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Debra Satterfield  
*Iowa State University*

Sunghyun R Kang  
*Iowa State University*

Nora Ladjahasan  
*Iowa State University*

Andrea Quam  
*Iowa State University*

Brytton Bjorngaard  
*Iowa State University*

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# **A Study on Design Careers and the impact of Gender**

**Debra Satterfield**, Iowa State University

**Sunghyun R. Kang**, Iowa State University

**Nora Ladjahasan**, Iowa State University

**Andrea Quam**, Iowa State University

**Brytton Bjorngaard**, Iowa State University

## **Abstract**

Many of those entering the design workforce will at one point in time be affected by life choices. Some of these choices are welcomed, however, others are of necessity and are not reflective of personal preference. Life choices such as childcare, career advancement decisions, marriage, leaving the workforce, making a lateral career move, or becoming an attendant caregiver for an incapacitated family member are only a few examples of situations that can dramatically impact the course of a career in design fields. In addition, women and men may be affected differently by these choices.

The purpose of this research is to identify the impact of gender on design careers. The methodology for this research is an online survey of university alumni. The respondents represented a variety of design disciplines. This research found a statistically significant difference in perceived impact of gender on design careers.

## **Keywords**

Design Careers, Gender, Culture, Diversity

This research analyzes and discusses the results of a survey developed to examine the perceived impact of gender by males and females on their design careers. The survey is a collaborative research effort by faculty in graphic design, interior design, integrated studio art, architecture, and the Institute of Design Research and Outreach. The survey will be used to measure the perceived impact of gender issues on design careers based on responses from alumni of these design programs and to analyze the actual impacts that were experienced by these respondents regarding issues such as leaving the workforce to raise children, care for elderly parents, or other life situations.

The results of the survey are analyzed and discussed with regard to how students in design programs could be better prepared for life situations through specific modifications to design curricula. Specifically, the data is discussed with regard to its ability to inform curriculum designs that can better address the life and career needs of men and women in design careers. The information will also be discussed with regard to how it can be used to increase awareness among students about life issues and their impact on design careers.

## Literature Review

Existing literature with regard to design, gender and workforce issues was examined to determine what areas of study might improve curriculum in design programs. It was used to identify areas of concern both in design and the workforce in general. This literature review is used to identify ways of better preparing males and females for successful careers in design based on gender relevant information for curriculum design.

### ***Gender Differences in the Workforce***

Gender studies in design have shown distinct difference between how men and women are treated in school during the design jury process (Frederickson, 1993, p.38). In addition, Clegg, Mayfield, and Trayhurn say that men and women are differently attracted to various design careers. Perceptions of the dominant disciplinary discourse, they say, influences how men and women choose design careers and suggests how gender constraints define the design field. (Clegg, Mayfield, and Trauhurn, 1999, pp. 43-54).

Sex differentiation and sex stratification have been observed in the workforce. Cognitive psychologists indicate that there is an impulse to categorize people according to factors such as age and gender. This process of marking people by personal characteristics is called social differentiation. Social differentiation in turn leads to the unequal treatment for members of different categories, which is called social stratification. According to sociologists, Reskin and Bielby, all societies use sex as well as age to stratify members across virtually all domains. They also say that these disparities are indicated by more men than women participating in the workforce. And those men average more hours worked per year, hold different and more complex jobs, work in different industries, out earn women, are more likely to supervise workers of the opposite sex, and dominate the top positions in their organizations. (Reskin and Bielby, 2005, pp. 71-72).

These differences and disparities have also been noted in the design industry. Michael Bierut, in a post to the DesignObserver, notes a question that was raised at a panel discussion on book design. The question posed by an audience member questioned why all three panel members: Milton Glaser, Chip Kidd, and Dave Eggers; were men. Glaser offered the following reply:

“...the reason there are so few female rock star graphic designers is that women get pregnant, have children, go home and take care of their children. And those essential years that men are building their careers and becoming visible are basically denied to women who choose to be at home...unless something very dramatic happens to the nature of the human experience then it's never going to change.”<sup>1</sup>

According to Matlow, with regard to gender differences in graphic design education, it is apparent that women experience additional pressures when working in a typically male-oriented environment. They have to work harder than men, be more committed to their work, and become more involved in it (2000, p.83).

