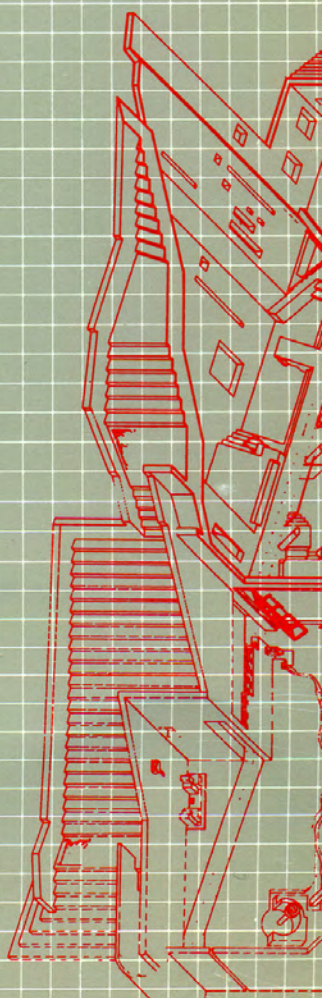
JOURNAL OF ARCHITECTURAL EDUC



NAL OF ARCHITECTURAL EDUCATION

Cover: Sketch by Reza Hadaegh

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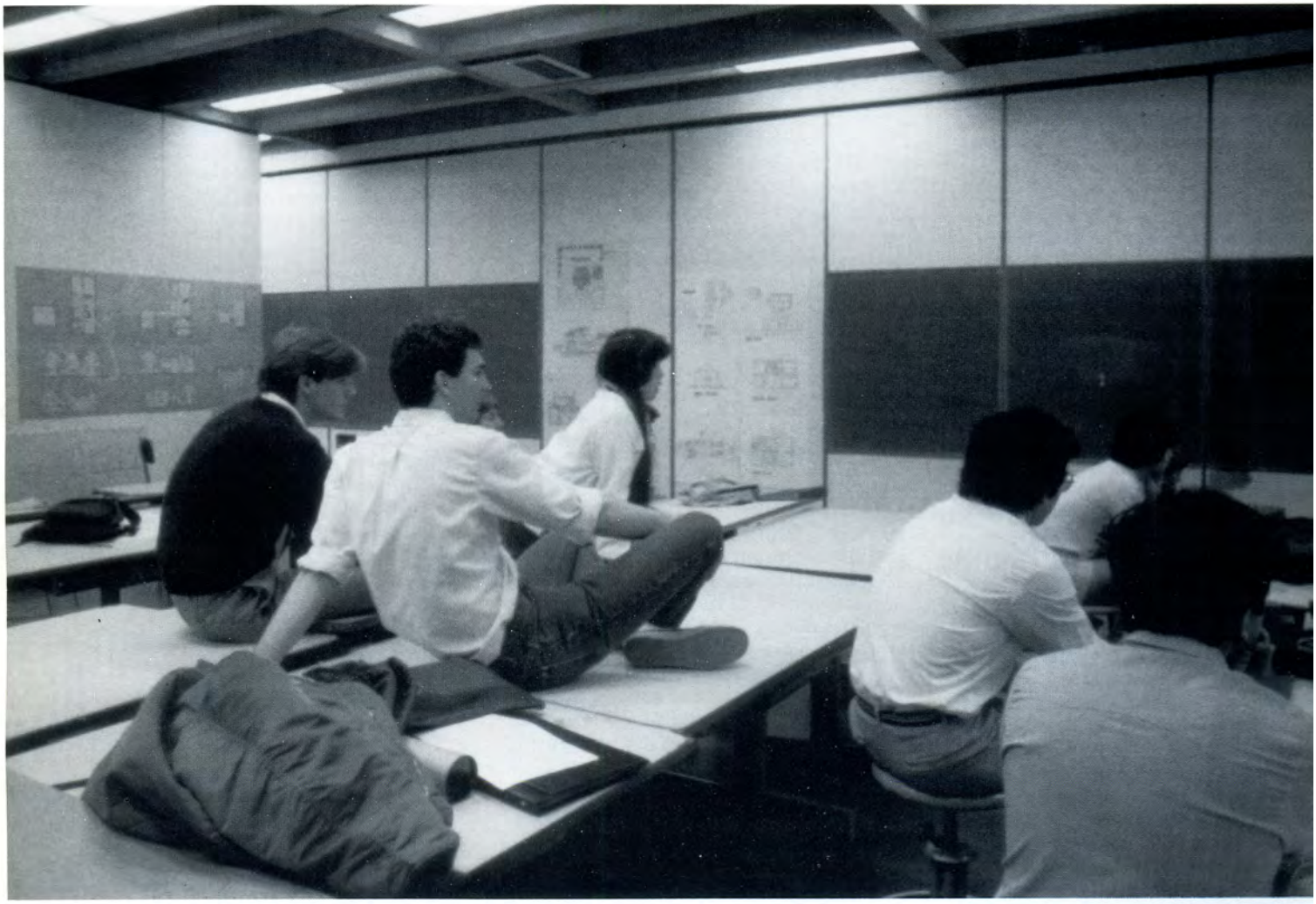
Private Reactions to Public Criticism

Students, Faculty, and Practicing Architec State Their Views on Design Juries in Architectural Education



Kathryn H. Anthony *is an Assistant Professor in the School of Architecture and in the Housing Research and Development Program at the University of Illinois at Urbana-Champaign. She holds a B.A. in psychology and a Ph.D. in Architecture from the University of California, Berkeley and has previously taught at Berkeley, San Francisco State University, and California State Polytechnic University, Pomona. A portion of this paper was presented in a lecture at the ACSA Teachers' Seminar at the Cranbrook Academy of Art in June 1985.*

