The (in)secure position of the design jury towards computer generated presentations

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The tendency towards computer aid in design presentations differs in academia than in the practicing field; practice seems to welcome computer aid in presentation, whereas in academia there seems to be a dilemma. In this study, we approach this duality based on our teaching experience within an interior architecture curriculum. First, we unfold the problematic to identify the contributing factors, then we observe the tendencies through a questionnaire with design students and interviews with design instructors, and finally we project upon our findings. We claim that the contributing factors to the problematic are: loss of author identity, problems of authenticity, and proficiency of the instructors in computers. Also we claim that although the transitional period of accommodating computer tools in design education in terms of presentation seems to be over, an adjustment period is starting anew. One of the powerful aspects of this period is not allowing hand skills to fade away.

Keywords: computer aided design, design education, drawing(s), evaluation

Final design juries which declare a concluding statement on the design project have a strong impact in design education. The way the design projects are conveyed graphically, affects how jury members comprehend and evaluate the projects (Gürel and Basa, 2004).

In the last decade, computers created an important change in presentation techniques and this change appeared to be radical. Yet, the integration of computer techniques to design presentation both in practice and education seems to be lived through and completed.

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Although this integration is better accommodated in design practice, largely due to its time and energy saving nature (Sanders, 1996), in design education there is still room for further debate. It is true that computers made a big impact by their positive contribution to presentation in design education (Hanna and Barber, 2001)[1]. Still, one of the debate areas indicates the problem that fully supporting computer aided presentations in design education is feared to lead to the loss of hand drawing skills in time (Shu, 2000; Angulo et al., 2001).

This study concentrates on this debate, looking at the problem from the points of view suggested by the authors, and testing the validity of these view points by a study carried out with students and design instructors within an interior architecture curriculum. As instructors of 3rd and 4th year design studios and experienced in teaching two graphical presentation courses (one based on hand skills, the other on computers), the authors of this study feel that the design curricula embrace computer aid in presentation, yet holding on to hand skills. As such, a tension is actually created within the ostensibly settled integration between conventional (hand drawn) and computer generated presentation techniques. This tension might not be fully apparent, yet it unveils especially in the final design juries. And this raises the question that whether there is still room for adjustment in the integration and accommodation of computer aid to design presentation in design education.

In their study dated 2001, Hanna and Barber (2001) referred to three separate works (by Lawson; Fraser and Henmi; and Robbins), and pointed out the claims in those works that conventional drawing methods are still preferred for design creation and development phases. They also commented that these claims still need empirical verification. Our study can be conceived as a partial response to this need since it is an effort to measure the tendency towards conventional drawing methods, perhaps not in the design phase, but in design presentation in design education. The reason why we focus on presentation that much depends on the fact that, interior architecture defines itself through well presented, detailed, colourful, rendered drawings. Drawings coloured to the last inch, with materials indicated and accordingly rendered are so crucial to interior architecture that it nearly justifies its existence within the other design fields, especially architecture, through these representations (Figure 1).

As such, a final jury in interior architecture education is almost like a ritual where students are expected to display all their skills on a multiple number of coloured, rendered and detailed drawings (Figure 2).

Figure 1 Selected drawings from the final jury presentation of a 4th year interior design studio project

It can be assumed that a well-done hand drawn set of drawings may secure the settled position of the jury member. Yet, this position may be challenged by computer generated presentations due to the reasons that are going to be discussed in this paper.

1 The jury attitude towards computer generated presentations

The jury's tendency in evaluating computer generated presentations can be two-fold. One is a positive attitude adding up and sometimes surpassing the impact of the design project, whereas the other is an insecure attitude, jeopardizing the conception of the design and interchanging its position with debates on presentation. The authors' backgrounds and observations during the final juries allow them to suggest that the position of the jury towards computer generated presentations can be outlined with the following parameters: identity, authenticity and proficiency.

We suspect that, however, the first two parameters are rather extravert and may easily be debated among instructors. The last one, on the other hand, is somewhat concealed and instructors do not even disclose it to themselves.

