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STUDENT PERCEPTIONS OF THE ARCHITECTURAL DESIGN JURY

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Abstract

The jury system is a traditional architectural learning assessment tool. Since the early years of the 20th century, it has been imported to schools of architecture throughout the Arab world by foreign expatriates and native scholars educated in the United States and Europe. The system has been well documented through the study of its evolution, the analysis of its processes, and also was criticized heavily in the literature of the Western world. However, there appears to be a severe lack of research and documentation in this area in the Arab world. The purpose of this paper is to fill this informational gap and attempts to answer the questions of how jury practices are performed in the context of the Arab world and how students perceive the jury system and its underlying practices in such a context? In an attempt to answer these questions, a multilayered methodology is deployed. First, to induct generalities between the two contexts (Western and Arab) an extensive literature review is conducted on the educational value of the jury system and the embedded communication processes. Second, to deduct particularities concerning specific contexts of the Arab world, two empirical studies are carried out with the intention of investigating jury practices and student perceptions within the context of selected cases from Egypt and Saudi Arabia. The understanding and portrayal of the Jury system and its associated problems contribute to the development of a set of recommendations to improve the performance of the Jury and its acceptability to architecture students.

Keywords

Architectural education, design studio, architectural design jury, assessment, learning.

Introduction

The architectural design jury system was -and still continues to be- a subject of debate over the past twenty years. Since the emergence of the classical study of Kathryn Anthony, published in Private Reactions to Public Criticism in 1987 and Design Juries on Trial: The Renaissance of the Studio in 1991, the topic has attracted a considerable number of educators to study, investigate, and debate its underlying processes and outcomes. Analytical descriptions of the jury system however can be traced back to earlier writings that emerged in the late 1970s and early 1980s (Carlhian, 1979 & 1980; Chafee, 1977; Egbert, 1980; Kostof, 1977; and Middleton, 1982). These writings point out that the jury system as a model for evaluating architecture students was first developed as part of arts education and training, and later was adopted in 1795. This was part of the rituals that were developed by the French system in the Ecole Des Beaux-Arts in Paris (School of Fine Arts). The jury practice started

as evaluating students' projects behind closed doors, where students were not allowed to be part of the evaluation process. This took place until the beginning of the 19th century when the Ecole Des Beaus-Arts decided to open up the system and allow students to be part of the evaluation process.

During 1800s, the jury tradition was imported to North American Architectural Education since Europe was the model for the Americans (Kostof, 1977). Most schools of architecture in the US continued to have one or two "Paris-Trained Professors" to make sure that the system is in place (Eshenick, 1977). It basically encouraged competition between students that was intense, and the end results were beautifully drawn projects in traditional and classical styles which were often defensible only on the grounds of "Good Taste and Intuition."(Anthony, 1991). Evaluation criteria were based on the quality of presentation and drawings, ignoring many of the variables that influence architectural design (Kostof, 1977; Salama, 1995).

The word jury appears to have negative connotation as it refers in linguistic terms to "a group of persons sworn to render a verdict or true answer on a question or questions officially submitted to them" (AHD, 1994). This goes on contrary to the true purpose of the assessment of design projects presented by the students, which is simply learning, reflecting, discoursing ideas, and ultimately improving students' performance. Juries, reviews, critiques are three terms used interchangeably in the schools of architecture. Remarkably, the system is the same, which is basically the old Beaux-Arts mechanism but in a modern version. Students present their completed design work one by one in front of a group of faculty, visiting professionals, their classmates, and interested passersby. Many scholars (Anthony, 1987; Dutton, 1987; Salama, 1995; Sara, 2004) agree with the view that faculty critique each project spontaneously without criteria made clear to the students who are asked to defend their work. Although the German and Swiss models have emerged between 1910s and 1930s in Europe to replace the French model, many of the habits, mechanisms and rituals of the Ecole Des Beaux-Arts continued to exist in the US (Eshenick, 1977), while influencing architectural education around the globe.

The jury system has been analyzed and also criticized heavily in the literature, specifically within the English speaking world. This is evident in the amount of publications that have dedicated entirely or partly to discussing and debating the jury practices, getting feedback from those involved in the jury process, and with the general aim conceived as improving design learning and the mechanism by which students work is assessed. While the evolution, analysis, criticism of the jury system is well documented within the Western context, a simple investigation on current 'English' publications reveals a severe lack of how such an evolutionary process took place in other parts of the world, namely the Arab world. Therefore, this paper is developed in response to this need. In essence, while the development of Arab architectural education admits that there has been continuous influence of worldwide trends on the educational process (Salama and Wilkinson, 2007), nothing or very little is documented on the jury system.

The assumption is that the overall educational system of architecture in the Arab world was borrowed from, or dramatically influenced

by, that which prevails in the West, but may have witnessed modifications throughout the years which changed its characteristics and its underlying practices. On the basis of this assumption, this paper attempts to answer the questions of how jury practices are performed in the context of the Arab world and how students perceive the jury system and its underlying practices in such a context?

In an attempt to answer these questions, a multilayered methodology is devised. It encompasses the following three mechanisms:

• Carrying out an intensive literature review of the published literature with the objectives of comprehending different approaches to investigate and discuss jury practices while shedding light on the educational value of the jury system.

• Investigating students' reactions to the jury system and its underlying practices within the context of the Arab world. This is based on two studies undertaken by the authors in 1999 and in 2005 respectively.

- The first was part of a research methods class offered at Misr International University-Cairo, Egypt, where a series of topics were presented to student teams and one team selected the topic of investigating student perceptions of the jury system in four major universities in Egypt. The team devised a questionnaire based on identifying a number of key issues, and was able to receive responses that ranged from 45 to 60 from each of the four universities.

- The second was three sessions conducted in 2005 at the department of architecture at KFUPM (king Fahd University of Petroleum and Minerals) with three student groups representing different year levels (sophomore, junior, senior). The sessions were envisioned in response to several student complaints on the way in which juries were undertaken by the faculty. Sessions involved brief discussions on the value of the juries in architectural education, followed by a questionnaire distributed to the attendees of each session. The questionnaire addressed issues that pertain to students' view of their previous learning experiences during the juries, jury mechanism, jury composition, jury scheduling, jury dynamics, and their feelings and behaviors.

While the discourse in this paper is qualitative in nature, it outlines the results of implementing the preceding two mechanisms. The significance of this work lies in the fact that it contributes to the international debate while adding to the already developed body of knowledge on this topic, uncovers student perceptions of the jury system in the Arab world, and proposes different scenarios amenable to a more effective learning process.

On Architectural Design Juries: A Literature Account

It is widely acknowledged that there is a lack of research on architectural education, design studio teaching practices, and architectural design juries. However, a considerable number of valuable writings on the architectural jury system and design review processes have emerged since the mid eighties. They were introduced to the academic community in architecture and its allied fields to discuss merits and demerits of the jury system while exploring its underlying communication mechanisms and suggesting possible ways of ameliorating current jury

practices. The three classical writings of Kathryn Anthony in 1987 and 1991, and Thomas Dutton in 1987 appear to be the most cited and influential with a strong impact on the publications of others. In essence, all publications offer insights toward a better understanding of the learning process and of assessing students' performance thereby deserving some form of investigation.

A total of twenty six publications on the jury system and design review processes were identified by the authors. The publications identified include those that are published in English only. It is noted that a number of authors who are non-English native have published on the subject both in English and in their native languages. In this respect, the authors note the work of Necdet Teymur of Turkey, Doris Kowaltowski of Brazil, Ashraf Salama of Egypt, and Ahmad Bakarman and Abdul Aziz Al Mogren of Saudi Arabia which relate in different ways to studio practices, communication in studio settings, and evaluating students performance. Their writings are not included except those that are published in English and on the jury or assessing students' performance. Moreover, the publications that address the jury system in virtual or digital studios are not included in the selection. While such publications attempt to relate virtual or online juries to some aspects found in real life juries, the typical characteristics of the communication process in real-life juries are very different. Therefore, the scope of virtual practices goes beyond the scope of issues and concerns this paper is raising.