This article reports the results of research about the effectiveness of design juries in architectural education, a topic which important is a conspicuous absence of information from what is our most valuable resource: our students. This research examines the educational value of juries, both interim and final, how design students cope with public criticism, and a comparison of the architecture student "subculture" with that of other students. The study consists of two phases. Phase I is a case study at a mid-sized university. This study relied on systematic behavioral observations, interviews, questionnaires, and diaries. Students, faculty, and alumni in architecture, urban planning, landscape architecture, and outside environmental design participated in the research. Phase II is a follow-up study of other schools, based on questionnaires of Teachers' Seminar. Results strikingl ument that the vast majority of all th questioned—faculty, students, and p ticing architects—believe architectu juries need improvement. Architectu students surveyed learn very little fr juries, but learn more from interim t final juries. Most students respond c sively and nervously to juries, and th high degree of tension and sheer "b out" that architecture students expe ence greatly interferes with the learn process. Finally, this research docur that the architecture student "subcu differs substantially from that of oth dents, and that it may well be harmf students' health. Implications of the findings are discussed, and suggest

ction

rpose of this research was to study
' systems as a method of architec-
lucation. Although generations of
ctural educators have relied on jur-
he primary vehicle to evaluate their
:s' work, very few have taken a seri-
k at the jury system itself and its
onal value to students in the
studio. In this respect, architec-
lucation is almost light years
most other academic fields
orofessionals have systematically
ed and often modified traditional
g techniques on a regular basis.
ching of mathematics, for exam-
derwent a tremendous change in
0s with the advent of new math
re recently, in the late 1970s to
vith the introduction of courses on
nxiety". Foreign language educa-
s been transformed through lan-
aboratories and through the "total
ion" approach. Computerized pro-
nave substantially altered several
f instruction in recent years. Even
cation has been revolutionized in
nstitutions, from elementary
n university levels, by applying new
dge about split-brain theory.
s and workshops on "draw-
:he right side of the brain" have
up like wildflowers across the
', posing a serious challenge to
nal teaching techniques.

ching of architectural design,
r, has remained relatively constant
ne French Ecole des Beaux-Arts
ablished in the nineteenth century.
hitectural jury came into vogue in
ted States around the turn of the
', with the studio as the center of
g.[1] Since that time, the process has
y included a fixed curriculum
design study begins upon entering
the division of students into stu-
ateliers led by a *patron* or master,
of sketch projects or the *esquisse,*
lition of older students or *anciens*
younger ones, the teaching of
by practicing architects and the
ion of projects by a trained jury.[2]
dents' fate ultimately rests in the
of the jury who decides whether
ss or fail. It is worth noting, how-
at the design juries of the Ecole
aux-Arts were conducted behind
doors. Students' design work was
on the basis of their graphic sub-
ıs alone; no oral presentation was made. By contrast, most juries or reviews held in today's architecture schools involve both verbal and graphic presentation of students' work.

Some assumptions of this paper ought to be pointed out. They center around the notion that the jury is intended to be a learning experience. Ideally, after participating in a jury, students learn how to improve their design concepts. They also improve their ability to evaluate critically design work. The information gained from each jury experience, ideally, has a cumulative effect so that the design of subsequent work is at least partly influenced and improved as a result of the criticism received on previous design projects. This is the accomplishment of what some scholars have called "double-loop" learning, a deep level of understanding which allows one to reexamine values and assumptions.[3]

Naturally other lessons can be gleaned from the jury experience as well, but these concepts seem to be central. These assumptions form the underlying framework with which most schools of architecture operate. They are reflected in the strong emphasis on design studios (which usually constitute the largest portion of the architecture curriculum, are awarded the highest amount of course credits, and occupy the most space—compared to other classroom facilities—in architecture school buildings) and on design juries as a primary way of measuring and evaluating students' progress in design. But are these assumptions really true?

Scholars have virtually ignored the study of design juries. A literature search revealed virtually no empirical research on the educational value of the jury system. Most closely related work, however, includes the research by Hassid, who developed a system of classifying criticism, the two-volume report produced by the Consortium of East Coast Schools of Architecture, and an account of a clinical psychologist who has treated architecture students.[4] However, none of these sources deals directly with juries.

One of the most useful concepts which can be gleaned from the scant literature available was developed by Argyris, who coined the term "Mystery—Mastery" to explain how students are taught about architecture.[5] The notion here is that somehow the critic has mastered the art of design, but the process throug
he or she arrived at this mastery
mystery to the student. R. D. Lair
called such a dilemma a "knot,"
cept well articulated in the follow
quote:

"There is something I don't know
that I am supposed to know.
I don't know what it is I don't kno
and yet am supposed to know,
And I feel I look stupid
if I seem both not to know it
and not know what it is I don't
Therefore, I pretend I know it.
This is nerve-racking
since I don't know what I must
to know.

Therefore I pretend to know ever

I feel you know what I am suppos
know
but you can't tell me what it is
because you don't know that I
know what it is.
You may know what I don't know
that I don't know it,
and I can't tell you. So you will ha
tell me everything."[6]

Donald Schön's work takes a mo
depth look at the experiential nat
the design studio, however it falls
focusing especially on design jur
recent heated debate in *Architec*
Record over the efficacy of the d
studio, too, did not discuss juries
depth.[8] The notion of criticism ha
discussed over and over again in
primarily in essay form or throug
lated examples from case studies
design juries are seldom mentior
More importantly, perhaps, is a c
ous absence of information abou
the educational value of design j
from what is probably our most
valuable source of information: c
students.

In light of this situation, this rese
sought to make a critical, system
inquiry into the architectural jury
particularly from a social and psy
cal perspective, while including s
as a primary source of informatic
following issues were addressed:
1) How educationally valuable is
system and for whom? How do fa
students, and former students of
ture (practicing architects) comp
their opinions of the jury system?
hypothesis is that current studen

probably be more critical of juries than would alumni or faculty, since the students are on the "receiving end" of the criticism and since the jury experience is most immediate to them.) How do juries in school compare with client presentations in practice? (One of the common rationales for juries is that they help prepare future architects for professional presentations. Do they?) Are any changes needed in the jury system, and if so, what are some suggestions for improvement? 2) Are interim and final juries equally effective teaching and learning techniques, or is one more effective than the other? 3) How do design students cope with public criticism? 4) How do the behavior patterns (especially with regard to sleeping and eating) of architecture students compare with those in other environmental design fields, and with those outside design?

