who manage their time well typically perform much better than those who do not. Good time management usually leads to stronger design projects due to a more balanced work schedule and allowing time for reflection. Also, good time managers have more successful reviews because they have allotted time to sleep as well as prepare for their oral presentations.

Some have argued that emphasizing time management limits the creative process in education. We believe that the consideration of time forces designers to be more creative in their process. Learning successful time management skills is essential. Students must truly understand the value of their time.

The professional world places a far higher value on time. Whether in architecture practice or any other discipline, people have a limited amount of time that must be utilized carefully in order to lead healthy professional *and* personal lives. The value someone places on his or her time corresponds directly to the value he or she places on lifestyle. To promote the value of time, we believe an increased awareness of work habits and emphasis on successfully utilizing time must exist in the design studio.

Is there a strong link between the value architects place on their time and the value society places on the architecture discipline?

What impact does this lack of value on time have on students upon graduation? When graduates are placed in a position where every hour counts, the transition can be an overwhelming adjustment. In many traditional design firms, employees must bill every hour of their time to a specific account. In the required architectural internship program, the Intern Development Program (IDP), participants must record 5,600 hours of their work and track it among 16 specific training areas. Does the attitude towards time that exists in design studios sufficiently prepare students for the world they face upon graduation? What connection does the lack of value placed on time have on the relatively low fees and wages found in the architecture profession? Is there a strong link between the value architects place on their time and the value society places on the architecture discipline?

THERE IS A WORLD OUTSIDE OF THE DESIGN STUDIO

"We were, first of all, concerned by the sense of social, physical, and intellectual isolation of architecture schools on their own campuses" (Boyer and Mitgang, 1996).

The study of architecture is demanding. The development of a professional body of knowledge requires long hours and intense reflection and application. As with all professions, specialized knowledge is contained in theories of the discipline, which are furthered and refuted by members of the profession. Both parties share specialized graphic and verbal vocabularies. Unfortunately, all too often in studio education, the real clients and communities are left out of the equation. To quantify this point, more than 73 percent of students surveyed agreed that they "often feel isolated from others outside the architecture school" according to 1996 *Building Community* report (p. 92).

Cloistered into the captivity of studio, the studio commands an increasingly greater role as the center of students' social lives, and consequently, the world outside studio becomes less important

When students spend all of their waking time, and some of their sleeping time, with each other for four to six years, in the same classes, in the same building, they become disconnected from the ubiquitous public they will serve. Too often, faculty members do not encourage or even allow any unstructured time for students to develop interests and relationships outside of studio. This, in large part, can lead to clients accusing the profession of arrogance and ignorance.

To further illustrate our concerns about student insularity and isolation, we have included the following quotes from noted educators and practitioners:

"Repeatedly in our travels, we witnessed the estrangement of the academy and the profession, the isolation and stress of student life, the disconnection of architecture from other disciplines, and the inflexibility of the curriculum on many campuses" (Boyer and Mitgang, p. 8).
"The intense contact with studio-mates often makes it difficult for design students to maintain their friendships with those in other fields. As many students have admitted, the more years they spend in design, the fewer non-design students they have as friends. Cloistered into the captivity of studio, the studio commands an increasingly greater role as the center of students' social lives, and consequently, the world outside studio becomes less important" (Katherine Anthony, p. 12).

"If we want professionals to be involved in their communities, we should make sure that we are instilling in students a sense of involvement with others outside the architectural community" (Thompson Penney, FAIA, 2002 AIA First Vice President).

"If you think about what you should be learning while in school, it should extend well beyond studio to include much more outreach, rather than being sequestered in a building 24 hours a day. Any outside/non-architecture experiences and knowledge that you gain are going to have the greatest impact on your success. This broad, general knowledge comes from greater university experiences through outreach to other departments, lectures, and visiting scholars, and many other things – not just architects or architecture" (Richard Quinn, FAIA, p. 48).

DESIGN IS THE INTEGRATION OF MANY PARTS

"Architecture, by nature and tradition, holds vast potential as a model for the integration and application of learning, largely because of its most distinctive feature – the design studio. The integrative possibilities of studio extend far beyond architecture" (Boyer and Mitgang, p. 85).

"At virtually all schools, design is quite rightly considered the heart of the curriculum. Still, the term 'design,' as commonly used by architects and architecture educators, has taken on limited connotations, focusing more on the aesthetic and theoretical dimensions of design than on the integrative nature of the process itself" (Boyer and Mitgang, p. 73).

Here is the paradox of architectural education: Design is correctly the master value, for it is architecture's approach to design that distinguishes architecture from other trades and professions, and it is the design process that holds so much potential for integrative learning. Yet design, as studio courses narrowly define it, limits integration and is a rare commodity in practice.

"Most schools still are inclined to educate students as if every architect will be a designer….The conflict between the hierarchical principle according to which architectural work is conducted and the inculcated idealized self-image in terms of which the employees, who are architects, think of themselves generates all kinds of tensions in the individual and within the firm. For example, a good many of the human resource problems in firms are centered around the complaint of younger architects that they are not given opportunities to contribute to the design of projects" (Gutman, p. 17).

at schools which offer studio sequences that allow students to leave school with a narrow base of architecture knowledge, there is too much studio

We must define design more broadly. Commodity and firmness are of equal importance to delight. Others have suggested that "Design Studio" be renamed "Architecture Studio." Some programs attempt whole-scale integration, with all coursework tied to studios—or all studios dependent on all other coursework. Other programs have developed curricula with parallel, highly-coordinated tracks; a history/theory/criticism sequence, for example, runs beside the technology and design sequences. Other programs, recognizing that integration is difficult while a student is just gaining proficiency with a subject, purposefully insert studios with a focus on integration, utilizing knowledge that was to be gained earlier in the curriculum.

"To the perennial question, then, 'does the design studio take up too much student time?' our answer is this: at schools which offer studio sequences that allow students to leave school with a narrow base of architecture knowledge, there is too much studio. At schools which use the studio to guide students through a gradually more complex and integrated exploration of architecture in its many dimensions –aesthetic, cultural, historic, practical, and technical – there can hardly be too much" (Boyer and Mitgang, p. 88).

DESIGN PROCESS IS AS IMPORTANT AS PRODUCT

One of the most critical aspects of architectural education is teaching design-thinking process. This ability has enabled many architecture graduates to succeed in traditional practice or in other disciplines that they choose to enter. The ability to view design as a process serves a graduate for a lifetime and withstands changes in architectural styles, materials, construction methods, and technology. These design-thinking skills allow architects to build on their knowledge base and apply their abilities to an infinite number of applications. How effective is our current studio culture at developing graduates with strong design-thinking processes?