Examining the twenty six publications (see Appendix 1) reveals three categories of studies; a) Students and Faculty Surveys, Questionnaires, and Observations; b) Experience Based Case Studies; and c) Experience Based Analysis and Positional Recommendations. While there are no clear boundaries between the approaches involved in the three categories, they are proposed for the purpose of classification and identification. In this context, it should be noted that such categorization is based on the approaches adopted to investigate and develop arguments on the jury and is not based on the results or the findings of these approaches.

Students and Faculty Surveys, Questionnaires, and Observations

This category involves different forms of rigorous research on the jury system in a specific context. Its major interest lies in getting feedback from those who are involved in the jury process; either faculty or students, or both. A total of nine publications can be considered under this category including the works of Anthony 1987, 1991; Frederickson 1993; Salama 1995; Groat and Ahrentzen 1996; Wilkin 2000; Al-Mogren 2004; and Gurel and Potthoff, 2006. The example of studies under this category can be seen in the work of Anthony 1987 and 1991. Anthony, in her article Private Reactions to Public Criticism (1987) followed by Design Juries on Trial: the Renaissance of the Studio, reports the results of intensive investigation on the effectiveness of design juries. She 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 university students. Anthony's approach relies on systematic behavioral observations, interviews, questionnaires, and diaries. Students, faculty, and alumni in architecture and its allied fields were integral components of this approach.

Another example of the publications underlying this category can be seen in the work of Mark Paul Frederickson (1993) in his article Gender and Racial Bias in Design Juries. Frederickson study encompasses features like assessment of the participation and interaction of various participants in the design jury process that is, male and female jurors, male and female students, and racial minority students. As well, it identifies and statistically examines several consistently biased practices and procedures in design juries. Its findings are developed in order to improve the inner workings and educational efficacy of design juries in architectural education.

Experience Based Case Studies

This category encompasses articles developed by an educator whose concern is to relate the literature and his/her experience to a specific case in a specific context. Five publications can be considered under this category including the works of Dutton 1987; Jones 1996; Parnell 2000; Salama 2005; and Llozor 2006. The investigation of these articles reveals that the case adopted and linked to the literature can be articulated through one or two modes: a) some conceptual understanding of pedagogical or communication concepts and this is evident in the work of Dutton (1987), or b) through a type of experimentation as evident in the work of Parnell (2000). The other three articles have overlaps where the cases presented rely on pedagogical or communication theories as well as experimentation in a studio or a jury process.

Analyzing the work of Dutton (1987) demystifies how the case is adopted through conceptual understanding of pedagogical concepts. In his article Design and Studio Pedagogy, Dutton (1987) utilizes the hidden curriculum concept to analyze the nature and practices of the studio while arguing that there is a rough correspondence between schooling and larger societal practices, where the selection of knowledge and the ways in which school social relations are structured to distribute such knowledge and are influenced by forms and practices of power in society. On the other hand, the investigation of the work of Parnell (2000) reveals how the case is adopted and presented through some form of experimentation. In her article The Student-Led 'Crit' as a Learning Device, Parnell (2000) develops a student-led review (in the form of sessions) as an experimental methodology that involves two reviews run by the students. She attempts to get feedback from both students and staff after conducting such experimentation.

Experience Based Analysis and Positional Recommendations

This category includes articles that represent the position of their authors. While those articles do not involve any form of research (neither students/faculty surveys nor case studies), they offer critical analyses and positional recommendations based on experiencing jury practices either as a student or an educator. A total of nine articles can be considered under this category including the works of Frederickson 1993; Willenbrock 1991; Ahrentzen and Anthony 1993; Vowles 2000; Farivarshadri 2001; Koch et al 2002; Anthony 2002; Cameron 2003; and Sara 2004.

An example of articles under this category is the work of Willenbrock (1991) in An Undergraduate Voice in Architectural Education. Willenbrock describes the jury review system as a tool of oppression and outlines her experiences as an

undergraduate student, how she got enrolled in architecture, and the practices she experienced in learning design in the studio. Her approach is to offer reflection and critique on studio teaching practices through experiencing them. Another example of the publications underlying this category can be seen in the work of Rachel Sara (2004) in her article The Review Process. In positive terms Sara's work appears to be optimistic and offers a guide that is aimed at design studio faculty and visiting critics involved in review/jury processes. While highlighting inherent opportunities and potential problems of the established jury model, she offers a variety of tips and concrete examples in an attempt to offer alternative approaches to the typical jury process.

In sum, based on the preceding analysis four aspects in the literature developed on design juries can be inferred as outlined below:

• Three publications were not classified under one of the preceding categories as they cross the boundaries between them; those are of Doidge, Sara, and Parnell (2000), Salama and Wilkinson (2007), and Webster (2007). The work presented in these publications overlaps between the categories of experience based case studies and experience based analysis and positional recommendations (see Appendix 1).

• Despite the variety of approaches to investigate, address, or develop recommendations, the aim of all publications is to offer panacea to the current ills of the jury system, and ultimately improving the teaching/learning processes of design.

• While the approach to investigate the overall jury practice based on rigorous research and getting faculty and students feedback appears to be more convincing as it relies on figures and some statistics, the other two approaches are important in providing critical discussions and valuable recommendations for improving the jury system either based on case study and experimentation, or just previous experience.

• Strikingly, out of the twenty six publications only three publications are written by Arab authors (Salama, 1995; Al-Mogren 2004; and Salama, 2005). While they are based on the literature developed by Western authors, they attempt to contextualize some aspects of evaluating students' performance and jury practices in the Arab world. Still, this in essence, supports the initial assumption of this paper—the lack of studies on this topic within the Arab world.

The Educational Value of Architectural Design Juries

In discussing the jury system the important beginning would be to address its purposes, objectives, and educational values. Several studies attempted to answer these questions (Anthony, 1987 and 1991; Graham, 2003; Ilozor, 2006; Sara, 2004). In general terms, they all agree on certain characteristics that should represent a paradigm of educational values for any jury process.

The main educational value of the jury system lies in enabling students to acquire effective knowledge of solving architectural or urban problems while offering them sufficient framework of guidance, either to complete their projects and that is the case of interim juries, or to consider such a knowledge in future projects and that is the case of the final juries.

Anthony (1987) argues, and rightly so, that the jury system should be seen as a tool that fosters the refinement of the learning process as well as in measuring the acquisition and application of knowledge (Anthony, 1987). The educational value of the jury system has a central position in the learning process (Salama, 1995). However, it has been heavily criticized on many grounds. Many students feel that they have not learned much from any juror comments, they state that they cannot remember anything about their colleagues' projects that are presented before or after their own due to exhaustion, nervousness, and worrying about their performance and grades (Anthony, 1991; Graham, 2003).

In 1993 at Harvard University, a round table discussion was organized to debate the purpose of the jury and to whom it should be directed towards (Dilnot et. al. 1993). In these debates, participating faculty members agreed that the purpose of the jury should not be to pass judgment on the students or to evaluate their design work. In essence, they perceived the jury system as an opportunity for developing theoretical discourses for ideas to thrive utilizing the work of students as a catalyst for discussion (Dilnot et. al. 1993). While this may seem to be the ideal situation, the roundtable discussion resulted in recognizing the different viewpoints of students and faculty as to how the jury mechanism works. Some jurors find the discourse fascinating and the discussion is between jurors and "the students didn't know what the hell was going on, it was entirely uninteresting to them (Dilnot et al. 1993:2-15). Conversely, juries that appear interesting to the students seem to be boring to jurors. In fact, one can infer from literature and from Harvard's roundtable discussions two important points, the first is that there exists a misunderstanding in terms of how educators and students see the educational value of the jury system, and second, such a misunderstanding inhibits an effective communication during the jury process.