Methods

To attempt to answer these questions, a study was conducted during the course of one academic year, with a follow-up comparative portion a year later, ending in June 1985. The first and major component of the study was completed at a mid-sized western university with a relatively large Department of Architecture (approximately five hundred-fifty students in a five-year Bachelor of Architecture program and forty in a Master of Architecture program). Architecture students collected most of the data under close instructional supervision as part of two courses entitled "Behavioral Factors in Architecture" and "Directed Research." Based upon feedback from students, faculty and school administrators, various phases of the study were refined and further developed to help address issues which arose as the research progressed. Data from the second phase of research, the faculty questionnaire at the Cranbrook Teachers' Seminar, were collected by the author.

a. Phase I: Case Study

The purpose of Phase I of this research was to document certain attitudes and behaviors of architecture students and faculty in the context of design juries at a case-study school. Issues addressed included the overall educational value of juries, a comparison of the educational value of interim vs. final juries, methods of delivering and responding to criticism and students' personal eating and sleeping

To attempt to answer various questions about the jury system, a variety of research techniques was used.[10] The sequence of research is reported in Fig. 1. These techniques included:

1. Systematic behavioral observations at nine architectural jury sessions, some recorded on videotape, of a total of one hundred-thirty student presentations.

2. Interviews of: a) forty-three architecture students immediately after receiving criticism from jurors; b) forty architecture students on an ongoing basis throughout the term; c) nineteen environmental design faculty: (eleven architecture faculty, and five landscape/planning faculty at the case-study school and three other architectural educators in the same geographic region).

3. Diaries of twenty-seven architecture students.

4. Questionnaires of: a) one hundred eighty-nine architecture students; and as a comparison b) thirty-two landscape architecture students; c) thirty urban and regional planning students; d) eighty-one nonenvironmental design students (enrolled in a "General Psychology" course for nonpsychology majors); and e) thirty-four architecture alumni (practicing architects) questionnaires.

5. A brief follow-up questionnaire of eighty-five architecture students.

b. Phase II: Follow-up Study of Other Schools

A year after all the data had been collected at the case-study school, a follow-up study, the second phase of this research, was conducted at the ACSA Teachers' Seminar, held at the Cranbrook Academy of Art. The seminar brought together a relatively small group of faculty and administrators from architecture programs across the country and a few from abroad. Enclosed with the on-site registration materials was a questionnaire about the jury system which participants were asked to complete and return to a lecture presentation delivered by this author. At the lecture the results of the case study were presented and a discussion session followed.

The purpose of this questionnaire was

other than the case study) evaluated t
jury system, and 2) to try to ascertain
whether or not specific features of th
jury process at the case-study institut
were typical, i.e., to begin to determir
a limited extent which findings might
generalizable elsewhere.

The questionnaire was based upon th
administered at the case-study schoo
the architecture students and alumni
to planning, landscape, and nonenvir
mental design students. In addition, a
number of items were added specific
for this group.

A total of sixteen questionnaires was
returned. The results reflect response
from faculty and administrators at fou
teen different institutions; twelve Am
can and two foreign representatives f
the following schools participated:

Foreign: University of Manitoba, Win
peg, Canada; Royal Institute of Techn
ogy, Sweden.

U.S.: Andrews University; Auburn Un
sity; Ball State University; California
technic State University, San Luis Ob
Louisiana State University; Tulane Un
sity; University of California, Berkele
University of Illinois at Urbana-Cham
paign; University of Miami; University
Oregon; University of Washington; W
ington State University.

These faculty and administrators we
alumni of twenty-one different institu
tions, including Princeton, MIT, Yale
nell, Berkeley, Michigan, Illinois, and
eral others. Most had received Maste
Bachelor degrees of architecture. Ha
had received their last degrees less t
ten years ago, while a few had gradu
over twenty-five years ago. The majo
those who responded (69%) were ov
thirty-five years of age. Thirteen mal
and three females returned the ques
naire.

c. Data Analysis

Qualitative data were analyzed throu
content analysis. A series of statistic
tests was used to analyze the quanti
data. For the behavior observations,
observation sheet was used to recor
behavior for each presentation at ea
jury session. Students presenting th
work, faculty (including jurors), and
rest of the class were observed. Non

ooks on body language, specific
ior patterns were placed into partic-
ategories (offensive, defensive, and
us) and recorded on observation
.[11] Selected presentations were
aped.

ts

ving is a summary of the major find-
om this research.[12] They center
d a number of themes which are
ned in detail below.

e Educational Value of the Jury
stem

n, the results of all phases of this
ch—interviews, questionnaires,
vations, and diaries—indicate that
st majority of those questioned
e that today's architectural jury sys-
inadequate and needs improve-
(Fig. 2) This sentiment is echoed by
nmental design students, faculty,
umni at the case-study school as
s by faculty and administrators at
nstitutions. Ironically, the only
sampled who is satisfied with the
which their work is judged is the
e of nonenvironmental design stu-
they have no juries at all. Since this
ch was not limited exclusively to the
tudy campus, but includes data
ther campuses, the results appear
somewhat generalizable to other
ls of architecture.

pothesis that alumni would be less
l of juries than current students was
rne out. Instead, it appears that
ared to other groups, architecture
, students, and alumni are about
y critical of the system.

dvantages of the jury system,
ding to some respondents, is the
nange of ideas, the fact that it sets a
ne for students to work towards,
at it is a broadening and learning
ence. For those who feel the system
improvement, suggestions for stu-
are to participate more actively, to
ter prepared, more confident, to
positive attitude, and to perceive
y as a learning experience. Some of
commendations for the faculty are
clearly the format and procedures,
ss issues specifically and focus on
m objectives, and to schedule the
ter the project is due. Suggestions
iting critics are to become more
ar with the problem, to speak to the
rather than assuming a role, to