Does emphasis on appearance take precedence over the quality of ideas and the process behind the design project?

With design as the core competency, architecture school graduates have the vast potential to add tremendous value to society through the design of a range of things from products, buildings, businesses, and organizations to entire communities. Architects are using these skills to offer more services to clients, and recent graduates are capitalizing on their knowledge to work in a large variety of settings. The value of the discipline of architecture lies with how effectively we prepare students to utilize the broad applications of the process of design.

To what extent do our current studio practices and projects promote the learning of process as a main objective? Is more emphasis placed on design process or final product? We fear that the current studio culture rewards students with the "best looking" projects. Does emphasis on appearance take precedence over the quality of ideas and the process behind the design project? Frequently in architecture schools, students without the ability to produce the "best looking" projects are marginalized and undervalued. In reality, the creation of architecture involves many individuals who all have important ideas to share and roles to play. Does our current individualistic studio culture accept students who are not artistically strong, but may have strong design-process ideas and skills that will allow them to successfully practice architecture?

There also must be serious consideration concerning the impact that digital technology and computers have on studio culture and the learning of design process. Computers are clearly changing education and practice by offering new tools for design and changing the way in which work is created. Digital technology offers exciting new opportunities in graphic representation, visualization, and construction methods. At the same time, we fear that computers may devalue the art and craft of architecture, decrease collaboration, isolate students, and emphasize product over process. As the prominence of computers increases, how will educators and students deal with the wide range of implications?

Without first-hand experience working with a client, do students graduate with the necessary skills to practice architecture effectively?

Also inherent in a successful design process is the understanding of the world and the forces that impact the meaning and creation of design. Architecture embodies cultural and social values because every design impacts people. Architects are able to design buildings because clients commission projects. In every design and architecture project, there is ultimately a user who will utilize the space or product. Without clients and users, there would be no architecture.

Despite this reality, most architecture schools place no emphasis on the role that clients and users play in the design process. In most studio projects, the client and users are merely fictional characters described in the design problem handout. When students are not encouraged to consider the role of the user in the design of a project, design habits and ideas are formulated by theoretical explorations void of critical cultural and social considerations. With the exception of some community design, design/build, and service-learning projects, students rarely gain experience designing for a real person in school. Yet, upon graduation, students will be asked to enter a world where they must design for someone other than themselves or their instructors. Without first-hand experience working with a client, do students graduate with the necessary skills to practice architecture effectively?

COLLABORATION IS THE ART OF DESIGN

"Most of us were taught in school to think of ourselves as individualists and even encouraged to be iconoclasts. One result of that individualism is that it has accustomed us to think of ourselves as competitors, something more characteristic of a trade than a profession" (Thomas Fisher, 2000, p. 30).

Architecture is a social art, involving countless voices and agendas. Its success is dependent on the application of knowledge from multiple disciplines and perspectives. We know this, just as we know that the most complex of contemporary issues can only be addressed through collaborative efforts. Yet, much of architectural education "upholds the primacy of the autonomous designer by focusing all its attention on the student's experience as an individual" (Cuff, 1991, p. 81). Students work side-by-side, but alone, often guarding their ideas from each other, competing for the attention of the studio critic. Group projects are most often limited to pre-design activities of research, analysis, and site documentation. The synthetic processes of design, in which negotiation and collaborative skills are most critical and difficult, are limited to individual efforts. Through these practices we unintentionally teach that the contributions of other designers, clients, consultants, and users are not valuable in the design process.

The need to increase collaboration within studio education must balance the importance of individual student development

Within an average architecture project, designers, drafters, project managers, business managers, clients, users, contractors, engineers and consultants regularly work together and share ideas in order to design a project. Within this process, countless acts of collaboration and communication must occur. Without this sharing of knowledge, architecture would not exist. In fact, hardly any professional work in any discipline could be completed successfully without collaboration.

The need to increase collaboration within studio education must balance the importance of individual student development. "The point is not to undo the role of the individual in architecture, which would be both undesirable as well as impossible. The individual professional will always remain central to design; we must recognize, however, that the individual acts in the context

of a larger and increasingly significant social environment. As such, the cult of the individual should not dominate our beliefs about practice any more than the collective or the team" (Cuff, 1991, p. 251).

Individual learning, personal development, and mastery are crucial requisites of studio education. Augmenting these individual skills with collaborative skills is a difficult challenge in the studio. Student designers are nascent and insecure in their capabilities. They often bring similar, rather than complementary, skills and knowledge to a team project. Hierarchies are difficult to establish and administer, but necessary to get work done.

students would be better served by learning about the value of collaboration

"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)" (Thompson Penney, FAIA, 2003 AIA President).

In the end, it is clear that students would be better served by learning about the value of collaboration and the negative effects of competition. As one educator responded to our inquiries, "No true leader works in isolation, no true leader would not listen before showing the way, and no true leader imposes his or her own individual dreams."

DESIGN IS INHERENTLY AN INTERDISCIPLINARY ACT

"Making the connections, both *within* the architectural curriculum and *between* architecture and other disciplines on campus, is, we believe, the single most important challenge confronting architectural programs" (Boyer and Mitgang, p. 85).

Architecture is a cultural discipline, giving form and shelter to the aspirations of diverse groups and individuals. Like scientists, architects rely on both a body of knowledge and a method of inquiry and invention. Like engineers, architects give form to function and application to materials and tools. And like artists, architects see potential project futures and translate aspirations into artifacts. The creation of architecture is a social act, involving a multiplicity of participants in design, development, execution, and occupancy. Yet, learning to work strategically — collaborating on innovative applications of new materials, tools, institutions or products — is not a tradition of architectural education.

architectural education must depend less on skill-based learning and more on the dissemination of knowledge.

On any given project, architects must work with urban designers, interior designers, landscape architects, contractors, engineers, building consultants, public officials, and many other individuals. Despite these obvious connections, few schools make serious efforts to expose students to the disciplines. As importantly, on any traditional college campus, there exist opportunities for architecture studios to collaborate with many disciplines that contain knowledge that is essential to the creation of the built environment. Architectural education would be well served to make connection with programs on campus such as sociology, business, English, art, public policy, political science, and social work. Not only would students benefit through new knowledge, but they would also have experience interacting with those who will someday serve as future clients. By embracing the value of making interdisciplinary connections on campus, architectural education can truly become a liberal arts education.

Twenty-first century architectural problems are complex, demanding multi-disciplinary responses and attention.