Arguably and in optimistic terms, the aim of the jury system as an educational tool can be exemplified by the following four purposes:

- Introduce constructive criticism of the students' designs, drawing the student's attention to the pros and cons of his/her design.

- Provide general instruction on critical design issues that pertain to the students projects under evaluation.

- Initiate scholarly dialogue, seminar-like exchange between faculty members, faculty members and students, and among the students themselves.

- Measuring the degree to which a student was able to acquire and apply knowledge in the form of a design solution in response to a hypothetical or real-life architectural or urban problem.

Notably, these purposes intend to further the student's intellectual growth. However, the literature points out to the fact that typical jury practices in many schools of architecture worldwide were not able to address these purposes efficiently and effectively (See Appendix 1). In this context, two aspects appear behind the shortcomings of jury practices which impact its intended educational value, the first relates to the jury set-up itself while the second concerns itself with the juror attitudes. Anthony, 1991; Boyer and Mitgang, 1996; Sara, 2004; and Wilkins, 2000 all argue that the physical seating arrangements of the jury indicates that the students work is

on trial as they often present before rows of jurors. Such a setting as indicated by Boyer and Mitgang (1996) encourages the view of jurors as attackers and students as defenders, and this in itself can bring out the worst in both jurors and students where, as Sara (2004) states, a defensive attitude tends to lead to further attacks. These two aspects are coupled with the subjectivity inherited in any judgmental process and in the absence of clear measurements for evaluating students' performance. Therefore, it is not surprising that the current established jury practice is not as valuable as educators would like to think.

Surveying Architecture Students by Architecture Students: Key Jury Related Concerns Investigated in Four Egyptian Universities

As part of an undergraduate research methods class offered in 1999 at Misr International University-Egypt, after delivering the necessary lectures, students implement the knowledge they have gained in a research assignment. A series of topics were presented to student teams and one team selected the topic of investigating student perceptions of the jury system in four major universities in Egypt. The team devised and developed a questionnaire based on identifying a number of key issues and with the facilitation of the instructors; the authors of this paper. The team received responses that ranged from 45 to 60 from each of the four universities; theirs was not one of them in order to reach reliable results and also due the sensitivity of the issues involved as felt by the students.

Notably, students were free in identifying the key issues but with some direction of the instructors. Strikingly, the issues they have identified express their deep concerns. Although students' own school was not included as part of the survey, what they were interested to investigate may reflect to a great degree the jury practices undertaken in their school. Issues identified by the students can be outlined as listed below:

- Jury composition and who should be part of the jury process: instructors/tutors and studio leader or a mix of jurors that include external examiners.
- Discussion preferences during the jury and whether students prefer a dialogue and feedback on their projects or just prefer to receive a final grade. It should be noted that the practice of conducting the juries behind closed doors still prevails in many schools of architecture in Egypt for a number of reasons, most important is the students numbers and the time constraints.
- Adherence to programmatic requirements and its impact on jury discussions and students grades.
- How students approach their design toward the final jury, whom they want to satisfy, the studio leader or their own thinking.
- Preferences on final grading policy: a holistic grading on the overall project or an announced itemized grading based on different project elements (precedent studies; program analysis; mass and contextual plan; floor plans; facades and imaging; perspective or axonometric drawings; and the overall presentation).
- The impact of personal impressions and appreciation on students' grades.

• The impact of utilizing impressive presentation techniques on the final grades, irrespective of the design concepts and the ideas involved.

The student team surveyed their colleagues and responses received were from Ain Shams University, Al Azhar University, Cairo University, and Helwan University. All are located in Cairo, Egypt and have well established architectural programs with large student population that exceeded 1150 in total at the time of conducting this survey. The number of respondents was 209 from the four universities. The student team stated in the final report that their colleagues were interested in the study and wanted to voice their opinions and express their views diligently on the jury practices at their respective programs. Table (1) illustrates summary of percentages of students responses to the key issues involved in the study based on simple frequency procedure.

Discussion of Major of Findings

The overall results indicate similarities between the four universities. As well, they indicate correspondence of the students' perception of jury practices in those universities with that which is found in previous studies in Western contexts. Nonetheless, new patterns of average responses emerged based on the key issues explored.

In general terms, students prefer the involvement of external examiners and jurors (88.62%). Many of them commented that they want the jury process to be more objective and that the presence of external jurors will help achieve this. This result corresponds with another alarming figure where over 90% of the students believe that personal appreciation and impressions has a strong impact on the final grades. Therefore, it can be argued that the fact that subjectivity and personal interest are considerable parts of the jury handicaps the overall learning process. While personal appreciation may benefit some students, it has severe negative impacts on the majority of the students. It appears that this case is more dramatic at the level of two individual universities. Every single student responded from Ain Shams and Helwan Universities believe that personal appeal influences the final grade of the project.

The majority of students (92%) prefer having an opportunity to receive feedback and defend their projects over only receiving a final grade. In essence, this indicates a need to engage in discussion about their projects. It also indicates that the students admit the validity of the jury system as part of their learning. The authors note in this context that the practice of conducting the juries behind closed doors still prevails in many universities in Egypt except in the final or senior design thesis. The typical claim by faculty or department chairs is that it is a time consuming process—discussing students' projects individually due to the large student population. But, such a case becomes completely unfair, when only a sample of students is allowed to discuss and defend their projects but others are not.

While only 11.6% of the students responded believe that emulating the style of studio leader and tutors and reflecting their interest is the driver for developing their design ideas in order to guarantee good final grades, the majority does not believe so. 74.42% of students responded believe that they attempt to address the style and interest of the instructors while at the same time integrating it into their own understanding and interpretation of the design problem, the nature of the project, and the overall

Issues / Students Concerns		Universities				Average
		Ain Shams	Al-Azhar	Cairo	Helwan	
Jury composition	Students prefer involving studio instructors and leaders only	14%	7.5%	9.4%	10.5%	10.35%
	Student prefer involving external examiners as part of the jury process	86%	91%	89%	88.5%	88.62%
Discussion Preferences	Students prefer dialogue, feedback, and defend their project	93%	88.5%	92.8%	93.7%	92.00%
	Students prefer just to receive the final project grade without discussion	7%	7.5%	6.2%	5.3%	6.50%
Impact of adherence to programmatic requirements	Adherence to the programmatic requirements has a high impact on jurors and the grade	51.7%	35%	50%	36.8%	43.37%
	Adherence to the programmatic requirements has an average impact on jurors and the grade	33.3%	35%	37.5%	52.7%	39.57%
	Adherence to the programmatic requirements has a low impact on jurors and the grade	10.3%	21.5%	9.4%	5.25%	11.61%
	Adherence to the programmatic requirements does not have any impact on jurors and the grade	3.7%	7.5%	2.1%	5.25%	4.63%
Approaching design toward the final jury	Students approach the design from the perspective of the instructors and the studio leader	20.6%	12.5%	3%	10.3%	11.6%
	Students approach the design based on their understanding and thinking of the nature of the project	10.4%	12.5%	25%	-----	11.9%
	Students approach the design based on the perspective of the jury leader and their own understanding	69%	74%	71%	83.7%	74.42%
Grading policy preferences	Students prefer holistic grading on the overall project	41.5%	50%	34.4%	36.8%	40.67%
	Students prefer an announced grading on different project elements	58.5%	50%	65.6%	63.2%	59.32%
Impact of personal impression/	Personal impression and appreciation has a strong impact on the final students grades	100%	83%	92.8%	100%	93.95%
	Personal impression and appreciation does not have any impact on the final students grades	-----	16%	6.2%	-----	5.55%
Impact of impressive presentation techniques	Students believe that utilizing impressive presentation techniques has a strong impact on the final grades, irrespective of the design concepts and the ideas involved.	75%	65%	72.9%	73.6%	71.72%
	Students believe that utilizing impressive presentation techniques has no impact on the final grades	24%	30%	24.1%	26.4%	26.12%

Table 1: Summary of students' responses to key issues on jury practices in four Egyptian universities. (Source: Authors).

requirements. On the other hand, approximately 60% of the students prefer having an announced grading policy on different project elements including the presentation itself. In this regard, one would argue that this will minimize the level of subjectivity involved in making judgments about students' projects.