Clegg and Mayfield note that women are under-represented in what they refer to as “hard design” areas such as product and furniture design and over-represented in “soft design” areas such as fashion and jewelry. They identify this dualism as a stereotypical association of women with the body and decorative fields and men with fields in the areas of technology and shaping nature (1999, p.3).

Even in the realm of business ownership gender differences have been noted. Marlow, Henry and Carter examined the “female under-performance hypothesis” in small business ventures. However, when analyzed it was found that differences exist in how female owned start-up

businesses are capitalized with women receiving more costly financing. When female-owned businesses are capitalized in the same way as male-owned businesses there were no differences in their levels of performance (Marlow, Henry, and Carter, 2009, pp.139-143).

In business, according to Lobel and St. Clair, research has been done to explain the differences in job performance and outcomes. The Human Capital Theory describes how voluntary life choices are made in allocating time and effort to tasks such as work or family. This theory has been used to suggest that because persons who are involved in labor-intensive tasks such as childcare and housework tend to select jobs that are comparatively less demanding. This theory thus predicts that because less effort and time is devoted to the job there are fewer positive performance outcomes such as pay or promotions. Another performance difference business theory is the Sex Discrimination Theory which focuses on the idea that men perceive women as a child rearer and as such it is appropriate to scale back their work duties and outcomes accordingly. Both of these approaches of describing the effects of family responsibility on job performance, say Lobel and St. Clair, suggest that family responsibility has an adverse effect on work effort, particularly for women. This limits women's opportunities for positive performance outcomes such as merit increases and promotions. (Lobel, S. and St. Clair,1992, pp. 1057-1058).

An in-depth interview with 48 highly successful women, conducted by psychologist Barbara White, indicated that there are several key commonalities to their success. White found the success of these women was predicated by a high centrality of their career to their lives, working continuously and full-time, fitting their family life around their work, and conforming to male standards of success. One common pattern of these women was to wait to contemplate a family until their careers were well established. If they decided to have children at all, the mean age of starting their families was 33 years old. They also chose to take a minimum amount of maternity leave. Of the women surveyed, 50% had children and reported that they did not see work and family to be mutually exclusive. In fact, they felt that their family was enriching and the time they spent on family was quality time. Other key issues for their success were to achieve promotions and positive evidence of their achievements at an early age. They also noted that they benefitted from a mentor. According to White, 38% of these women said that their abilities had been raised by the support and encouragement of a mentor. (White, B., 1995, pp. 4-15)

## **Research Methodology**

The research methodology involved the development and pre-testing of a survey tool. The survey questions were based on a literature review of existing data about job satisfaction in design careers from research studies done on design and architecture.

Additional survey questions were developed based on research from focus groups with students and faculty groups in design. The survey questionnaires were carefully developed to measure the perceived impact of gender issues on design careers for alumni. The self-administered online survey was conducted through SurveyMonkey in December 2009. Eighty-eight alumni responded and participated in the survey. The survey collected participants' demographic information including gender, age, major, degree, internship experiences, ethnicity, and income ranger per month.

The respondents were all alumni from a Midwest land-grant university with approximately 28,000 students located in a town with a population of 50,000 people. The respondents were all from design disciplines in programs of Architecture, Community Regional Planning (CRP), Graphic Design, Interior Design, Landscape Architecture, Studio Art, Applied Art Education, or double majors in these programs.

## Discussion and Findings

The data from this survey will be examined based on gender, age, and discipline with regard to their impact on design careers. The information will be analyzed with regard to those who stayed in design careers, those who left design careers for a period of time with the intention of returning, and those who permanently left their career either for another career, retirement, or unemployment. The information provided by the respondents will be used to identify the impact of gender, job satisfaction, life situations, and other issues on the decision to continue in a design career. Architecture (33%), Graphic Design (21.5%) and Interior Design (18.5%) were the three top survey respondents with a total of 73% of the total respondents.

The Interior Design respondents were all female, while both male and female were represented architecture and graphic design.