The essential interdisciplinary nature of architectural decision making is largely ignored by architectural education. If future architects are to perceive new opportunities as well as give them form, architectural education must depend less on skill-based learning and more on the dissemination of knowledge. The critical knowledge to be disseminated and assimilated is not all internal to the discipline.

We live in an increasingly non-linear world in which everything is connected. Twenty-first century architectural problems are complex, demanding multi-disciplinary responses and attention. If architects are to remain the generalist leaders of design teams, they need to be able to understand the language of multiple disciplines and of particular areas of expertise. Education needs to offer students a broader base of ideas from which to draw, different ways of knowing, different methods of research and analysis, and different approaches and attitudes.

EVEN EDUCATORS CAN LEARN

"Faculty and visiting critics receive no formal training in how to conduct juries, and more often than not, they simply rely on the techniques their own professors used when they were in school, however good or bad they may have been." (Kathryn Anthony, Design Juries on Trial, p. 4)

Considering that most architecture studio instructors were educated to serve as architects and not instructors, what impact does this have on the creation of our current studio culture? As Anthony points out, most instructors rely on their experience as architecture students to guide their own teaching methods. This phenomenon would help explain why our current studio culture has essentially persisted in its same form throughout the education of generations of architects. We raise concerns about teaching methods and the structure of studio learning elsewhere in this report, and we fear that these concerns are directly impacted by the preparation and experience that many instructors receive, or do not receive, prior to serving as a studio instructor.

A primary concern of our task force involves the level of preparation and communication that schools provide to their instructors

The design studio has an inherent responsibility to prepare students for architecture practice. Therefore, learning the fundamentals of design must be connected at some basic level to the realities of the architecture profession and the construction of buildings. At a fundamental level, successful instruction must incorporate knowledge about the complex processes of real-world design application. To provide this knowledge, what experiences must an instructor possess? We fear that many studio instructors separate the design from the practice experience that is vital to impart professional knowledge to design students successfully.

A primary concern of our task force involves the level of preparation and communication that schools provide to their instructors. Academic institutions and architecture schools have specific missions and objectives that shape the design of curricula, the design of studios, and the broader aspects of instruction. When instructors are actively engaged within the academic community of the school, there are many opportunities and avenues for these individuals to embrace these objectives and incorporate them into their teaching methods. However, what are the effects on studio culture when the instructors and critics are not engaged in the academic life of the schools?

Without providing any preparation or guidance before critiques, there is nothing to ensure that the assessment environment will be a healthy and constructive experience for students

Many faculty members, full-time and part-time, do not make a concerted effort to align themselves with institutional missions. In fact many of these mission statements are unclear to begin with. In particular, however, we are concerned about the preparation of adjunct professors, visiting instructors, and guest critics who come from outside the school and may not be connected to these broader missions. Many respondents to our inquiries have communicated that many outside instructors are not connected to the larger goals of the school and do not exhibit successful levels of preparation. We fear that this issue is of significant concern based on the number of outside individuals who sit on design reviews and critiques. Without providing any preparation or guidance before critiques, there is nothing to ensure that the assessment environment will be a healthy and constructive experience for students. Also, due to the complex nature of studio projects, it is difficult for outside evaluators to evaluate student work fairly without sufficient explanation of the project objective and learning environment.

We believe that schools and instructors must seriously question and examine the methods of preparing instructors to teach and critique studio projects. To what extent should schools and the ACSA provide guidance on how best to structure studio courses? Is there a formal method of faculty mentoring that schools can develop? With exposure to cultural-sensitivity training, would educators create healthier studio environments? We believe answers to these questions must be sought, or else we fear that the studio instruction techniques will continue to be derived from an instructor's experience as a student.

THE GOOD OF STUDENTS MUST PREVAIL

Perhaps one of the strangest ironies about the design studio is that while it is the central experience of nearly every program in architectural education, it is also the most nebulous. Certainly one explanation for this may derive from what Donald Schon perceptively called the "paradox and predicament of learning to design." He stated in his influential *The Design Studio*, "Initially, the student does not and cannot understand what designing means. He [sic] finds the artistry of thinking and doing like an architect to be elusive, obscure, alien, and mysterious. Conversely, the studio master realizes that the students do not initially understand the essential things and cannot be told those things at the outset because the fundamental concepts of designing can be grasped only in the context of the doing" (Schon, p. 55).

This paradox and predicament of learning to design describes provocatively the life in design studios. But to what extent is this an issue inherently of design studios, or is this more a matter of the application of particular pedagogies?

In his interesting contribution to the *Architecture Education Study*, Chris Argyris accomplished some important work that focused on the dynamics of the design studio primarily in terms of the behaviors and verbal exchanges between teachers and students, and secondarily on what was investigated as content (Argyris, pp. 551-660). As Thomas A. Dutton elaborated in his *Voices in Architectural Education: Cultural Politics and Pedagogy*, four points became clear in this study. First, Argyris found that what was described and what actually happened in design studios were usually quite different, often resulting in teaching behaviors that were unsound. Second, the interaction between teachers and students was characterized by both groups as "striving to control the learning environment." This often set up a competition between teachers and students, and among students themselves. But given the power differential between students and teachers, students typically lost in the exchanges. Third, in this way, the studio setting became a teacher-centered experience, where learning design was "successful" only to the extent that students understood and accepted their professors' language and their frames of reference. This reinforced a student dependency on teachers, where students tried to make connections between their issues and the teachers' expectations. Fourth, and as a consequence of all this, teachers and students rarely questioned the assumptions and values underlying their theoretical frameworks. In time, a "mastery/mystery game" emerged where "mystery began to be taken as a symptom of mastery." Argyris found that

rarely did teachers "help the students recognize the ideas and theories that were embedded in their work or make explicit their own ideas, or reflect about their work and thinking in a way that would help the students understand the discovery-invention-production processes" of the design process (Dutton, pp. 165-194).

Pedagogy would be better understood as a learning theory based in a teaching theory

Argyris' analysis of competition, teacher dominance, student dependency, and mastery/mystery is a little sobering, and these practices do more than simply silence student voice. As Lian Hurst Mann put it, "By challenging students to 'suspend disbelief' and have faith that mastery of the creative process is inherently mysterious, a process of uninformed consent to the dominant culture of the pedagogue is institutionalized in architectural education" (Mann, p. 52).

Explaining learning is a responsibility about which professors ought to be more explicit

All of this raises larger questions about the roles and practices of both teachers and students in constructing the studio context. But, of course, professors need to take the lead role here and investigate questions that shed light on their responsibility to construct the environment for learning. Pedagogy is a term that is often misunderstood as referring to teaching technique or the act of instruction. Pedagogy would be better understood as a learning theory based in a teaching theory. It is a theoretical framework that explains learning.