The majority of students believe that the adherence to programmatic requirements either that which is delivered to them as part of the project outline requirements, or that which is developed during the studio process has some type of impact on jurors and the grades, 43.37% high impact, 39.57% average impact, and 11.61 low impact. On the other hand, 71.72% of the students believe that utilizing impressive presentation techniques has a strong impact on the final grades irrespective of the design concepts and ideas. These two results may seem contradicting since the adherence to programmatic requirements as a statement contradicts with the statement that utilizing impressive presentation techniques has a strong impact on the final grades irrespective of the design concepts and ideas. It is expected that if the average responses of one of the two statements is high then the responses to the other would be low, which is not the case.

Analysis and Discussion of Student Perceptions of Jury Practices at KFUPM in 2005

Three sessions were conducted in 2005 at KFUPM-Dhahran, KSA, with the three groups representing different year levels. These sessions were envisioned in response to several students complaints on the way in which juries were undertaken by the faculty. Sessions involved brief discussions on the value of the juries in architectural education, followed by a questionnaire distributed to students attendees of each session; (16 sophomore students, 12 junior students, and 10 senior students). The questionnaire addressed issues that pertain to students' view of their previous experiences during the juries, jury mechanism, jury composition, jury scheduling, and jury dynamics.

Jury Learning Experience

Students were given a list of skill and knowledge related statements and were asked to select all that apply to them based on their experience in both final and interim juries. Moreover, they were asked to add any additional skills they feel they have gained out of their learning experience within the juries.

The total responses of students illustrate that "development and improvement of verbal presentation skills" appear to be the most important part of their experience in the final juries as it was selected by the majority, while "criticism and assessment of architectural projects seems to be the most important part of their learning in the interim juries." Looking at each group of students the same skills apply where consistency among students response exist. However, three types of skills appear to be competing for sophomore students in the interim juries, these include in addition to the preceding two skills "satisfying the jury members by balancing the issues they introduce in their project presentations." (Table 2).

While "development and improvement of conversational skills" appears to be the second important part of student learning experience in the final juries, it does seem so in the interim juries. "Note-taking skills" appears to be the least

Skills students feel they were part of their jury learning experience	Final Juries					Interim Juries				
	SO	JU	SE	TO	RA	SO	JU	SE	TO	RA
Criticism and assessment of architectural projects	8	6	7	21	3	6	9	8	23	1
Development and improvement of your note-taking skills	3	2	0	5	6	4	5	4	13	5
Development and improvement of your verbal presentation skills	11	11	9	31	1	6	7	6	19	2
Development and improvement of your conversational skills	10	7	6	23	2	5	5	6	16	4
Satisfying your studio faculty by focusing on issues of interest to him/her/them	7	7	4	18	4	4	6	7	17	3
Satisfying the jury members by balancing your emphasis on the issues you introduce	6	4	6	16	5	6	5	5	16	4
Others: presentational layout, overcome frustration, playing w/words, and organize thoughts	3	3	0	6	7	1	2	0	3	6

Note: SO = Sophomore, JU = Junior, SE = Senior, TO = Total, and RA = Ranking

Table 2: Students' perceptions of their learning experience in final and interim juries. (Source: Authors).

important part of students' learning as it is seen in the rank order performed on the total responses for both final and interim juries (Table 2). As well, this is clearly evident in the senior students' responses. On the other hand, "satisfying studio faculty by focusing on issues of interest to them" seems to occupy an average position across the responses.

The preceding results indicate that students recognize that there is a high value of the juries and that their learning experience was satisfactory in general terms. It is the position of the authors that the skills selected by the majority of the students seem logical and was expected. However, as part of students reactions on their learning experience negative aspects emerge where some students stated that focusing on the presentation layout is more important to them than any other skills to attract the attention of the jurors while others mentioned that as part of their experience they learned to play with words to impress the jurors. Overcoming frustration was mentioned by three senior students as they stated sometimes in the interim juries that continuous misunderstanding exists between them, studio faculty, and when there are visiting jurors attending.

Jury Composition, Mechanism, and Scheduling

When students were asked about the composition of the jury, about 50% seem to prefer that it involves their studio faculty, other design faculty, and visiting professional

Jury Composition	SO	JU	SE	TO
Only studio faculty	6	0	0	6
Studio faculty and other design faculty in the college/department	0	1	2	3
Studio faculty and visiting practicing architects	1	4	2	7
All (studio faculty, other design faculty, and visiting practicing architects)	7	5	6	18
Other (Please state)	2	1	0	3
Jury Mechanism	**SO**	**JU**	**SE**	**TO**
Jury members critiquing students projects publicly	2	7	8	17
Jury members critiquing students projects individually (behind closed doors)	9	2	1	13
Jury members critiquing students projects without students presence at all (behind closed doors)	4	3	1	8
Others (please state)	1	0	0	1
Jury Scheduling	**SO**	**JU**	**SE**	**TO**
The jury is conducted on the same day of project submission	0	0	0	0
The jury is conducted in the studio session that follows that day of the project of submission	14	9	9	32
The jury is conducted a week after the project submission	2	3	1	6

Note: SO = Sophomore, JU = Junior, SE = Senior, TO = Total

Table 3: Students' perceptions of jury composition, mechanism, and scheduling. (Source: Authors).

architects. Reasons for this preference were expressed in statements like these "having a more vibrant dialogue," and "having multiple view points and inputs." Some students stated that external critics bring different perspectives and approaches on how they look at a project and this will help in understanding what aspects should be considered in future projects. In fact, these responses reflect a general awareness of what the jury composition can add to their learning experience. This corresponds with the results of investigating jury practices in the four schools in Egypt.

Notably, those who prefer the involvement of "only studio faculty" are mainly sophomore students who feel that outsiders do not know much about what the project is about, the nature of the assignment—they come unprepared and thus address issues that go beyond the scope of the their projects under assessment.

A considerable number of students (17) prefer to have jury members critiquing their work publicly. The reason they stated is that it offers a good opportunity in terms of speaking in public and learning how to communicate effectively. However, a smaller number of students (13) prefer to have the jury members critiquing their projects individually behind closed doors stating that it causes public stress and that the ambient noise may disturb the student (Table 3). Students who do not prefer to be present at all in assessing their work stated that their concern

is that it represents a situation of embarrassment if their projects are not up to the standards expected that they do not know clearly.

One of the striking results is that none of the students prefer to have their juries on the same day of project submission as they stated there is always a need to refresh after hard work and not sleeping for several nights preceding the submission. On the other hand, there appears to be a reasonable consensus on the need to conduct the jury two or three days after the day of submission stating that if such a period from the day of submission got longer the degree of enthusiasm in presenting their projects decreases dramatically (Table 3).

Jury Dynamics—Selected Paradoxical Aspects

A number of important issues related to the jury process were selected to understand students' perceptions including the format of receiving criticism, the time given to them to present their projects, the design issues emphasized during the jury versus the ones emphasized during the semester, and the general mode of communication among the jury members.