1.1 Loss of author identity

We interpret the designer identity as the traceable features in a drawing that distinguish the author of the design/drawing from the others. It is

Figure 2 Shots from the final jury presentations of a 4th year interior design studio project

the spirit and the character of the designer that reflects onto the design/drawing. Even though the student is at a novice level using the computer and architectural software, the resulting presentations may be devoid of these characteristic touches (Akalın, 2003). The look of the computer presentation including almost none of the characteristic features of the designer becomes even more problematic in the case of interior design education. That non-characteristic look, which may be preferable in the case of a design competition, becomes an alienating issue in evaluating a student's work. Moreover, a show of hand skill in the presentation brings along a positive attribute to the student.

1.2 Problems on authenticity

The authenticity of a drawing is directly proportional to its capacity to reflect the author's identity, in the sense that it is described above. During our experience in teaching the design studio, we have come across cases where students might have felt insufficient in presenting their designs. This situation may be occurring due to the fact that design ideas' presentation is almost as important as the ideas themselves in interior design discipline. A neat final jury presentation might be regarded as a respectful attitude towards the profession and it may be a positive attribute in evaluation. Accordingly, students are expected to present good drawings in the final jury, yet at the same time they need to make sure that they have full authorship on these drawings. In order to claim full authorship on final jury presentations, students need to demonstrate their skills in the drawing techniques during the design development phases throughout the semester. Otherwise, presenting

good drawings in the final jury might raise question marks, because sufficient clues to construct an understanding of the student's identity are lacking. Thus, as the identity cannot be traced, authenticity may become a problem. Tracing author identity in hand-made drawings is relatively easy compared to computer generated drawings, partly due to the presence of characteristic lines that give clues about the author. Moreover, we argue that in tracing author identity of a drawing the instructor's proficiency in the drawing technique is a contributing factor.

1.3 *Proficiency of the instructor(s) in computers*

According to Mahdjoubi (2001), the level of expertise, professional education, gender and age might alter the perception of the visual simulation content. We further argue that the proficiency of the instructor over the covered subjects (such as design content, structure, materials and presentation technique) in a design jury puts the instructors in a secure position. Within this secure position, instructors evaluate and criticize the designs. As Ochsner (2000) states, the instructor in the design jury identifies with the student unconsciously, and this identification affects the instructor's behaviour. Here, we argue that proficiency is one of the key constituents in the density of this identification. If the instructor does not feel as competent as she wishes to be, her secure position is jeopardized and that may negatively reflect onto the identification process. Within this perception, computer generated presentations may shift the instructor's secure position. Perhaps the most common and biased argument may be the expectation of a gap between the instructors with hand drawing backgrounds and students skilled in computer techniques (Laiserin and Linn, 2000). The authors think that there is not an apparent gap, yet there is a veiled tension. This tension may be due to the expectation of the instructors to be in a secure position to get fully involved in decoding and criticizing the computer assistance in a student's design. By the same token, they might feel themselves alienated to the presented design and the presentation technique may overshadow the content.

2 *Method of study*

In order to test and justify our proposition, a study was carried out in two parallel phases to obtain views both from instructors and students. Consecutively, a questionnaire was handled with the students, whereas individual interviews were conducted with each instructor. Eighty-eight 4^{th} year design studio students participated in the questionnaire, 51 of whom are male, and 37 female (58% male, 42% female). And 19 instructors, who all have experience in design juries, were interviewed.

Out of these 19 instructors, three are 1st year, four are 2nd year, seven are 3rd year, and five are 4th year design studio instructors. The interviews were conducted on face-to-face basis following a calendar of appointments with each instructor. Throughout the interviews, a check list of 16 questions all multiple choice, yet with the possibility of noting instructors' additional views, were used.

Both in the questionnaire and the interviews, the presentation techniques are grouped as 'hand drawing and rendering', 'computer drawing and rendering', and 'hand and computer drawing combined'[2]. The thoughts, preferences, related problems, future projections on these techniques were inquired accordingly.

3 Findings

3.1 Questionnaire with the students

The study carried out with the students showed that majority of the students strongly feel that 'hand drawing and rendering' is encouraged in their design education (Figure 3). They are also comfortable in using hand drawing for the design process and critics, however, for the final juries there is a slight increase in the number of students who get support from the computer (Figure 4).