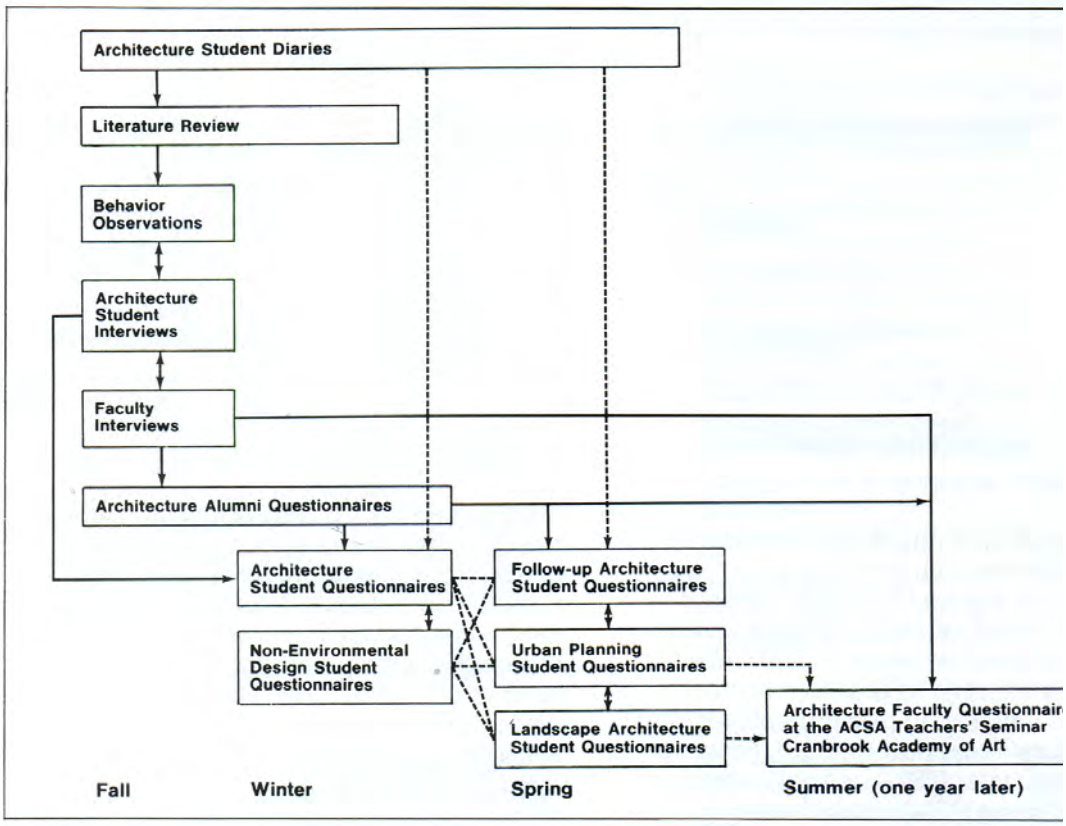


Fig. 1 Research Process

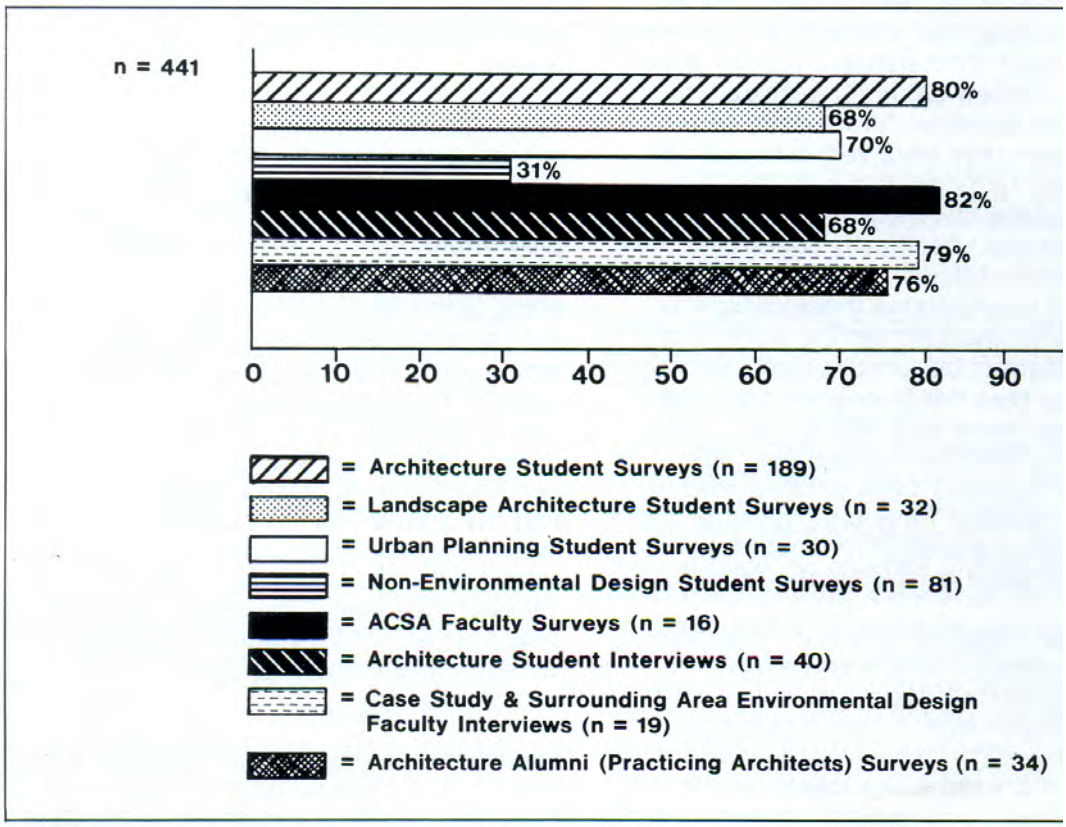


Fig. 2 Comparisons between Architecture students, faculty, and alumni and students in related and other disciplines with regard to their opinions of the jury system or ways their work was judged. Percentage indicates those who believe the system needs improvement.

examine all work seriously before beginning comments and to know the program and educational objectives of the course.

Furthermore, when the forty-three students were interviewed soon after making their design presentations, it was found that roughly two-thirds (63%) do not think that they had learned much from the jury comments they had just heard. Only slightly over a quarter (28%) believe they had performed well, citing confidence and preparation. Poor verbal presentation, nervousness and exhaustion are the reasons cited among those who think they did only fairly. Those who think they did poorly blame their inexperience, poor verbal presentation, and lack of enthusiasm.