Regarding the format of receiving criticism they have experienced, the majority of the students (30 out of 38) stated that the common type of receiving criticism on their projects is oral and that they have rarely received it in writing. Students stated their concern regarding the form of criticism they receive during and after the jury, emphasizing the fact that feedback on their projects should be offered in writing in order to maximize learning opportunities the jury process may offer whether to advance the project through interim juries, or to capitalize on their learning for future projects through final juries.

Over 50% of the students (20 out of 38) feel they are given enough time to present their work and that this time is typically around 10 minutes. However, more than 70% of the students stated that they are either interrupted by jurors' questions while they are in the middle of their presentations, and in some cases they are not given sufficient opportunity to complete their presentations, or go into a conversational mode beyond the scope of their projects. Some students commented that this creates a chaotic tense situation. This corresponds to the work of Frederickson (1990), when he argues that a typical statement is often heard immediately after the juries "I wish the jury had enough time to sit and listen to me, I have prepared things to say, it is really frustrating… I needed extra time to have things explained differently and clearly."

The majority of the students (75%) agreed that design and projects priorities are changed during the jury process from what was intended and emphasized during studio instruction, commenting that this contributes to a continuous misunderstanding of what the project intentions were, and what aspects they should have placed emphasis upon, or whether there were true learning outcomes expected. Some students commented that this sometimes create a lack trust between them and the studio faculty who they expect to run the jury based on aspects kept emphasized throughout the project process. In essence, this result leads to the argument that the change of design priorities may lead to an anxious, defensive, and potentially hostile attitude toward the jurors.

While students have not explicitly stated all their concerns, in discussing some jury dynamics during the sessions, a common scene in jury

settings can be derived, that is—jurors show inattentiveness during the presentations expressing boredom and monotony and naturally students feel embarrassed and humiliated while showing the need for a better attention. While such a feeling of boredom hinders the communication process between jurors, it has a negative impact on students. In this process, repetition and discussion of irrelevant issues become dominant and thereby depleting the vigor of the jurors and the students presenting.

Asking the students about what they have sensed as a general mode among the jury members, more negative issues are emerged where 33% mentioned that there is always a contradiction among all members of the jury, while 55% mentioned that a competitive scene is what characterize the discussion and intervention of jurors in the delivery of their criticism and viewpoints. Only few students 16 % stated that there is harmony and understanding among jurors. This finding corresponds with the literature Anthony (1987), Frederickson (1990), and Sara (2004) when they agree that jurors come to the juries with hidden agendas and that by some jurors, the jury is seen as a forum in which to set forth a certain ideological or philosophical approach to design or to respond to previous statements made by other fellow jurors at other juries

In essence, findings suggest that there is as a misuse or abuse of the jury system itself. It is argued that flattery and showing-off to attending high administration figures or prominent visiting architects is an important factor that often sets educational goals aside, In fact, this diverts the jury from one of its primary purposes, to educate and enlighten students based on their articulation of responses to design problems. Another important aspect is that there is always a tendency to undervalue those with different view points from their own. In making judgments about students' projects this may lead to distorted views about students' performance and in terms of their actual and potential aptitudes. As the result, many students are unfavorably affected by the existence of personal matters among the jurors. Students might be the victims of such old and unresolved conflict where a juror can address several criticisms to another juror through the student and his/her work.

While the preceding discussion of some aspects of jury dynamics may appear negative or pessimistic as it presents worst-case scenarios, it provides a base for openly discussing some of the rituals as educators keep repeating them unconsciously. As well, the discussion suggests that there are many feelings and attitudes involved in the communication process including defensiveness; hostility; anxiety; fear of failure; conflicts of ideas; emotional tension; frustration; boredom; embarrassment; and humiliation, to name a few. While some may argue that the resolution to these negative aspects involves very basic concepts such as respect, reciprocity, sensitivity to others, etc. implementing such concepts in jury settings that are amenable to responsive learning process, remains a challenge.

Conclusions

The architectural jury system as a traditional educational ritual started in the French "Ecole Des Beaux-Arts" as a part of an evaluation process that continued to evolve as both an

assessment and learning tool. During the 19th century, this educational tradition was imported to North American schools of architecture and later to the Arab world starting in Egypt. Eventually, by mid 20th century the same jury practices were adopted by faculty and teaching staff in all schools of architecture in the region through their European architectural education. Over the past thirty years, architectural schools throughout Saudi Arabia and Gulf States, took on the practice through Arab and foreign expatriates in addition to native scholars who were typically educated in the United States or other European countries.

It is generally agreed that the jury is supposed to further and enhance the student's intellectual growth through constructive criticism that clarifies the pros and cons of the students design and expand on the critical design issues that pertain to the project in question, in addition to the evaluation of how much knowledge has been acquired and how successful it was applied in the proposed design scheme. All such activities should be undertaken in an environment that facilitates communicating and exchanging scholarly thoughts and knowledge between faculty members and students.

Based on an extensive literature review on the educational value of the jury system and the embedded communication processes and two empirical studies presented on student perceptions of jury practices, similar problems have been identified across all the domains of investigation. Most of the problems that have been reported by the students stem from the communication aspects that bring the students and the jurors in conflict that mainly arise from the rules that organize and control the relationships between the students and jurors. Other problems stem from the educational program that does not cover aspects such as presentation skills and verbal expression, while the majority is juror related problems such as harmony between the jury members, subjectivity, and motivation.

Classifying the problems, they can be seen within three categories that relate to environmental setting, the juror, and the student.

- ***The setting*** of the architectural design jury suggests an offensive inquiry ending with judgment and grades on behalf of the jurors, and a case (i.e., project) presentation and defensive responses on behalf of the students.

- ***Jurors*** are the main source of the jury system problems primarily because of their subjectivity and professional ethics. This can be further outlined as follows:

o Subjectivity of the jurors can be attributed to personal preferences due to understanding and experience in certain domains and weakness in other. This contributes to problems such as a) lack of transparency in grading; b) changing priorities during presentation; c) fixation on certain design issues while oversimplifying or ignoring major design issues, thus leading to boring and repeated discussions; and d) weakness towards strong presentation versus commitment to design standards and program requirements.

o Professional ethics related problems can be attributed to the inability to separate judgment from emotions. This contributes to problems such as: a) personal appeal influences; b) hidden agendas between jurors; c) cruelty and harsh comments; and d) showing off to impress certain

audience whether students or other jurors.

• ***Students*** are mainly over concerned with fair treatment since they call for scheduling their presentation after they have rested, to know in advance the criteria of their evaluation, to have sufficient time for their presentation, to be given sufficient opportunities to articulate and defend their viewpoints, and to have a clear and concise feedback that is recorded while being amenable to implementation.

Most of the preceding problems can be eliminated through scenarios that may include:

• To educate the educators about the true reasons behind the jury evaluation system which should be concerned with educating the student and fairly assessing their performance.
• To write down the criteria of evaluation and the set of ground rules that the jurors and the students should abide by.
• To weaken or even remove the grading power of external jurors, such that the educational values of the jury may increase.

The authors believe that the jury system should continue to evolve and that these brief scenarios should be taken seriously and be further developed into frameworks for jury practices amenable to experimentation, testing, improvement. In essence, architectural education should not adopt educational tools developed in the past and not equipped to face the practical realities of contemporary learning, assessment, communication, and design discourse. While addressing the unique peculiarities of each project and year level, such frameworks need to emerge from the specifics of a school of architecture, its students body, its faculty profile, and its overall context.

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References

Ahrentzen, S., and Anthony, K. (1993). Sex, Stars, and Studios: A Look at Gendered Educational Practices in Architecture Journal of Architectural Education, 47(1), 11-29.

Al-Mogren, A. A. (2006). Architectural Learning: Evaluating the Work Environment and the Style of Teaching and Management in Design Studios. Alexandria Engineering Journal, 45(5), 1-14.