Our findings show that there is a substantial number of students who prefer to use hand and computer combined. Although the allowance for direct computer plots to the final juries is limited until the 4th year, the results show that the students do not feel uncomfortable with this situation. Moreover, they also claim that, they think the best presentation medium to express the designer identity is the hand drawing, or hand and computer combined, rather than computer alone. When asked about the technique which the jury seems to favour, students again indicated hand drawing (Figure 5).

As for the problem of authenticity, the students do not seem to acknowledge that jury members neither imply nor declare such a problem regarding their own presentations (Figure 6). Interestingly, the students indicate that they feel uncomfortable with their fellow students' presentations if they are well-done. Yet, they do not make a significant differentiation between hand drawing and computer drawing in such a discomfort about authenticity (Figure 7). Through further inquiry, the students pointed out that although not applicable to their own presentations, if authenticity becomes an issue in a jury presentation, then it is especially for computer drawn drawings (Figure 8).

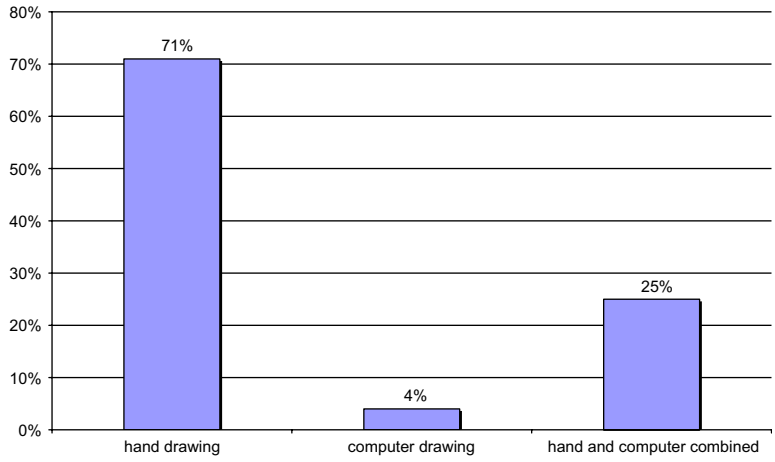

Figure 3 Students' responses to the question of encouraged drawing technique in design education

As for hand drawings, problem of authenticity can only come after the problem of containing less detail and information compared to computer drawings. In comparing problems of hand and computer drawings, the students identify the difficulty in revealing the designer identity as a greater problem for computer drawings.

Finally, the students indicated that regardless of the jury profile, hand drawn presentations are always appreciated more (Figure 5). On the other hand, students do not derive an implied imposition from this situation, and they pointed out that they did not have to work with a drawing technique other than the one they preferred (Figure 9).

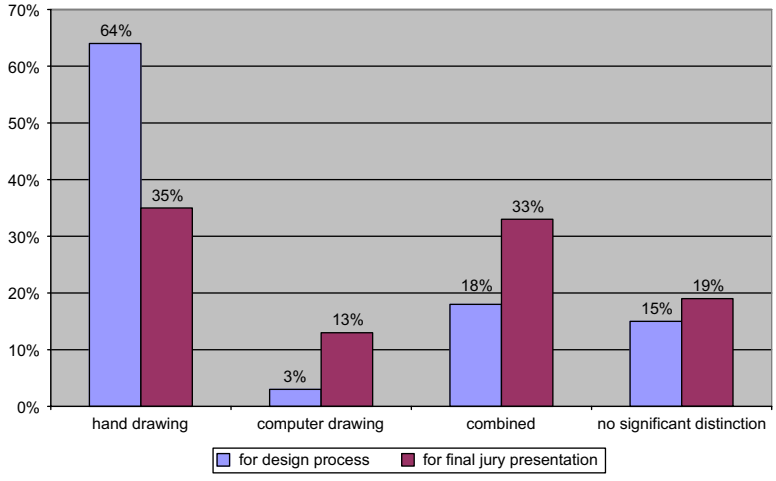

Figure 4 Students' drawing technique preferences for design process and final design jury