When asked how much they remember about projects of classmates who presented work before their own, most of those architecture students interviewed say they remember some or a lot. About half (53%) are able to give two correct examples describing previous projects and the jury's reaction to them. However, over one-quarter (28%) cannot remember anything. Most (72%) cannot remember anything about those projects presented after their own.

The analysis of the twenty-seven student diaries revealed that students do not seem to learn much from public criticism. After a jury, only a few students were able to answer the question "What did I learn?", even though they were very articulate in describing their own thoughts and feelings about the criticism they received. Only a handful specifically stated that they digested the criticism, rectified any problems, and incorporated these criticisms into their subsequent design work. One student learned about structures, another learned to view things beyond one's personal experience and "loosen up". These were about the only substantive comments to be found. Desk crits seemed to be most valuable. Final crits, given at the conclusion of a project or in jury format seemed to be of *least* educational value.

More often than not, however, what students claimed to have learned from design juries has more to do with presentation style, or how to "play the game," than with design. For instance, after the first crit of the term, one fourth-year student learned "to be patient, modest, courteous, to keep my talking to the bare mini-

final crit, this student learned "to speak softly but carry a gargantuan stick."

Another student said:

"What did I learn? I learned that third year (design) is no more organized than second year was last year. I learned that . . . the teachers don't agree on methodology. The most important thing I learned . . . is what *I* need to concentrate on if I want to be a good architect and the separation (between) that and what I need . . . to be an 'A' student."

In a similar vein, a third-year student designing a beach house related:

"They talked only briefly about my general design when they hit on my southern, beach front elevation. Very open. They took off on a debate over energy conservation versus ocean views, and when they realized that they had gotten carried away on that one issue, they stopped and went on to the next project . . . . The instructors were too preoccupied with their own egos. They began attacking each other rather than the project . . ."

In sum, most students in our sample of diaries and interviews appear to learn little from their final juries. Furthermore, what they do learn has little to do with design.

Three-quarters of those faculty surveyed at the ACSA Teachers' Seminar believe that student presentations to a jury are either somewhat or very different from presentations to professional clients. Of the architecture alumni (practicing architects) sampled from the case-study school, most (82%) also concur that the two processes are quite *different*. Reasons for this are that a designer's professional presentation usually commands more respect from the client than students typically received from the jurors, that the professional presentation is a more informal process than are juries in school, and that clients are much more involved throughout the entire design process than are jurors at the university. Here are some examples of the practitioners' comments:

"I don't believe the comparison to be a relevant one. Both situations are pressure-filled, yet . . . client presentations involve

"Often, professionally speaking, the presentation is a product of a team In school, I don't recall working as on any project, which I think was ar great detriment. The emphasis at sc was on *individual creativity* through the design process. As a profession see a lot of people who carry that at into an office, and are almost incap exchanging ideas and working crea on a team basis."

"The jury system is much more diffic handle than client presentations. Yo ego and self-esteem are much more exposed and you must deal with a la audience. If you can handle a jury, y can handle a client. I think it's a goo training ground."

"The most difficult, abusive school ju but a comedy when compared with t indecisive, budget-conscious, critica porate client! (not to mention the de oper, the building department, or va other entities an architect must deal with)."

"Totally different. Clients tend to con their comments to the satisfaction o program requirements. The school ju is closer to the in-office reviews of principals and other staff."

"I believe they are worlds apart in terr importance. The jury in school turns a joke at the last minute, becoming r a means of securing a grade in a cla but a professional presentation is a r of relaying your most sacred design ries in a way that may eventually bec part of the built environment. It is wh more of an exciting and real-life expe ence, where the school jury is merely competition of your peers and you."

b. The Educational Value of Interim Final Juries

Most of those questioned agree that *pared to final juries, interim juries are more effective learning technique. W interim juries seem to serve many us purposes, the value of final juries app to be minimal at best.* Of all groups sa pled, architecture students say they l *least* from final juries. (Fig. 3) Views o faculty and students on the amount learned from each format seem to dif substantially.

faculty sampled at the case-study
ol and neighboring institutions
e that because interim juries allow
justment and fine-tuning of con-
, they result in more learning than
uries. Several architecture students
iat final juries, as opposed to interim
, do not help them very much
ise it is really too late to alter the
ct. Others feel that interim juries are
useful as studio critiques. However,
thers believe that final juries are
beneficial by offering diverse opin-
opportunities for dialog, and
its. And many students believe that it
y at final juries where their design is
lete enough for others to comment
gently on the solution. In sum, fac-
nd students believe that interim and
uries accomplish different goals.

thods of Delivering and Responding Public Criticism

ods of delivering criticism at both the
study school and other universities
oned appear to be similar. *Most*
sm is oral and delivered in public,
e-spot; very little criticism is written.
esult, design students are under a
deal of stress during the jury. Unfor-
ly, this tension interferes with their
to recall correctly the criticism they
ven about their own work. Further-
their sheer exhaustion after pre-
g their work prevents many of them
even listening to any jury comments
other students' projects. Criticism
y seems to go in one ear and out
her.

stance, observations revealed that
receiving the jury's comments, *most*
ecture students display defensive
ervous behavior. Most of this behav-
s non-verbal. Most common student
ior patterns observed were crossing
and legs, avoiding eye contact, and
ng up the mouth or chin. Twiddling
s, tapping feet, pacing, scratching
s parts of the body, and biting fin-
ls are other signs of nervous behav-
ost faculty behaved nervously too,
some onlookers from the rest of the

nsion observed during these ses-
s mirrored in the students' private
. Students find the design process,
pecially crit sessions, to be a highly
onally charged experience. The
ty of emotions described in the dia-
astounding. As one student sum-

marized, going through a crit is like "riding on a rollercoaster with no seatbelt." Emotions run high and range the full gamut from high to low. However, the vast majority of emotions narrated by the design students about juries was strikingly negative. *The most commonly felt emotions are anxiety, fear, frustration, anger, embarrassment, disappointment, guilt, and disgust.*

For the most part, students' feelings of anxiety centered around feeling unprepared. A few days before his preliminary jury, one fifth-year student wrote:

"I can see it now, the gallery full of other students and aggressive words exchanged between us and the jurors. My knees are literally shaking just thinking about it. The muscles in my stomach feel tense and tied up in knots."