Anthony, K. (1987). Private Reactions to Public Criticism Journal of Architectural Education, 40(3), 2-11.

Anthony, K. (1991). Design Juries on Trial: The Renaissance of the Studio. New York USA.: Van Nostrand Reinhold, NY.

Anthony, K. (2002). Designing for Diversity: Implications for Architectural Education in the Twenty-first Century. Journal of Architectural Education, 55(4), 257-267.

Boyer, E. L., and Mitgang, L. D. (1996). Building community: A new future for architectural education and practice. Princeton, NJ: Carnegie Foundation for the Advancement of Teaching.

Cameron, M. (2003). The Jury's Out: A Critique of the Design Review in Architectural Education. Retrieved Dec. 11, 2007, from www.acuads.com.au/conf2003/papers_refereed/cameron.pdf

Carlhian, J. P. (1979). The ecole des beaux-arts. Journal of Architectural Education, 33(2).

Carlhian, J. P. (1980). History at the Ecole. Journal of Architectural Education, 34(3).

Chafee, R. (1977). The Teaching of Architecture at the Ecole Des Beaux-Arts. In The Architecture of the Ecole Des Beaux-Arts. Cambridge, MA: MIT Press.

Dilnot, C., Krieger, A., Robbins, E., Saunders, W., and Scogin, M. (1993). Teaching and Curriculum at the GSD: Design Jury Roundtables. GSD News, Summer, 3-15.

Doidge, C., Sara, R., and Parnell, R. (2000). The Crit: An Architectural Student's Handbook. London, UK: Architectural Press.

Dutton, T. A. (1987). Design and Studio Pedagogy Journal of Architectural Education, 41(1), 16-25.

Egbert, D. D. (1980). Beaux-arts traditions in French architecture. Princeton, NJ: Princeton University Press.

Esherick, J. (1977). Architectural education in the thirties and seventies. In S. Kostof (Ed.), The Architect: Chapters in the History of the Profession (pp. 238-279). New York, NY: Oxford University Press.

Farivarsadri, G. (2001). A Critical View on Pedagogical Dimensions of Introductory Design in Architectural Education. Retrieved April 21, 2004, from http://www.cebe.heacademy.ac.uk/aee/pdfs/farivarsadrig1.pdf

Frederickson, M. P. (1990). Design Juries: A Study in Lines of Communication Journal of Architectural Education, 43(2), 22-26.

Frederickson, M. P. (1993). Gender and Racial Bias in Design Juries Journal of Architectural Education, 47 (1).

Graham, E. M. (2003). Studio Design Critique: Students and Faculty Expectations and Reality. Unpublished Master Thesis, Louisiana State University, Baton Rouge, Louisiana, USA.

Groat, L. N., and Ahrentzen, S. (1996). Re-conceptualizing Architectural Education for a More Diverse Future: Perceptions and Visions of Architectural Students Journal of Architectural Education, 49 (3), 166-183.

Gürel, M., and Potthoff, J. K (2006). Interior Design in Architectural Education International. Journal of Art & Design Education, 25(2), 217-230.

Jones, S. H. (1996). Crits-An Examination International Journal of Art & Design Education, 15 (2), 133-141.

Koch, A., Schwennsen, K., Dutton, T., and Smith, D. (2002). The Redesign of Studio Culture. Washington, DC, USA.: Studio Culture Task Force, American Institute of Architecture Students (AIAS).

Kostof, S. (1977). The Architect in the Middle Ages, East and West. In S. Kostof (Ed.), The Architect: Chapters in the History of the Profession. New York, NY: Oxford University Press.

Llozor, B. D. (2006). Balancing Jury Critique. CEBE Transactions, 3(2), 52-79.

Middleton, R. (1982). The beaux-arts and the nineteenth-century French architecture. Cambridge, MA: MIT Press.

Parnell, R. (2000). The Student-Led 'Crit' as a Learning Device. In D. Nicol and S. Pilling (Eds.), Changing Architectural Education. London, United Kingdom: Spon Press.

Salama, A. M. (1995). New Trends in Architectural Education: Designing the Design Studio Raleigh, North Carolina, USA.: Tailored Text and Unlimited Potential.

Salama, A. M., and Al-Amir, A. (2005). Paradigmatic Trends in Architectural Education: Impacts and Challenges. Paper presented at the Congress of the International Union of Architects: Grand Bazzar of Architectures, Istanbul, Turkey.

Salama, A. M. (2005). A Process Oriented Design Pedagogy: The KFUPM Sophomore Studio CEBE Transactions. CEBE Transactions, 2(2), 16-31.

Salama, A. M., and Wilkinson, N. (2007). Design Studio Pedagogy: Horizons for the Future. In A. M. Salama

and N. Wilkinson (Eds.). Gateshead, United Kingdom.: The Urban International Press.

Sara, R. (2004). The Review Process CEBE Transactions, 1 (2), 56-69.

Vowles, H., Nicol, D., and Pilling, S. (2000). The 'Crit' as a Ritualized Legitimization Procedure in Architectural Education. In Changing Architectural Education (pp. 259-264.). London, United Kingdom: Spon Press.

Webster, H. (2007). The Analytics of Power: Re-Presenting the Design Jury Journal of Architectural Education. 60 (3), 21-27.

Wilkin, M. (2000). Reviewing the Review: An Account of a Research Investigation of the 'Crit'. In D. Nicol and S. Pilling (Eds.), Changing Architectural Education (pp. 100 -107). London, United Kingdom: Spon Press.

Willenbrock, L L (1991). An Undergraduate Voice in Architectural Education.. In T. A. Dutton (Ed.), Voices in Architectural Education: Cultural Politics and Pedagogy (pp. 97-117.). New York, USA: Bergen and Garvey.

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Appendix 1: Major Features Addressed in the Literature on Architectural Design Juries as Part of Design Studio Teaching Practices

1987	**Kathryn Anthony**	**Private Reactions to Public Criticism** Journal of Architectural Education, vol. 40, issue 3. pp. 2-11.
Major Approaches - Features		
• Reports the results of research about the effectiveness of design juries in architectural education, • 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. • Two phases are involved: The first: 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 architecture faculty at the Cranbrook Teachers' Seminar. • Implications of these findings are discussed, and suggestions for improving design juries are offered. • Could be considered under the category of students and faculty based surveys.		
1987	**Thomas A. Dutton**	**Design and Studio Pedagogy** Journal of Architectural Education, Vol. 41, issue 1. pp. 16-25.
Major Approaches - Features		
• Utilizes the hidden curriculum concept to analyze the nature and practices of the studio • Offers an argument that there is a rough correspondence between schooling and larger societal practices, where the selection of knowledge and the ways in which school social relations are structured to distribute such knowledge, are influenced by forms and practices of power in society. • The author attempts in experimenting with a transformative pedagogy for the design studio, endeavoring to set up the conditions to investigate not only the many issues of design, but the nature of design education itself. • Could be considered under the category of experience based case studies.		
1990	**Mark Paul Frederickson**	**Design Juries: A Study in Lines of Communication** Journal of Architectural Education, vol. 43 - issue 2. pp.22-26.
Major Approaches - Features		
• Assesses impediments in communication between different parties involved in the jury system. • Anatomy of the communication problems during the juries and the attitudes, feelings, and behaviors involved. • Methodology is not clear, but appears to be based on some form of observation. • Could be considered under the category of experience based analysis and positional recommendations.		
1991	Kathryn Anthony	**Design Juries on Trial: The Renaissance of the Studio** Van Nostrand Reinhold, NY, New York USA.
Major Approaches - Features		
• Developed based on the earlier intensive investigation (1987) • Introduces guidelines and checklists that are based on extensive research with systematic observations and videotape recordings of juries, diaries of design students, and interviews and surveys of students, educators and practitioners conducted during a seven year period. • Interviews feature leading architectural, landscape, and interior designers including name architects. • Introduces recommendations that aim at empowering students to take better control of their performance at juries and in studios through an array of self management skills, including: time management, public speaking, negotiating, preparing effective graphics, and handling studio stress. • Could be considered under the category of students and faculty based surveys.		