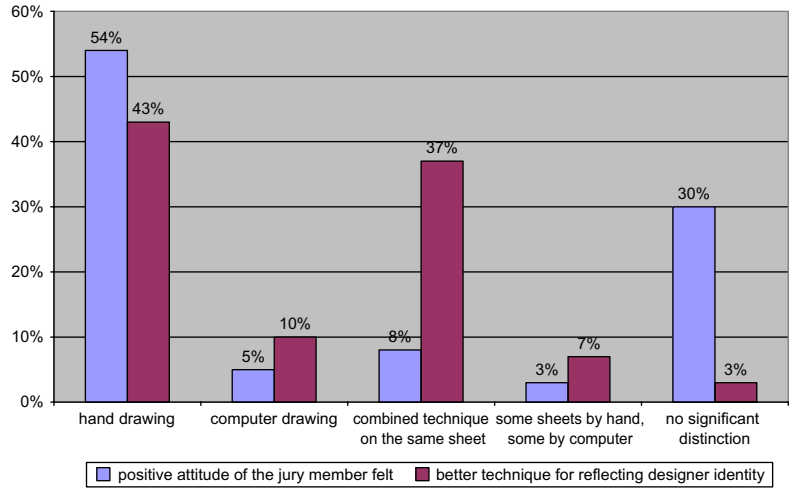

Figure 5 Students' responses for the drawing technique that they feel jury members positively approach to and the best drawing technique to reflect their designer identity

3.2 *Interview with the instructors*

In our study carried out with the instructors, it appears that majority of the instructors do not differentiate in their preference between hand and computer drawn jury presentations. Some indicated that they would prefer to see presentations where hand and computer are used together. However, none stated any preference in seeing totally computer drawn

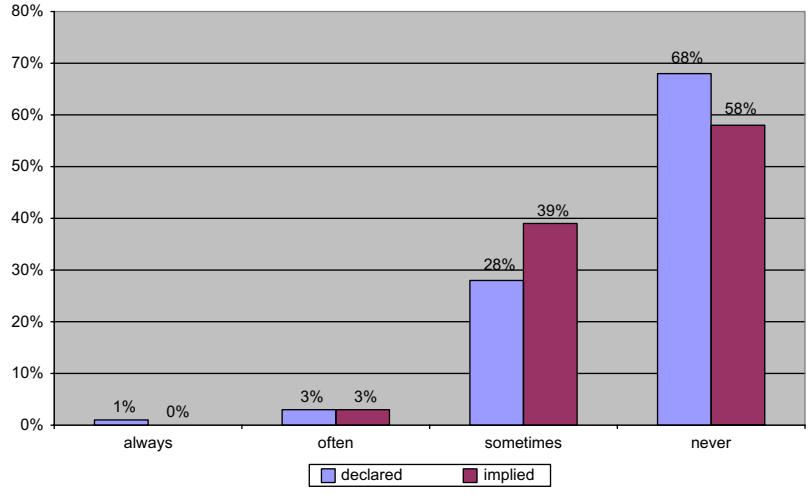

Figure 6 Students' responses on whether the issue of authenticity is implied or declared during their final jury presentation

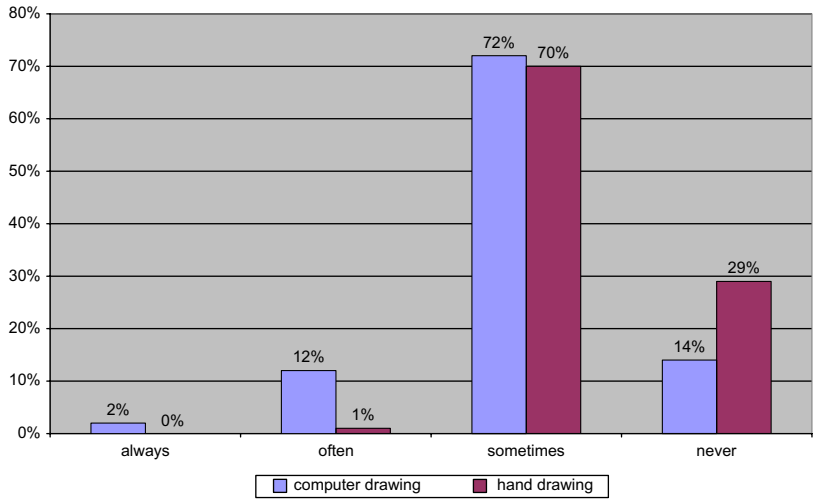

Figure 7 Students' responses indicating whether authenticity is an issue in fellow students' presentations

presentations. Moreover, they underlined the indispensable position of hand drawing technique in education.