Before his final jury, this same student wrote:

"I feel a deep sense of futility. I have spent at least eight hours a day on my drawings, staying up until 3 a.m., getting up at 8 a.m., and my drawings don't show it. . . . As I was driving home from school today, I suddenly realized that . . . all my life was concentrated on that fateful Wednesday. Life beyond Wednesday was not important."

Another fearful student narrated: "I do not want to present my work. It is very superficial and unsubstantial. I do not want to be yelled at by my instructor."

Feelings of fear are often accompanied by visions of dreadful consequences. Often these fears are cloaked in very harsh language. As one student put it, "Undoubtedly, the jury members will crucify me . . . my instructor is famous for tearing students up." Another student, before the final jury, made this diary entry:

"The whole weekend I have been worried sick that I'm not going to get done. I had very little sleep and am coming down with a cold and a cough. I feel awful and hate architecture at this moment. I stayed up all night last night and feel miserable. I would do anything to get out of (the jury) right now. I wish I had an accident—just anything so that I wouldn't have to face the jury."

Frustration was another emotion shared by several students. Several students

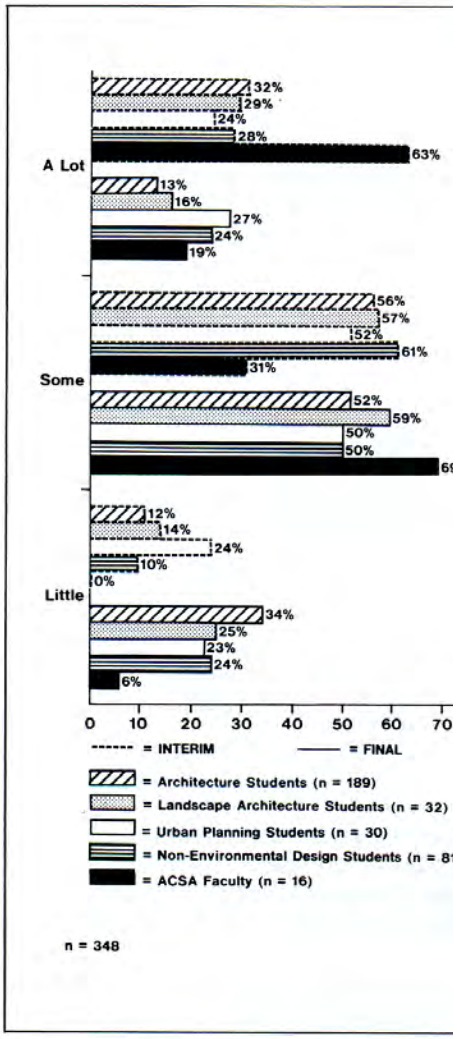


Fig. 3 Amount learned from Interim vs. Final juries. Comparisons among students in Architecture, relat other disciplines and ACSA faculty (from questionn

complained of being cut off during presentation to the jury. As one ind put it:

"I was the second one to present, th must admit I wasn't as nervous as I ally am (I guess 3 × 5 note cards, a outfit, and good drawings go a long towards making one feel prepared) ever, Visiting Juror X never let me f my presentation (I guess he gets ne if he doesn't get his two-cents wort He cut me short . . . so basically I he him out and I tried to finish my pres tion but then he interrupted me aga I just thought, 'Well, I guess I'm thro here.'"

Others were frustrated during the ju contradictions among professors, b own professors contradicting previ

ey had given throughout the
y their professors "tuning out"
resentations altogether. A rather
account went like this:

ion Day—Do I feel like shit . . . .
teacher who gave me an excel-
as Professor X. Gave me all pos-
all negative points. Can you
' (My professor) walks out at the
of my crit and comes back in
y're criticizing all my work. Real

student had this to say about
ion day:

ite before I began to speak Mr. X
. He was the reason for my crit
wnhill . . . . It seemed as though
and talked and talked and every-
said . . . came out bad. What
is that some of the issues he
up (contradicted) what I had been
n by (my professor), and I did not
ay, 'Well, Professor Y didn't tell

ent entered reactions to a pre-
ury, which was held in front of
id a professional audience
jeable about the project's site.

mbarrassed that they didn't say
about (my project) or even ques-
uess they did not see what I
was on an 8 ½″ × 11″ sheet. I
nbarrased that after my presen-
st walked out of the class. The
y I felt like scum of the earth.
se, when I came home, the
ght I resented myself."

week, following another jury pre-
, this same student stated:

ed a lot of technical stuff but
f architecture. I feel disap-
nd depressed. I don't feel like I
nything from this class. I just
ut full of confusion and depres-
days as an 'A' student are over."

te student, whose team made a
entation of a group project,
d disappointment and explained:

und out that our team was just
y displaying some ideas which
unged together at the last min-
sad and . . . embarrassed."

o expressed positive feelings
ir jury experience were clearly a
minority (ten out of twenty-seven students). Most commonly cited pleasant emotions were surprise, relief, happiness, a sense of accomplishment, and on rare occasions, euphoria. Students tended to feel this way after a favorable crit. One student entered:

"After crit—feeling fantastic—I finally have got the idea of developing a concept through the entire design. The guest critic said 'I'm happy to be here' after looking at my project . . . I also got congratulated by other students . . . will now go home and sleep for a couple days."

A student whose final jury went well explained:

"I feel satisfied, peaceful, proud to know I was productive and recognized. I won't forget the smile of my instructor, his arm around me, and his words, 'You're great!' At that moment, they meant so much to me."

Another student, while writing about favorable feedback from the jury, exclaimed, "Miracles never cease!"

The diaries also revealed that students highly regard positive criticism—but they don't get enough of it. Most of the accounts in the diaries centered around the psychological impacts of negative criticism. In fact, students' negative emotions were often directly linked to harsh, negative critiques from their professors. Stories about negative criticisms far outweigh those of positive critiques.

Students used powerful expressions to describe their negative reviews. Among some of the stronger phrases were "we got completely shot down", "the jury was ripping me apart," "the instructor came down on us," "they jumped on me," "I was crucified," or "we were massacred," "he's damn sarcastic," and "it was the ultimate slap in the face."