Explaining learning is a responsibility about which professors ought to be more explicit. At the very least this should entail syllabi that are clear about what is to be learned and the criteria for assessing that learning. Professors would also do well to confront directly any slip into the game of mastery/mystery by exposing their language and frames of reference, thereby allowing students to relate to and challenge these; not to be dominated by them. By working towards a studio context that is clear in the promotion of learning, perhaps the studio can become less nebulous.

GRADES CAN IMPEDE PRODUCTIVE ASSESSMENT

"Human beings are born with the intrinsic motivation to learn, to improve, to take pride in one's work, to experiment. Research suggests that learning and grading actually work at cross-purposes because the best motivation for learning comes from a student's intrinsic level of interest and not from the extrinsic force of grades" (Kuhn, 1999).

Grades have been associated with schooling for so long that it is practically impossible to think of schooling without them, yet a number of graduate architecture programs like those at Oregon and Yale have abandoned the A-F grading scale in studio courses in favor of a Pass/Fail system. However, a universal rethinking of the role of grades in contemporary schooling remains far from the horizon, even given the mass of research evidence that demonstrates the counterproductive role of grades in advancing learning.

We fear that grades tend to heighten individualism and competition. They thus tend to rupture relationships and reduce the capacity for collaboration. This runs counter to the evidence that the quality of learning is typically much higher when the context is carefully structured collaboratively.

All learning needs assessment of some type and the question here is whether grades provide enough breadth and depth of feedback for real learning to take place

Grades are a form of control and shift responsibility for learning from students to the professor. They enforce compliance and unwittingly reinforce the pervasive ideology of "do what the professor wants." Hence, we believe grades reduce risk-taking, reinforce conformity, and generally lead students to avoid challenging themselves in the studio. Reinforced by this frame of mind is a pedagogy of transmission, where students are perceived as having deficits and it becomes the responsibility of the professor to fix those deficits. Similarly, all evaluation rests with the professor, thereby undermining procedures for students to learn modes of self-assessment and self-criticism.

All learning needs assessment of some type and the question here is whether grades provide enough breadth and depth of feedback for real learning to take place. Too often, grades are used exclusively without other forms of assessment—they become substitutes for the kind of feedback and evaluation needed for intellectual growth. As one researcher put it, "A grade is a uni-dimensional symbol into which multi-dimensional phenomena have been incorporated" (Milton, Pollio, and Eison, 1986). This is especially problematic for the design studio.

Grading should not be conflated with assessment. They are entirely different

A challenging studio learning environment contains many aspects: relating knowledge to student experience and vision, a multiplicity of pedagogical and learning styles, a variety of student-faculty and student-student encounters, an ability to take risks, and an opportunity to share power to construct new knowledge and transform thinking. If these are some of the activities that compose challenging learning environments, to what extent are such environments undermined by the practice of grading? Grading should not be conflated with assessment. They are entirely different.

CRITIQUES ARE LEARNING EXPERIENCES, NOT TARGET PRACTICE

"Despite the apparent progress in ridding most schools of egregious abuses, communication problems remain in many juries. Too often, the proceedings seem almost Kafkaesque – a sleep-deprived student facing a panel of inquisitors, with the "right" answers so subjective as to be unknown" (Boyer and Mitgang, p. 94).

Criticism is an important form of assessment for learning. Our concern is with how the function or role of criticism is socially organized, and hence what kind of learning is privileged by that particular social setting

Outside of the individual desk critique, the formal review may be the most ubiquitous social behavior of the studio culture. As Anthony writes in *Design Juries on Trial*, "Although they may be called *reviews* or *critiques*, with few exceptions, the format of design juries is virtually the same in every design school in the English-speaking world" (p. 3). The question is, why?

We wonder if the formal review model is just too overused; that it has become the one answer for all forms of learning

Our concern here is not to question the value of criticism per se in assessing student design work. Criticism is an important form of assessment for learning. Our concern is with how the function or role of criticism is socially organized, and hence what kind of learning is privileged by that particular social setting. In other words, what is the hidden curriculum of the formal review, where jurors (typically professors) sit in the front row, students in the back, and the presenter stands in front of his/her project? What is learned in this kind of context regardless of the actual content of the project? Is this a context supportive of dialogue? Equal exchange? Is this context an example of a democratic practice?

Currently many juries and critiques serve as opportunities to reinforce the inadequacies of student work, rather than to build upon that which is more than adequate

Facing these questions head-on hopefully can encourage professors and students to construct other kinds of settings that in turn will nurture other social forms of criticism to take root. We wonder if the formal review model is just too overused; that it has become the one answer for all forms of learning. "Presenting" and "defending" are two activities the formal review privileges very well. But these activities may not be what students need early on in the design phase, for example. It may be that another kind of context needs constructing to facilitate criticism that is more reflective and active, or dialogical, etc. This means understanding what kind of learning is needed for students at a particular moment and then designing a context for the delivery of criticism to meet that need.

Currently many juries and critiques serve as opportunities to reinforce the inadequacies of student work, rather than to build upon that which is more than adequate. We believe that the role of juries should be to serve as a celebration of student work, as well as benchmarks for growth. This cultural shift would provide a process that does not end in the demeaning of students. It would end in the recognition of their accomplishments and what is left to achieve.

TO DESIGN FOR MANY, PARTS OF ALL MUST BE INCLUDED

Over the span of the last decade, progress has been made in airing questions about diversity in architectural education. Certainly there have been advances in scholarship, evidenced by the rising production of books, articles, and initiatives around diversity and multiculturalism in architectural discourse. The extent to which this production has been swift enough is open to debate. But it was in 1993 that Kathryn Anthony and Bradford Grant, co-editors of a special sub-theme issue in the *Journal of Architectural Education*, wrote that "Issues of race, multiculturalism, and to a lesser extent, gender have traditionally been overlooked in architectural education." Anthony and Grant did note that "interest in gender and multicultural issues is on the rise" (P. 2).

What, if any, has been the extent of this change upon the culture of the design studio? No one doubts that design professionals need to function more effectively within a multicultural society, and thus students and faculty should receive more exposure to theories, research, and experiences that increase multicultural sensitivity. But the design studio, like any institution, is not free of the relations and forces of the larger society. That is, it will reproduce those systems of belief and relations that the larger society values.