As for the best technique in representing the student's designer identity, the instructors seem to acknowledge a loss of identity both in hand and computer drawn presentations, in relation to the student's proficiency in using that technique. Yet, when further inquired they indicated that identity loss is more of a problem in computer generated drawings compared to hand drawings.

The problem of authenticity is also acknowledged by the instructors in both drawing techniques. It is notable that, all of the instructors stated that problem of authenticity is an issue in the juries whenever there is a well-drawn and extensive presentation. Still, confirming our propositions, they point out that the authorship of the student is better traced in hand drawings in comparison to computer generated ones. Again, in line with our arguments, we find that majority of the interviewed

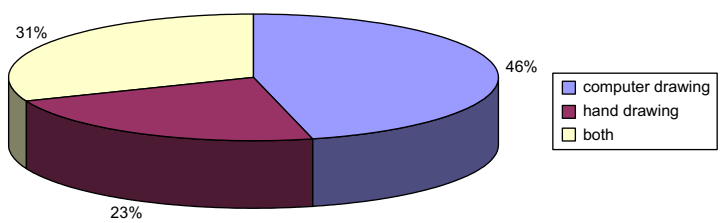

Figure 8 Students' responses in comparing drawing techniques in raising authenticity issues

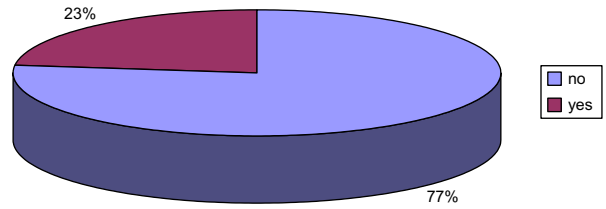

Figure 9 Students' responses to whether they had to work with a drawing technique other than the one they preferred

instructors find their approach to the design presentations parallel to their proficiency in the technique that the presentation has been made with.

Table 1, column 1, illustrates the distribution of responses of the instructors in their preference of presentation techniques that they want to see in the final juries. It is evident that the instructors do not make a significant choice in between the two media, yet if a choice is necessary, they want to see combined technique of presentations. When inquired about the best presentation technique (related to their background and experience) in tracing student identity and authorship, the majority of the instructors selected hand drawing and rendering, as illustrated in Table 1, column 2.

Table 2, column 1, illustrates that almost all the instructors agreed on the argument that students primarily need to be equipped with hand drawing skills in their education. Again, as seen in column 2, they strongly agree that their attitude in the jury towards reviewing the presentation technique is related with their familiarity in that technique. When asked about their view of some projections for the near future, instructors agreed on the fact that computers will be dominant in the design practice (column 3), yet that does not seem to be so for design education (column 4). They almost totally agreed that hand skills will preserve their value in the near future[3].

Table 1 Responses of the instructors to questions related to preference of presentation technique and potential of the presentation technique in reflecting author identity, authorship and being familiar to the instructors

	Preference	Identity/Authenticity/ Proficiency
Hand drawn and rendered	1	13
Computer drawn and rendered	0	0
Hand and computer combined	7	5
No significant distinction	11	1

Table 2 Responses of the instructors to questions related to priority of hand skills in education, relation of jury member's familiarity in a presentation technique and her attitude, and views on future positions of presentation media

	Priority of Hand Skills in Education	Relation of Familiarity and Jury Attitude	Dominance of Computers in Profession	Dominance of Computers in Education	Preservation of the Value of Hand Skills
Agree	18	16	11	5	18
Not sure	0	1	6	4	1
Do not agree	1	2	2	10	0

3.3 Further discussions

Although we unfolded the problematic into three contributing factors, our findings lead us to extensive discussions which are not un-related yet on the periphery of these factors.

In comparing hand versus computer drawings, instructors acknowledged that computer techniques used in a drawing may cast shadows on the design content. It is also considered a problem that computer drawings may have the look of a technical/professional drawing rather than being characteristic and sketchy. During the interviews, the instructors pointed to additional problems regarding the computer drawings. One of them mentioned 'the belief of the students that computer draws the best and the most correct'. Another stressed 'a tendency in surrendering to the so-called superiority of the computer, especially when it comes to the development of the 3rd dimension'.