Appendix 1: Major Features Addressed in the Literature on Architectural Design Juries as Part of Design Studio Teaching Practices

1991	**Laura L. Willenbrock**	**An Undergraduate Voice in Architectural Education.** In T. A. Dutton, ed., Voices in Architectural Education: Cultural Politics and Pedagogy, Bergen and Garvey, New York, USA, pp. 97-117.
Major Approaches - Features		
• Outlines the experiences of an undergraduate student, how she got enrolled in architecture, and the practices she experienced in learning design in the studio. • Offers reflection and critique on studio teaching practices. • Describes the jury review system as a tool of oppression. • Could be considered under the category of experience based analysis and positional recommendations.		
1993	**Mark Paul Frederickson**	**Gender and Racial Bias in Design Juries** Journal of Architectural Education, vol.47 – issue 1, pp. 38-48.
Major Approaches - Features		
• Assesses the participation and interaction of various participants in the design jury process, that is, male and female jurors, male and female students, and racial minority students. • Identifies and statistically examines several consistently biased practices and procedures in design juries. • The findings are distilled from one portion of an ongoing comprehensive investigation of the inner workings and educational efficacy of design juries in architectural education. • Could be considered under the category of students and faculty based surveys.		
1993	**Sherry Ahrentzen and Kathryn Anthony**	**Sex, Stars, and Studios: A Look at Gendered Educational Practices in Architecture** Journal of Architectural Education, vol.47 – issue 1, pp. 11-29.
Major Approaches - Features		
• Based on educational research and theory, it assumes that male and female university students are treated differently and that this needs to be investigated in architectural education • Argues that architectural educators must examine whether their teaching practices and pedagogy are similarly gendered. • Identifies situations in which gendered practices occur in design studios and juries. • Suggests ways in which we can restructure our educational practices to provide enhanced opportunities for both women and men. • Could be considered under the category of experience based analysis and positional recommendations.		
1995	Ashraf M. Salama	**New Trends in Architectural Education: Designing the Design Studio** Tailored Text and Unlimited Potential, Raleigh, North Carolina, USA.
Major Approaches - Features		
• Part of an intensive study on studio teaching practices. • Outlines a criticism against traditional approaches to studio teaching and jury practices. • Presents a wide range of innovative concepts and practical ideas for teaching architectural design. • Based on surveys of over 75 design instructors from 28 schools of architecture, it explores different aspects of studio teaching and what impact they have on the attitudes, skills, methods, and tools of architects. • Offers a comparative analysis of contemporary trends that are committed to shaping and identifying studio objectives and processes. • Could be considered under the category of students and faculty based surveys.		

Appendix 1: Major Features Addressed in the Literature on Architectural Design Juries as Part of Design Studio Teaching Practices

1996	**Sue Hall Jones**	**Crits—An Examination** International Journal of Art & Design Education, vol. 15 – issue 2, pp. 133–141.
Major Approaches - Features		
• Describes the history of instituting the crit and the ways in which its use has changed in the last 150 years • Utilizes the context of a British school of architecture and both contemporary and earlier research examples to support the hypothesis that these changes have contributed to the current atmosphere of doubt in which the crit is held. • Supports the call for a review of architectural education methods, whilst stressing that the nature and flaws of the existing process must first be recognized. • Could be considered under the category of experience based case studies.		
1996	**Linda N. Groat and Sherry Ahrentzen**	**Re-conceptualizing Architectural Education for a More Diverse Future: Perceptions and Visions of Architectural Students** Journal of Architectural Education, Vol. 49 – issue 3, pp. 166-183.
Major Approaches - Features		
• Argues that the field of architecture must engage diversity in two senses of the word simultaneously: both in terms of its demographic composition and in terms of the substantive domain of architecture. • Surveys 650 students at six different architecture schools. • Investigates the ways in which both the content and the form of architectural education might impede or support the progress of women and minority students, with emphasis places upon three aspects of the "hidden curriculum": studio pedagogy; social dynamics; and ideals and expectations. • Could be considered under the category of students and faculty based surveys.		
2000	**Charles Doidge, Rachel Sara, and Rosie Parnell**	**The Crit: An Architectural Student's Handbook** Architectural Press, Elsevier, Oxford and London, United Kingdom.
Major Approaches - Features		
• Argues that the crit, review or jury is a cornerstone of architectural education around the world. • Offers critical statements that pertain to jury practice and how in most cases many students view it as hostile confrontation – an ego trip for staff and humiliation for them. • Offers guides to students through this academic minefield. • Offers advices and suggestions for tutors on how to model a crit around a broad range of learning styles to ensure that the process is constructive and beneficial for all architecture and design scholars. • Prepares students to build more creative relationships with clients and users across the industry. • Could be considered under the categories of experience based case studies and experience based analysis and positional recommendations.		
2000	**Rosie Parnell**	**The Student-Led 'Crit' as a Learning Device.** In D. Nicol and S. Pilling, eds., Changing Architectural Education, Spon Press, London, United Kingdom, pp. 211-219.
Major Approaches - Features		
• Argues that the traditional crit of review is underexplored resource for the development of a considerable number of skills including team work and communication skills. • Develops a student-led review (in the form of sessions) as an experimental methodology that involves two reviews run by the students. • Encompasses feedback and evaluation activities. • Could be considered under the category of experience based case studies.		

Appendix 1: Major Features Addressed in the Literature on Architectural Design Juries as Part of Design Studio Teaching Practices

2000	**Margaret Wilkin**	**Reviewing the Review: An Account of a Research Investigation of the 'Crit'** In D. Nicol and S. Pilling, eds., Changing Architectural Education, Spon Press, London, United Kingdom, pp. 100 -107.
Major Approaches - Features		
• Argues that the crit or project review is a from of teaching and that its continuity suggests that it has been a successful mode of knowledge and skills transmission. • Based on feedback received from both faculty and students involving a questionnaire, they were asked to state their views. • Adopts a group discussion as an additional mechanism to get faculty feedback • Reports on the result of the investigation and develops arguments under the headings of the review process as a learning opportunity, the organization and setting of the review, client and user related issues, and students' participation in the review process. • Could be considered under the category of students and faculty based surveys.		
2000	**Hannah Vowles**	**The 'Crit' as a Ritualized Legitimization Procedure in Architectural Education.** In D. Nicol and S. Pilling, eds., Changing Architectural Education, Spon Press, London, United Kingdom, pp. 259-264.
Major Approaches - Features		
• Maps out the peculiar and contradictory tradition of the crit. • Argues that the review process is inherently social and can function as a vehicle for socially produced meanings. • Introduces the author's position as an architect and educator. • Could be considered under the category of experience based analysis and positional recommendations.		
2001	**Guita Farivarsadri**	**A Critical View on Pedagogical Dimensions of Introductory Design in Architectural Education** Proceedings of Architectural Education Exchange: Architectural Educators Responding to Change, Cardiff, United Kingdom http://www.cebe.heacademy.ac.uk/aee/pdfs/farivarsadrig1.pdf (last accessed in April 21, 2004).
Major Approaches - Features		
• Introduces critical pedagogy as mechanism under which students are capable of taking their responsibilities as future professionals. • Critically analyzes the pedagogical dimension of introductory design education • While emphasis is not placed on the juries, some aspects of ways in which students work is evaluated are involved. • Introduces a framework for a student-centered introductory design education. • Could be considered under the category of experience based analysis and positional recommendations.		