Acceptance of all individuals regardless of race, gender, creed, religion, sexuality, socio-economic background, or physical disability must be sought

Of course, reproducing the cultural and racial capital of the dominant society is not all that the studio does, and many professors work against such reproduction. But our fear is that the inertia and machinations of the dominant ideologies and practices that favor Eurocentrism, cultural chauvinism, individualism, hierarchy, and patriarchy in architectural schooling still reign. Our fear is that the culture of the design studio continues as a masculine and white-based landscape. If this is true, then the question becomes: is multicultural sensitivity enough? We wonder about the extent to which curriculum, pedagogy, and the culture of the design studio need to be organized around practices that are explicitly anti-sexist and anti-racist.

the design studio, like any institution, is not free of the relations and forces of the larger society

In addition to issues of race and gender, architectural education constantly ignores other groups who are less often cited as minorities, but clearly qualify. Acceptance of all individuals regardless of race, gender, creed, religion, sexuality, socio-economic background, or physical disability must be sought. Through exposure to those groups of people with whom we may be less familiar, the architecture discipline will be strengthened through understanding how to design for everyone. There can be no argument as to the value of that experience.

New Visions, Shared Values

To design a healthy studio culture, we have laid forth five essential values: optimism, respect, sharing, engagement, and innovation. Every school has its own qualities and needs that will ultimately govern how it creates a more successful studio culture. One asset every school shares, however, is talented and energetic students who will embrace these shared values when they are embraced by faculty members and school administrators. Instead of offering prescriptive recommendations, we have focused on larger values and ideas that will enable schools to address holistically the critical issues they face.

First, we propose that design studios engrain in students a culture of optimism. We imagine a culture where students are optimistic about the skills they are learning, hopeful that architecture can make a difference to society, and confident that they will succeed within the profession or in any other discipline they choose. We also believe that it is possible for educators to be optimistic in the potential of architectural education to reach new levels of success.

Second, to promote a healthier studio learning environment, schools must create a culture of respect. We envision a climate where student health, constructive critiques, the value of time, and democratic decision-making are all promoted. In addition, respect for ideas, diversity, and the physical space of studio are all essential in order to enhance architectural education.

Third, we believe that architecture studios should be known for promoting a culture of sharing. With this value at its core, studio learning will promote collaboration, interdisciplinary connections, and successful oral and written communication. By embracing this value, studio educators can make the learning of architecture and design less mysterious. Architecture schools can also embrace sharing as a way to play a larger role within larger university communities.

Fourth, to realize enriched educational goals, studio learning must promote a culture of engagement. We believe in the value of preparing students to serve as leaders within the profession and within communities. To achieve this goal, students must engage communities and understand the necessity of embracing clients, users, and social issues. We also envision studio projects engaging the expertise and opportunities presented through partnerships with architectural practitioners and experts in allied disciplines.

Fifth, to design an effective studio environment successfully, schools must support a culture of innovation. It is not sufficient to merely encourage innovation in student design projects. We must encourage critical thinking, foster risk taking, and promote the use of alternative teaching methods to address creatively the critical issues facing architectural education.

CULTURE OF OPTIMISM

As the designers of human environments, architects are inherently responsibility to produce spaces that uplift spirits, address social issues, protect the environment, provide safety, and improve the quality of life. As the late Samuel Mockbee once said, "Architecture has to be greater than just architecture." The idea that good design has tremendous power to impact human life positively is an incredibly optimistic view. To reach the vast potential that this architecture holds, it is essential that our schools and studio courses exhibit a culture of optimism.

students must witness and even experience for themselves the power that architecture has on society through scholarship and by providing time and opportunities for student extracurricular efforts

Within architecture education, students have the potential to develop broad understandings about a wide range of issues, coupled with strong abilities in design. Furthermore, architecture education has the ability to produce students confident that the infinite applications of design-thinking have prepared them for architectural practice and a wide range of career possibilities. To accomplish this, students must witness and even experience for themselves the power that architecture has on society through scholarship and by providing time and opportunities for student extracurricular efforts.

With clarity about the overall goals and objectives of architectural education, students have the potential to graduate with confidence in the knowledge gained and the skills nurtured

Within a culture of optimism, students would graduate believing that they can succeed within the architecture profession. Far too often, students are concerned that they do not have the skills and abilities to enter architecture practice and even earn a livable wage. With clarity about the overall goals and objectives of architectural education, students have the potential to graduate with confidence in the knowledge gained and the skills nurtured. It is essential that architecture schools communicate to students what skills are being taught, why they are being emphasized, and how these skills prepare them for life-long experiences as members of the profession and society. A culture of optimism can exist in all schools if the other values within this report are embraced. When students begin school, they are typically full of energy, passion, idealism, and optimism. However, years of grueling work, negative critiques, disconnection from the practice of architecture, isolation from family and friends, and disengagement from serving communities have left many students burnt out and disenfranchised.

Architecture has to be greater than just architecture

It is essential that all individuals are optimistic that architectural education holds great potential to reach new levels of success. Far too often, individuals accept unhealthy situations due to the belief that one person or a small group cannot make a difference. Students, educators, administrators, and practitioners must all accept their responsibility to question existing practices critically and do their part to bring about positive change.

CULTURE OF RESPECT

Fundamental to any successful and healthy environment is a culture of respect. When true respect exists, great things happen. Ideas flourish, knowledge is transferred, people care for each other, confidence is built, and communication is healthy. In their 1996 *Building Community* report, Boyer and Mitgang wrote a whole chapter titled, "A Climate for Learning." Within that chapter they write, "Whether the focus is kindergarten, college, or architecture school, any talk of realizing enriched educational missions of higher levels of student and faculty scholarship is hollow unless the climate for learning in the school community itself is supportive, not corrosive" (p. 91).

Architecture schools should be places for growth and prosperity, not environments where students "put in their time," learn "how to survive," or complete an experience that could be compared to ritualized hazing. Although architecture education may not explicitly promote these unwritten values, it is clear that design studios across the country could go a long way towards eliminating them by embracing a culture of respect. To address this situation, educators must be mindful of the conditions and values they create in addition to taking efforts to prevent unhealthy conditions.

We envision a studio culture in which students are respected for their ideas and engaged as partners in design studio decision making

Within a healthy and responsible studio environment, respect for coursework and personal demands of students would be primary considerations. We believe there must be a balance in architectural education among studio courses, other architecture courses, and liberal arts courses. By placing full emphasis on studio courses, opportunities for students to experience a balanced education are greatly limited. There is tremendous potential to enhance architecture education by examining working conditions and student/educator relationships within design studios. To facilitate successful student work habits, educators have the ability to provide mentoring on design issues, set clear and responsible workload expectations, and consciously promote the value of time.

We envision a studio culture in which students are respected for their ideas and engaged as partners in design studio decision making. Within this democratic environment, educators and students would share decisions in all areas of studio life, including work conditions, programmatic considerations, project direction, scope of readings, studio scheduling, and the determination of a student's grade. Attempts at creating a more democratic culture can be made in order to eliminate the unhealthy consequences of rendering students as powerless.