Yet, one instructor complained about the role of the computer as a *scapegoat*; she mentioned that when a student was inquired about the incorrect use of line values, he said 'The computer did it!' naively, as if he is referring to an invisible partner named 'computer'. Those remarks on surrendering to the final outcome of whatever is made through the computer, reminded us very much of the comment in Coyne et al. (2002) study that if you only know how to draw a box on a computer then it is likely that your building will be a box. Actually, we think that it is not the computer but the user's skills in using the computer that one surrenders to.

One instructor pointed to the problem of control over the plots of the computer generated drawings. She said: 'Although the student is aware of a mistake in a final plot, it is difficult to go through the tiring process of re-plotting the whole thing. The simple relationship between the

student and the drawing on the paper turns out to be a complex process where other media are involved'.

As for the hand drawings, instructors do not acknowledge that showing less details than computer drawings may be regarded as a problem. Yet, during the course of the interview, they pointed out to various other problems, based on the fact that interior architecture drawings require more in terms of colouring and rendering, compared to architectural drawings. Therefore, 'the incompatibility of scale' (especially in furniture layout), 'inconsistency of line quality', 'time-consuming nature' and 'naivety in the 3rd dimension' are the mentioned problems regarding hand drawings.

4 *Concluding remarks and a concluding question*

This paper aims to constitute a critical understanding on the jury attitude towards computer assisted drawings in interior design studio. The observations of the authors that this attitude is basically built upon three contributing factors (*identity, authenticity and proficiency*), has either been confirmed to a great extent or raised further questions through the views of students and instructors. Despite the limited domain of the research, the authors suggest that further studies might be generated in different academic design quarters.

The nature of the jury attitude cannot be absolutely determined. Yet, the critical point of view disclosed by this paper introduces a cross-section of the current condition. This cross-section displays that the tendency of the period is using hand and computer combined; such that, computer outputs are traced by hand, or hand drawings are processed through computer. It is striking that, despite many potentials introduced by the computers, especially for interior design education, drawing by hand is still indispensable. No doubt, computer technology creates new opportunities for presentation that in the traditional way would not be possible. However, hand drawing ability is of immense importance to interior design. Moreover, in densely coloured and detailed sheets, the quality of rendering becomes a radically important issue. And also, as Joch (2003) rightfully puts it, designers try to use every advantage to distinguish themselves from their colleagues and hereby lies a chance to do so by maturing in hand skills.

Yet, the study has pointed out that the devotion to hand drawing in academia does not stem from pure conservatism. It is the warmth of the hand touch that is sought for. Academia does not seem to want to leave the romantic touch. The designer is somewhat privileged by her hand

skills in academia. Thus, it is not surprising that the students whose jury presentations display elaborate hand skills become popular among students and are appreciated by the instructors. Students are expected to have a good knowledge in hand drawing in spite of the fundamental shift in practice towards computers. This anxiety is partially based on the suspicion that computers might be dragging the whole act of design towards a more-engineering look. As much as practice and academia shift to computers (Şenyapılı and Ozguc, 1998), the value of hand touch increases that much, in inverse proportion.

What enables us to put down the above arguments is the fact that both the students and the instructors agreed upon the prospect that hand drawing will preserve its value in the future. A majority of the instructors have their backgrounds in a period of design education where computers were not dominant. Interestingly, although the new generation is more 'computerized', there is not an apparent gap in between their perception of the value of hand drawing and that of the instructors. Within this framework, we argue that although computers seem to have fulfilled the needs of professional design practice, they still have to evolve in order to be embraced totally in academia. Now the question is: how to reconcile the hand sensitivity/identity with computer technology?

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1. In their study, Hanna and Barber asked students to identify in which areas of the design process the use of CAD made a big and positive difference. Drafting was voted as the major area of impact and presentation as the third. (In between these two, students voted for lighting.)
2. However, for more detailed inquiries, we have further sub-divided the latter group as 'hand and computer applied on the same piece of drawing' and 'hand drawn and computer drawn separate sheets'.
3. We have asked the same questions for the near future to the students. The results are in the same line, yet there is no such majority of responses in distribution of the responses, as in the instructors.