Accounts of positive criticism, though rare, were just as touching. Some students praised their instructor for speaking up on their behalf to the rest of the jury. One student expressed: "Professor X was a real lifesaver . . . he jumped in and bailed us out. . . . He is like our father and we are his children, and he stands up for us."

Another said:
"The thing that has 'made my day,' however, is that Professor X himself came by and took a look and said, 'You great project here.' I felt that t first positive thing he ever sai work and it made me feel a lo

Perhaps the saddest case was ing: "After class I ran into my told him I felt as if I didn't real feedback during my review ar that it was because I had a go Had the student not confronte instructor directly, there woul no way of knowing if the instr uation was positive or negativ through the course grade.

Several students said that the highly motivated to continue after hearing positive criticisn By contrast, an entirely negat often led to their feeling sulle depressed and unwilling to pu project.

d. The Studio Subculture: Ea Sleeping Habits of Design

Questionnaire results indicat ing and eating patterns of en design students—especially t architecture—dramatically di those outside the design prof Architecture students constit est group of those who *do no* the night before a project is d Most architecture students d all or sleep very little; altogetl majority (83%) sleep less thar

Most students sampled—incl non-environmental design ma less than usual the day a proj However, almost all the envir design students eat poorly. A substantially more of the envi design students eat junk fooc nonmajors.

Architecture student diaries r a combination of poor sleepi usually little or no sleep befo day itself—and poor eating h junk food from vending mach food at all—accompanied by tently high level of stress con many students experiencing "burnout," or complete menta cal exhaustion.[13] One student was typical of others: "Today presentation. I have been up the night before and before. . too tired even to care. I just w it over and done with." Sever fatigued that they reached a s

eeling like they would be
iving up altogether.

to prevent this tendency by
g a type of "catharsis," a clean-
mind and body, prior to their
tation. A few students pur-
t home, showered, and put on
es. As a result, they were out
start," ready to begin on a

act burnout after the jury, most
ward themselves by rushing off
heir much needed sleep. Oth-
n a delicious meal while trying
eir bodies and their minds to
rking order.

ns

nclusions are drawn from this
) The vast majority of all those
l—faculty, students, and prac-
itects—believe the jury system
ate and needs improvement.
level of learning about design
est. Most of those questioned
t academic juries and
al practice presentations
ntially different, so the argu-
school design juries help pre-
practitioners for such presen-
uestionable. 2) Compared to
, interim juries are a more
arning technique. 3) Most criti-
es is oral and delivered on the
equently most students
efensively and nervously. The
nt defending their egos and
eir emotions interferes sub-
ith the learning process. Stu-
ly regard positive criticism—
on't hear it often enough. Psy-
and learning theorists have
nstrated the educational value
reinforcement; in this regard
ctural educators have a lot to
ddition, skills such as time
nt and oral presentation tech-
not taught adequately and yet
a major impact on students'
The studio subculture differs
y from the lifestyle of non-
dents, and, although this sub-
foster a sense of belonging,
cts of it may be detrimental to
ental and physical health. The
of proper sleep and diet
be overemphasized.

level of stress may be needed
future architects, but the pres-
stress is too high to be of