When a studio culture places an instructor in an unquestioned position of power, we believe that learning is compromised. Design instructors are leaders, critics, and facilitators. However, power is not a tool that should be monopolized to exert control. In an environment where educators create master/student relationships, students are less likely to take risks, think critically, or communicate successfully with instructors. To equalize the balance of power within design studios, it is important that the focus of attention is on the relationships among students, not on the power that a studio instructor holds over students individually or as a group.

Finally, architectural education must embrace the value of diversity, not only in the background of its students, but also in the ideas that they express. The diversity of student backgrounds, experiences, and thought is one of the most valuable aspects that contribute to meaningful shared studio learning. We also envision a climate where ideas and feedback would be exchanged freely, without fear of repercussion. As stated by Ernest Boyer and Lee Mitgang, "Design studios and juries should be opportunities for respectful, two-way exchanges. Classrooms and studios in which faculty critique while exhausted students dutifully nod and listen, are hardly breeding grounds for future leadership or civic responsibility" (p. 133).

CULTURE OF SHARING

The necessity of sharing within architectural education is a value that few can dismiss. It is a value that is first taught in kindergarten and serves as one of the foundations of the creation of architecture. However, throughout this report, we have documented our concerns about the level of collaboration in student projects, the lack of interdisciplinary initiatives, limited emphasis on written and verbal communication, and insularity from the community and the rest of campus. We believe that the all of these issues can be addressed by embracing a culture of sharing.

To encourage students to work collaboratively, education must place a priority on communication

The creation of architecture is a collaborative act that involves a wealth of knowledge and individuals. Yet, in many design studios, competition is often regarded as the major motivating factor that pushes students to excel. Within competitive environments, someone will always end up on the losing end. Studio education should not be based on the concepts of winning or losing, but instead on the process of learning. Collaboration must also occur beyond the walls of the studio classroom, and across campus. It is essential that architecture programs build relationships with other disciplines in order to give students opportunities to work on interdisciplinary projects. On any traditional college campus, there are many potential partners whom architecture schools can embrace. In addition to collaborating with related design disciplines, architecture studios would benefit by partnering with other professional schools or liberal arts departments.

To encourage students to work collaboratively, education must place a priority on communication. Our schools have found success teaching graphic and visual communication, however oral and written communication have been traditionally undervalued by our discipline. According to the Carnegie Foundation survey published in *Building Community*, 66% of administrators and 65% of faculty members felt that the teaching of writing skills were weak at their institution (Boyer and Mitgang, p. 70).

education should not force students to struggle independently to learn the mystery of architecture

The ability to communicate in the most basic means is a great challenge facing the architecture profession. Students, faculty, and practitioners need to understand when it is appropriate to use jargon that is not easily understood by larger society. Architecture education has the opportunity to produce graduates with the ability and willingness to communicate in simple terms to the general public. Along with teaching and critiquing design, studio instructors can educate students on the art of presentation and verbal communication. Adding writing and reading assignments to studio courses will benefit students greatly.

We also believe that education should not force students to struggle independently to learn the mystery of architecture. As mentioned earlier in this report, we are concerned about the nebulous nature of design studio learning objectives that exist in schools throughout the country. We believe that a greater emphasis on sharing by educators can clarify the intent of studio learning and allow for the construction of healthier educational environments.

CULTURE OF ENGAGEMENT

By embracing a culture of engagement, architecture schools can prepare students to serve as leaders, successful architects, and, above all, good citizens. At its core, leadership is concerned with effecting change for the betterment of others, the community, and society. Leadership is a process that can be learned and developed through education and experiences. Despite the obvious connections between architecture and leadership, our education system rarely emphasizes the value of thinking of the two as inseparable, or even as one and the same. We are convinced that the value of architectural education and the profession will increase by engaging students within the community.

Architecture schools can make a commitment to enhancing citizenship

In the *Building Community* report by the late Ernest Boyer and Lee Mitgang, they state, "Graduates should be knowledgeable teachers and listeners, prepared to talk with clarity and understanding to clients and communities about how architecture might contribute to creating not just better buildings, but a more wholesome and happy human condition for present and future generations" (p. 129). To accomplish this goal, students must gain experience working with communities and learning first-hand about the issues that are important to society. The architecture community would be well served to learn the necessity of acting as creative listeners who focus more on embracing the public as opposed to educating the public.

Architecture schools can make a commitment to enhancing citizenship. Many schools have outstanding initiatives and programs that engage students with communities and provide valuable leadership skills. The task force is encouraged by the number of design/build courses and community design courses that exist. These opportunities are among the most popular with students, and there has been an increased demand for these efforts in recent years. We believe that they offer incredible potential to strengthen architectural education. Through these community outreach efforts, students typically are exposed to collaboration, real clients, hands-on learning, community interaction, economic issues, and the realities of designing within constraints.

we feel that architectural education must do more to engage the architecture profession

We propose that architecture studio projects fully consider the social and cultural implications of designing for clients, users, and society. Too often, studio culture ignores the needs of users in school, which leads to future difficulties communicating with and designing for clients. There are real opportunities to collaborate with citizens and community organizations to offer design services and visionary ideas through studio projects. At the very least, we hope that studio design critiques and programs will emphasize consideration of the needs of users at the same level as evaluating building form and materials.

We are convinced that the value of architectural education and the profession will increase by engaging students within the community

Lastly, we feel that architectural education must do more to engage the architecture profession. If the architecture discipline truly embraces the notion of life-long education, then stronger understandings and relationships must be formed. Design studios can offer research projects that work with members of the architecture profession to produce case studies that will enrich student learning, create new knowledge for the discipline, and strengthen ties with the profession. Also, strong relationships with architectural practitioners can allow for successful student mentoring and tremendous opportunities for students to experience construction sites, visit design offices, and fully understand the realities of practice. These connections will not only help students, but they will build a strong sense of community and positive relationship that will help the larger discipline of architecture.

CULTURE OF INNOVATION

Architecture is a discipline of innovation. The very essence of design is the creation of something new and unique. But innovation goes beyond simply doing something new or different; it entails making an improvement. To produce successful graduates and make needed changes in studio culture, architecture schools must embrace a culture of innovation.

First of all, we feel it is essential for innovation to exist within student ideas. The design studio is a place where creativity and spontaneity should guide exploration and serve as a base of learning. To promote creativity and innovation, the studio environment must provide freedom for students to take risks. We also believe schools must focus on providing support for critical and analytic thinking. While this is a fundamental objective that applies to student design projects, we also feel that emphasis must be placed on the broad application of critical thinking. With critical thinking as a base, students will be in a position truly to question existing conditions, which will allow for new levels of innovation and creative discovery.