Appendix 1: Major Features Addressed in the Literature on Architectural Design Juries as Part of Design Studio Teaching Practices

2002	Aaron Koch, et al.	**The Redesign of Studio Culture** AIAS Studio Culture Task Force, American Institute of Architecture Students, Washington, DC, USA.
Major Approaches - Features		
• Part of a larger study on analyzing the studio culture • Studio teaching practices are critically analyzed, critiqued • A number of visions and values the form the backbone of architectural education are conceptualized. • Argues that critiques are learning experiences not target practice while introducing a cultural shift in terms of viewing the jury where its role should be to celebrate student work as well as benchmarks for growth. • Could be considered under the category of experience based analysis and positional recommendations.		
2002	**Kathryn Anthony**	**Designing for Diversity: Implications for Architectural Education in the Twenty-first Century** Journal of Architectural Education, vol. 55 – issue 4 , pp. 257–267.
Major Approaches - Features		
• Reviews literature about the need for diversity in schools of architecture and provides statistics documenting the relative lack of diversity, especially among architectural educators. • Stresses the need to go beyond affirmative action requirements in order to promote a climate that values differences and manages diversity. • Proposes strategies such as writing a diversity plan, restructuring the design evaluation process, and revising the architectural curriculum. • Suggests mentoring and cross-training programs, more-flexible work environments, exit interviews, and public outreach as ways to promote diversity in architectural schools. • Could be considered under the category of experience based analysis and positional recommendations.		
2003	**Mitlon Cameron**	**The Jury's Out: A Critique of the Design Review in Architectural Education,** Proceedings of the Annual Conference of the Australian Council of University Art and Design Schools, University of Tasmania, Australia. www.acuads.com.au/conf2003/papers_refereed/cameron.pdf (last accessed in Dec. 11, 2007).
Major Approaches - Features		
• Discusses the review process as a forum for presenting and assessing student design projects. • Relies heavily on reviewing the literature while at the same time relate the literature to personal experiences at the university of Canberra. • Relate architectural design juries to the experiences of design and fine arts disciplines which often employ practices similar to that of the jury. • Could be considered under the category of experience based analysis and positional recommendations.		

Appendix 1: Major Features Addressed in the Literature on Architectural Design Juries as Part of Design Studio Teaching Practices

2003	**Elizabeth Mary Graham**	**Studio Design Critique: Students and Faculty Expectations and Reality.** Master Thesis, School of Landscape Architecture, Louisiana State University, Baton Rouge, Louisiana, USA.
Major Approaches - Features		
• Argues for the need to reevaluate and better understand criticism in educational settings in landscape architecture. • Explores if theories of criticism are employed in landscape architecture studios. • Reviews remarkable writings on the jury. • Surveys faculty and students perception of criticism in the design studio including jury practices. • Could be considered under the category of students and faculty based surveys.		
2004	**Abdel Aziz Al-Mogren**	**Architectural Learning: Evaluating the Work Environment and the Style of Teaching and Management in Design Studios** Paper posted as part of the scientific document portal of the College of Architecture and Planning, King Saud University, Riyadh, Saudi Arabia, http://faculty.ksu.edu.sa/almogren/Publications/Architectural%20Learning%20(Egypt)4.pdf (last accessed in December 10, 2007).
Major Approaches - Features		
• Part of a larger study on studio teaching at the College of Architecture and Planning, King Saud \]University. • While the focus on is on the studio environment as a whole, a survey study is conducted and involves jury related aspects (communication and assessment). • Adopts a questionnaire mechanism to get the students and faculty feedback from the same college. • Identifies different factors involved in assessing and grading students' design projects. • Could be considered under the category of students and faculty based surveys.		
2004	**Rachel Sara**	**The Review Process** CEBE Transactions, Center for Education in the Built Environment, University of Cardiff, vol. 1 – issue 2, pp. 56-69
Major Approaches - Features		
• A guide aimed at design studio faculty and visiting critics involved in review/jury process. • Provides a description of the established model, highlights inherent opportunities and potential problems. • Offers a variety of tips and concrete examples in attempt to offer faculty alternative approaches to the typical jury process. • Could be considered under the category of experience based analysis and positional recommendations.		

Appendix 1: Major Features Addressed in the Literature on Architectural Design Juries as Part of Design Studio Teaching Practices

2005	**Ashraf M. Salama**	**A Process Oriented Design Pedagogy: The KFUPM Sophomore Studio** CEBE Transactions, Center for Education in the Built Environment, University of Cardiff, vol. 2 – issue 2, pp. 16-31.
Major Approaches - Features		
• Argues for a process oriented design pedagogy, and that the process and product are equally important components in design teaching practices. • Outlines an assessment of traditional studio teaching practices. • Introduces and implements a model that advocates dialectic relationships between the process and the product, and that recognizes students' individual differences. • Issues that relate the studio process to evaluating the outcomes of students' work are outlines. • Could be considered under the category of experience based case studies.		
2006	**B.D. Ilozor**	**Balancing Jury Critique in Design Reviews** CEBE Transactions, Center for Education in the Built Environment, University of Cardiff, vol. 3 – issue 2, pp. 52-79.
Major Approaches - Features		
• Offers a review of the jury system • Explores and evaluates alternative mechanisms introduced and implemented to foster a fairer system of critical reviews. • Argues that a jury critique that is students-centered enhances students' learning experience while avoiding the typical over-emphasis on their inadequacies. • Could be considered under the category of experience based case studies.		
2006	**Meltem Ö.Gürel and Joy K.Potthoff**	**Interior Design in Architectural Education** International Journal of Art & Design Education, vol. 25 – issue 2, pp. 217–230.
Major Approaches - Features		
• Explores interior design related coursework taught in accredited architectural programs in the United States. Two methods of collecting data are used: self report from architectural program chairs and content analysis of web-site posted program catalogues describing course content. The findings show that many interior design concepts are not well addressed in the architectural curricula. • While emphasis is not placed on the juries, some aspects of jury related practices are involved. • Could be considered under the category of students and faculty based surveys.		

Appendix 1: Major Features Addressed in the Literature on Architectural Design Juries as Part of Design Studio Teaching Practices

2007	**Ashraf M. Salama & Nicholas Wilkinson** (editors)	**Design Studio Pedagogy: Horizons for the Future** The Urban International Press, Gateshead, United Kingdom.
Major Approaches - Features		
• Probes future universal visions within which the needs of future shapers of the built environment can be conceptualized and the design pedagogy that satisfies those needs can be debated. • Introduces theoretical perspectives on design pedagogy and outlines a number of thematic issues that pertain to critical thinking and decision making; cognitive and teaching/learning styles; community, place, and service learning; and the application of digital technologies in studio teaching practices, all articulated in a conscious endeavor toward the betterment of the built environment. • While the general focus is not on the jury, specific demerits of studio teaching and assessment are addressed. • Notable contributions that address students performance related issues are that of Anu Yanar, Nisha Fernando, Malika Bose, Michael Jenson, Ryan Smith, Hulya Turgut, Ashraf Salama, and Stephen Kendall. • Could be considered under the categories of experience based case studies and experience based analysis and positional recommendations.		
2007	**Helena Webster**	**The Analytics of Power: Re-Presenting the Design Jury** Journal of Architectural Education, vol. 60 – issue 3. pp. 21-27.
Major Approaches - Features		
• Argues that while the centrality of the design jury as a site for learning disciplinary skills, beliefs, and values is now widely acknowledged, there continues to be considerable disagreement about what is learnt and how. • Inspired by Michel Foucault's studies of relationship between power and the formation of the modern self, reports on the findings of a year-long ethnographic study carried out in one British school of architecture. • Attempts to unravel the complexities of the design jury as a site of dichotomous power relations • Proposes a new set of pedagogic events that are carefully constructed to support student learning. • Could be considered under the categories of experience based case studies and experience based analysis and positional recommendations.		