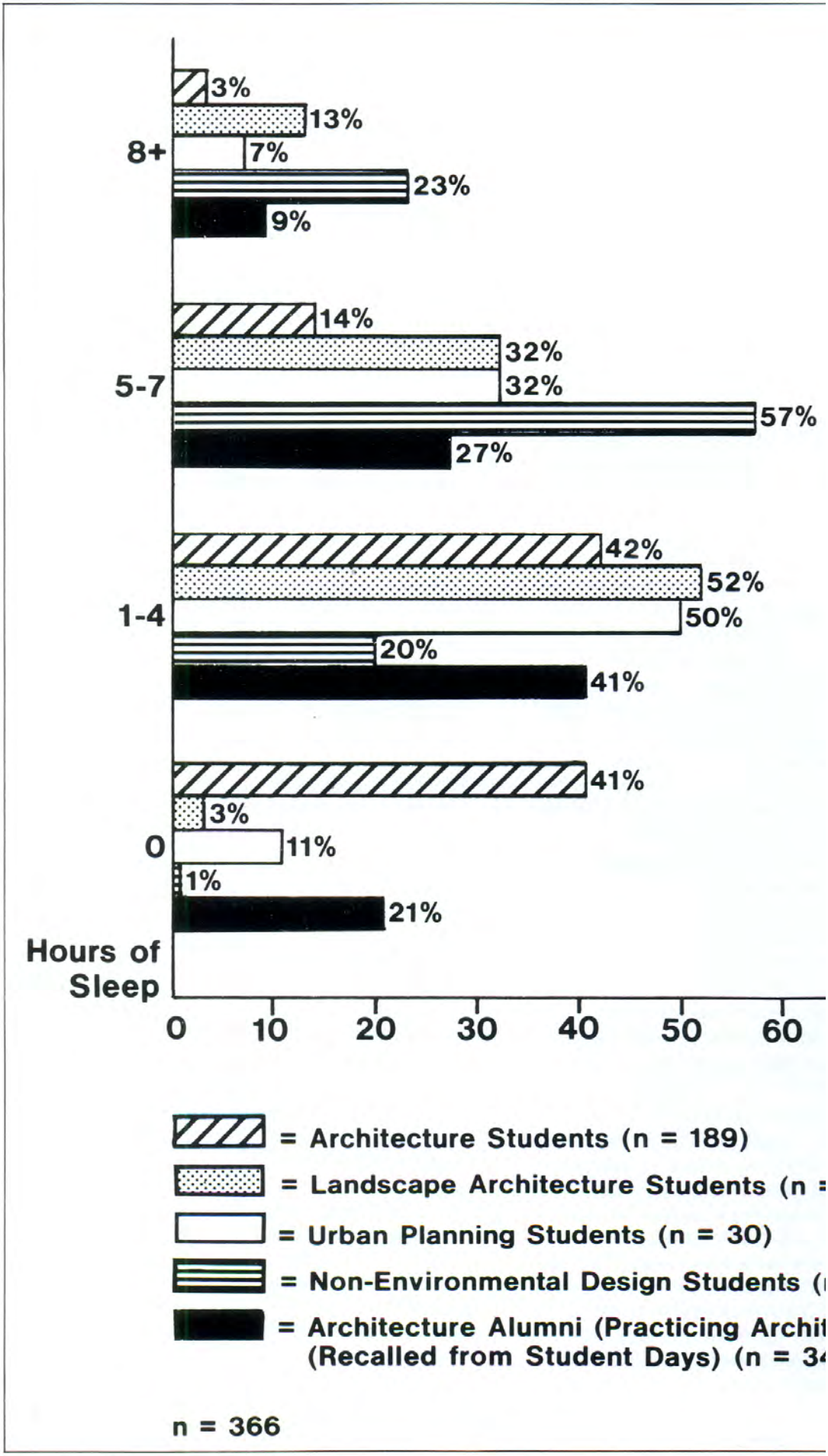


Fig. 4 Comparison of Environmental Design, non-Environmental Design students', and Architecture alumni's sleeping habits the night before juries or project due date (from questionnaires)

ıum educational benefit. Neverthe-
ıries do have some positive quali-
ıd, with substantial refinement, they
ıntinue to play an important role in
ı education.

ırse, one should not dismiss the
of juries entirely based on this study
As one colleague has suggested,
ing for a jury might be comparable
cticing for a musical recital. In both
ces, the preparation and practice
ell be an even greater learning
ence than the final presentation
In addition, the jury may well
ıplish other goals besides learning
design—for instance to socialize
ensitize students into the subculture
ıitecture, and to learn to negotiate
lients. Furthermore, juries can
imes be the only place in which the
s subdisciplines of architecture—
ıs structures, history, energy con-
environment and behavior issues,
stance—are integrated. In some
it is *only* through the juries that
ıts view the field as a true Gestalt,
the whole is actually greater than
m of its parts. This important aspect
es should not be overlooked.

ɔnclusion here, however, is that the
ıt of stress produced by public criti-
ıt juries is a key to understanding
effectiveness as a way of learning
design. *Stress can be a positive*
ogical tool, provided it is used in
ration. In the case of the jury system,
timal level of stress is high enough
tivate and discipline students to
eir best foot forward," so to speak,
ɔt so high that it interferes with stu-
ability to function normally. It
ırs from all sources of information
ıe "ideal" feedback cycle discussed
r, is not working properly, largely
ıse stress gets in the way. Similarly,
e-loop" learning is not achieved,
hat learning does take place
ns at a relatively low level.[15] System-
xperimentation with a variety of pre-
tion and feedback techniques,
ling juries—and measuring stu-
responses to them—would help
ectural educators to fine-tune this
ss.

estions for Further Research

tudy has its limitations which can be
ıted by further research. More
fically, further refinement of the questionnaire, larger samples, and replication of various research methods across several university campuses would undoubtedly yield more far-reaching results. A nation-wide survey of architecture faculty, perhaps administered through the ACSA, would be highly illuminating.

In addition, further research could use other methods to study the jury system and its impact on architecture students. University medical facilities could be contacted to find out the number of school-related injuries suffered by architecture students around jury time; some have said that design students are accident-prone, cutting fingers while building models at 3 a.m. Counselors could also be contacted to ascertain the numbers of architecture students who sign up for therapy. Perhaps a critical issue for further study concerns the definition of the "jury" itself. Although the results of the Cranbrook Teachers' Seminar questionnaire confirm that juries at the case-study school tend to typify those of the fourteen universities represented, other institutions may conduct their jury sessions differently. For instance, at some universities the term "jury" has been replaced by "review," which in itself implies a less adversarial situation. However, the name change may well be euphemistic rather than truly symbolic of a radically new approach to evaluating students' work.

Recommendations

Based on this research here are a few recommendations to help make the architectural jury system more effective as a learning technique:

1. At the outset of a design project, have students and faculty (ideally the instructor and those who will later serve as jurors) help establish the criteria for a "successful" outcome: i.e., what types of design features or spatial qualities will help make this an "A" project. If the criteria are spelled out clearly and commonly agreed upon, the "mystery" component of the mastery-mystery phenomenon will be removed.[16]

2. Consider scheduling a final jury or review session about a week or two prior to the actual conclusion of a project. In this manner, students can incorporate some of the revisions suggested by the faculty into their final designs.

3. Require students to have spe
ing in oral presentation techniqu
through public speaking course
through special sessions during
time. Consider inviting faculty fr
demic departments such as spe
communication to help students
verbal presentation skills. Anoth
is to have students videotaped d
"practice jury," and then play bac
tape so students can see themse

4. Consider the purpose of an o
sentation simply to gain practice
public speaking. Invite other fac
students to hear the presentatio
to judge the projects in public. F
private methods of delivering cr
(i.e. strictly in writing).

5. Ensure that all jurors, includi
have written copies of the desig
grams well before the jury sessi

6. Insist that students submit th
work at least one full day before
presentations. This will allow th
rest up and prepare better psycl
for their jury and should help m
burnout.

7. Require that written criticism
to each student. (The University
at Urbana-Champaign School o
tecture encourages faculty to p
written criticism to students at
ies.) Either ask all jurors to writ
icisms down on paper and subr
the students (via the professor,
use the feedback to help deter
students' grade), or else assign
dent a "buddy," i.e., a fellow cl
ber to take notes on the criticis
during the presentation. Stude
more likely to remember what t
hear and see in writing, rather t
what they hear.

8. Encourage faculty and gues
deliver more specific, construc
impersonal criticism. Vague sta
(like "This is a great project" o
an example of bad design"), ur
are part of a much more substa
mentary, can be damaging and
pedagogically ineffective.

9. Rather than reviewing each
individually, use a jury to evalu
cally all projects together—see
en masse in a large pin-up or e

general trends and
xamples can be brought
ints, but names of stu-
nentioned. This removes
efense and the emphasis
d comprehension at the
ius sparking discussion
learning.[17] It also
ntages or disadvantages
st or last to present a

n instructors might try
th a variety of formats
nt work, and ask the stu-
help them learn the
appear the most logical

s

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s financial and
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