To create a healthier and more successful studio culture, architecture schools will need to rethink existing practices and develop creative alternatives

Innovation is healthy not only for student projects, but also when applied to the academic context in the larger sense. In a culture of innovation, architecture schools and educators would imagine more effective teaching methods and learning objectives. In *Design Juries on Trial*, Kathryn Anthony wrote, "It is indeed ironic that throughout the term, design instructors encourage their students to be creative, go out on a limb, take a risk – and then when it's all over most of those same instructors rely on the same technique they've been using for years" (p. 129).

We feel a culture of innovation must be embraced in order to create alternative teaching and learning models. To create a healthier and more successful studio culture, architecture schools will need to rethink existing practices and develop creative alternatives. Common studio projects must be reevaluated to determine if students are learning the full range of skills and exposed to the complex set of issues that they will encounter upon graduation. To create successful collaborations within and outside design studios, innovative ways of constructing student relationships and experiences must be developed. Finally, to provide constructive and beneficial critiques, we believe alternatives to the traditional design jury must be sought.

Architecture education must use innovation to design a successful studio culture. We believe that schools have the opportunity to examine the learning objectives of the institution in addition to their curriculum in order to determine how best to create necessary improvements to studio culture. Innovative partnerships must be formed in order to provide new experiences and opportunities for students within the university and the outside community. In the end, we believe the inherently innovative nature of architecture and design will serve as a base for creating an improved studio culture.

A Call to Action

We encourage everyone to think critically about design studio culture that exists within your school. For far too long, the patterns and culture within schools have been taken as rote. As designers, we must consider if our current practices are as successful as they could be. In order for architecture to develop and reach its potential, we believe that change must occur.

Ultimately, lasting cultural change must come from within the architecture schools. As Thomas Fisher wrote in *In the Scheme of Things*, "Rather than the conservative force they represent now, the schools should instead be the place where the critique of the design culture is most acute. That, I believe, is their cultural role" (Fisher, p. 77). This change must take place in the schools, although it will take more than educators and students to bring about these needed improvements.

Students must recognize their power to bring about positive change. As the primary reason why schools exist, students are entitled to a healthy environment, successful education, and, most of all, a voice in creating change. Students have the right and the responsibility to question educational practices that exist and propose new alternatives. Through their actions, students determine what habits they will form and what type of studio culture will exist. Ultimately, students choose how long they work, how much they sleep, what they eat, and to what extent they isolate themselves from the rest of campus or even society at large.

Architecture school administrators have the ability to set forth a vision in order to produce a healthy studio culture. Through the design of architecture programs and curriculum, leaders can implement policies and procedures to promote the values listed throughout this report. They also have the potential to share and disseminate initiatives to promote the positive values that we have listed throughout this report. We believe that every school has a number of successful studios and efforts that could serve as models to all within the discipline.

Studio instructors have the inherent responsibility to educate students in a manner that promotes successful learning, creative discovery, and healthy student lifestyles. Throughout this report we have listed many areas and ideas that we feel must be critically examined and improved. In addition to the concerns raised elsewhere, we believe that the essential role of studio instructors is to think critically about current studio education practices and evaluate these methods to determine if they contribute to a healthy and successful studio environment. Also, we believe it is critical for studio instructors to embrace students as partners in creating the studio learning environment. Through strong collaboration and communication with students, we believe new levels of understanding and awareness can be formed in order to guide future change.

Practitioners, alumni, and other members of the community have the ability to mentor students, serve as resources to educators, and develop unique partnerships with schools that can enrich learning experiences. We believe it is important for those outside of the academy to contribute in meaningful ways in order to support students and educators. These individuals are in a unique position to offer resources and knowledge that are not readily available within architecture schools.

The collateral organizations, including the American Institute of Architects, the American Institute of Architecture Students, the Association of Collegiate Schools of Architecture, the National Architectural Accrediting Board, and the National Council of Architectural Registration Boards have the power, individually as well as collectively to implement practices that will allow for a more successful studio culture. These membership organizations can continue to promote dialogue and recognize studio culture best practices through publications, annual meetings, and awards programs. Further, the collaterals can take real action not only to call for further change, but also to lead in these efforts. These organizations are in the position to promote a new culture through innovative programs, meetings within the architecture discipline, educator training programs, student awareness efforts, and even the creation of accreditation conditions and criteria that promote a healthier, more effective studio culture.

Other organizations and publications like *ArchVoices*, *AIArchitect*, and *Architectural Record* also have a critical role to play. These groups have the potential to disseminate information and create needed dialogue on ideas concerning the redesign of studio culture. Their role in promoting discussion on studio culture is extremely important given their ability to reach a considerable number of diverse individuals within the architecture discipline.

Throughout this report, we have suggested roles that everyone can play and ideas to accomplish a more successful studio culture. There are more ideas and suggestions available than we could fit into this report or even dream about. We do not pretend to have all of the answers, although we do believe that collectively this discipline can work to find the necessary solutions.

A New Program for the Design of Studio Culture

Our challenge, now, is to design a studio culture that promotes:

- Design-thinking skills
- Design process as much as design product
- Leadership development
- Collaboration over competition
- Meaningful community engagement and service
- The importance of people, clients, users, communities, and society in design decisions
- Interdisciplinary and cross-disciplinary learning
- Confidence without arrogance
- Oral and written communication to complement visual and graphic communication
- Healthy and constructive critiques
- Healthy and safe lifestyles for students
- Balance between studio and non-studio courses
- Emphasis on the value of time
- Understanding of the ethical, social, political, and economic forces that impact design
- Clear expectations and objectives for learning
- An environment that respects and promotes diversity
- Successful and clear methods of student assessment
- Innovation in creating alternative teaching and learning methodologies

Start today in whatever ways you can.

Afterword

STUDIO CULTURE TASK FORCE PROCESS

The American Institute of Architecture Students (AIAS) is an independent, nonprofit, student-run organization with more than 6,000 members in 125 schools offering architecture and design programs. The AIAS initiated the Studio Culture Task Force in December of 2000. Since the Studio Culture Task Force's inception, the AIAS has maintained the goal to be inclusive and collaborative in its process. Both the American Institute of Architects (AIA) and the Association of Collegiate Schools of Architecture (ACSA) have representatives on the task force. Through these relationships, the AIAS has ensured that the input and concerns of educators, and practitioners were a critical part of the process.

The task force was charged to research the current practices in architectural education and target opportunities for positive change in studio culture. The primary goal of the task force was to generate discourse about studio culture within all architecture schools and the discipline of architecture. One of the main goals of the Studio Culture Task Force was to gain a diverse amount of feedback and research a wide range of ideas on architectural education. The AIAS call for feedback was lengthy, and the scope broad. The AIAS contacted students, architects, educators, leaders of the architectural collateral organizations, members of the building and construction industry, psychologists, sociologists, and experts on higher education. Through a direct mailing campaign, a large amount of feedback was gained that shaped the findings and recommendations of the task force.

The Studio Culture Task Force made every effort to ensure that every interested and related party had the opportunity to provide feedback. The topic of studio culture has been widely discussed with architecture students through the activities of AIAS chapters and national publications. AIAS representatives promoted this initiative to educators through the ACSA Board of Directors, at the ACSA Administrator's Conference, during a panel at various ACSA Annual Meetings over the past three years, and in the *ACSA News*. Through representation on the AIA Board of Directors, the AIAS has solicited comments from leaders of the profession. The leaders of the collateral organizations discussed studio culture in a special Five Presidents Panel Discussion and at several of their meetings. Lastly, the discipline of architecture had exposure to our initiative through calls for feedback published by *ArchVoices* and *Architectural Record*. We are very appreciative of all the feedback that has been received and the attention that this initiative has generated.

ACKNOWLEDGMENTS

STUDIO CULTURE TASK FORCE

Aaron Koch served as the 2001-2002 AIAS National Vice President after graduating with a BS in architecture from the University of Minnesota, Twin Cities, in May 2001. While AIAS Vice President, Aaron assumed roles on the ACSA Board of Directors; the AIA National Associates Committee; the IDP Coordinating Committee; and numerous other collateral committees. As a student, Aaron served as the coordinator of the College of Architecture and Landscape Architecture (CALA) Mentor Program; the AIAS Minnesota President; on the AIA Minnesota Board of Directors; and in leadership positions throughout the University of Minnesota. Aaron is currently the program coordinator with the Mayors' Institute on City Design (MICD) in Washington, DC. In April, 2003, he will leave for two years of service with the Peace Corps as a Community Development Volunteer in East Timor.

Katherine Schwennsen, FAIA, the AIA representative, is an architect and educator at Iowa State University. She is the Associate Dean for Academic Programs in the College of Design and an associate professor in the Department of Architecture. Kate earned a BA with distinction and an MArch from Iowa State. She practiced in Des Moines for Engelbrecht & Griffin Architects, and then as a senior project architect for Bloodsgood Architects and Planners before returning to her alma mater to teach in 1990. She has served as a member of the Iowa Board of Architectural Examiners; chair of the Iowa Architectural Foundation; a founding member of the Iowa Construction Industry Forum; and president of AIA Iowa. Kate has recently served on the AIA Board of Directors as the Director of the Central States Region, and in December of 2002, she will serve as an AIA Vice President.

Thomas A. Dutton, the ACSA representative, is an architect and professor of architecture and interior design at Miami University in Oxford, Ohio. Tom earned his BArch from Cal Poly San Luis Obispo, California and his Masters in Architecture and Urban Design from Washington University in St. Louis. He currently leads a design studio in which his students work with the Over-the-Rhine Housing Network in Cincinnati to design and build actual livable spaces for low and moderate income families. He is co-editor (with Lian Hurst Mann) of *Reconstructing Architecture: Critical Discourses and Social Practices* and editor of *Voices in Architectural Education: Cultural Politics and Pedagogy*. His research focuses on the connections between critical pedagogy, architectural education, and social practice. Tom has served as the ACSA Treasurer and East Regional Director.

Deanna Smith, a student at Drury University in Springfield, MO, served on the AIAS National Board of Directors as the National Director of the Midwest Quadrant. She is pursuing a Bachelor of Architecture degree along with a Bachelor of Arts in Studio Arts and a Bachelor of Arts in Art History. She has served as the AIAS President at Drury University; student representative at the Hammonds School of Architecture; and as a NAAB visiting team member. Deanna has studied abroad in Greece and Belize and worked as an intern at Marpillero Pollak Architects in Manhattan.

WORKS CITED

Anthony, Kathryn. Design Juries on Trial: The Renaissance of the Design Studios. New York: Van Nostrand Reinhold, 1991.

—. Designing for Diversity: Gender, Race, and Ethnicity in the Architectural Profession. Champaign: University of Illinois Press, 2001.

Anthony, Kathryn and Grant, Bradford. "Gender and Multiculturalism in Architectural Education." *Journal of* Architectural *Education 47/1*. September 1993.

Argyris, Chris. Architecture Education Study, 1: The Papers. Andrew W. Mellon Foundation, 1981.

Association of Collegiate Schools of Architecture (ACSA). Guide to Architecture Schools, Sixth Edition. ACSA Press, 1998.

Boyer, Ernest and Lee Mitgang. *Building Community: A New Future for Architectural Education and Practice*. Princeton, N.J.: Carnegie Foundation for the Advancement of Teaching, 1996.

Dutton, Thomas A. "The Hidden Curriculum and the Design Studio," in Voices in Architectural Education. New York: Bergin & Garvey, 1991.

Gutman, Robert. Professions and their Discontents: The Psychodynamics of Architectural Practice. *Practices 5/6*. Cincinnati: Center for the Study of Practice: 1997.

Cuff, Dana. Architecture: The Story of Practice. Cambridge, Mass.: MIT Press, 1991.

Fisher, Thomas R. In the Scheme of Things: Alternative Thinking on the Practice of Architecture. Minneapolis: University of Minnesota Press, 2001.

—. "Patterns of Exploitation." *Progressive Architecture*. May (1991): 9.

Kuhn, Alfie. Punished by Rewards. Houghton Mifflin Co, 1999.

Mann, Lian Hurst. Architecture As Social Strategy: Structures for Knowledge for Change. Ph. D. dissertation, University of California Berkeley, 1990.

Milton, Ohmer, Pollio, Howard R. Pollio, and Eison, James A. Making Sense of College Grades. San Francisco: Jossey-Bass, 1986

Monaghan, Patrick. "The 'Insane Little Bubble of Nonreality' That Is Life for Architecture Students." *The Chronicle of Higher Education*. June 2001.

Schön, Donald. The Reflective Practitioner: How Professionals Think in Action. Basic Books, 1983.

—. The Design Studio. RIBA Publications, 1985.

Temkin, Jody. "For would-be architects, grad school like boot camp." *The Chicago Tribune*. January 6, 2002.

Quinn, Richard. "Studiomania." *Crit*. Fall 2000: 24.