### Retention in Design Careers

Out of the 88 total respondents, 61 (72.6%) are still working in design-related careers. Of these people still in design careers, 40% are male and 60% are female. However, of these people, 28% report that they left the workforce at some point in their career and 72% report that they have never left the workforce.

With regard to retention of females in their design careers, there were several distinguishing features between the disciplines. In architecture and landscape architecture, all of the female respondents remained in their design careers. However, in graphic design only 79% of the females who entered that career remained in their field and in interior design only 70% of the females remained in that career. By contrast, in CRP only 40% of females remained in their design careers and in studio arts 50% of females remained in their careers.

With regard to retention of males in their design careers, graphic design had 100% retention of males in the career compared to architecture with 87%, CRP with 67%, and landscape architecture with 71%. However, studio art did not have any retention of males in the career as reported by this survey.

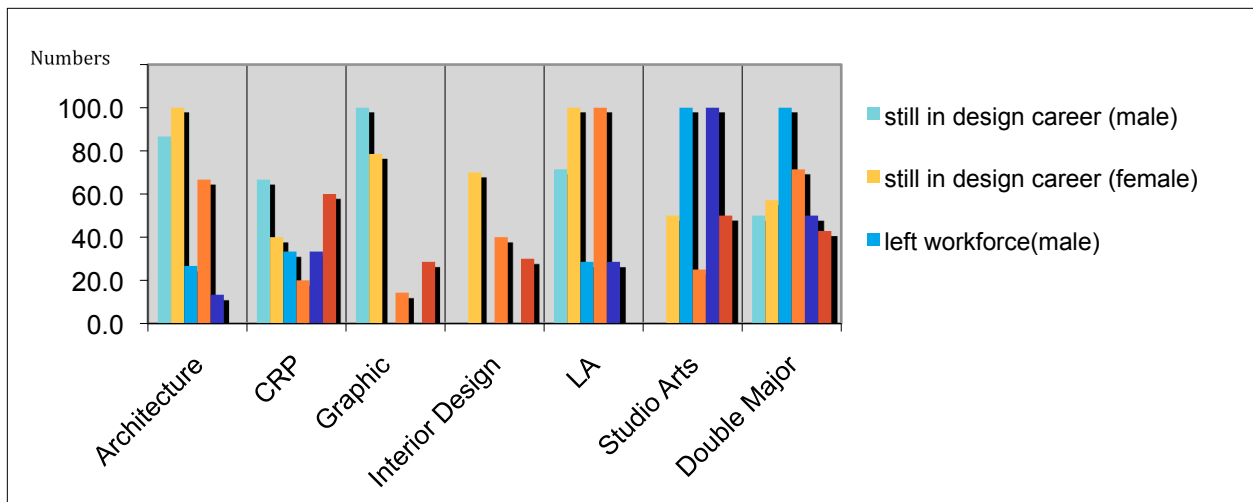


Figure 1. Gender Comparison of Numbers of Persons in Design Careers

Overall, the retention rate of all degrees in design careers was high. This may be related to the fact that 81.4% of respondents who are still in their careers report that they find their work

rewarding. Figure 1 compares the percentages of total respondents in each discipline broken down by gender with those who stayed in design careers compared to those who left design careers.

### Leaving Design Careers

Leaving a design career can be broken down into two basic categories. First, those who left design for what they perceived to be a temporary period of time and second, those who left design permanently. People who left design careers on a temporary basis did so for reasons such as going back to school, becoming an attendant caregiver, or maternity leave. Persons who left design careers permanently did so for reasons such as retirement, career changes, poor job markets, or unemployment. These reasons for leaving design careers were highly dependent on variables such as gender, age, and income levels.

### Leaving Design Careers for a Period of Time

The survey asked respondents about whether they had ever left the workforce. Of males, 34% indicated that they had left the workforce for a period of time compared to 66% of females who indicated they had left for a period of time. Leaving the workforce for a period of time was also greater among those respondents who identified themselves as no longer in design-related careers. The primary reason given for leaving the workforce was returning to school (25%); however, 22% indicated becoming a primary caregiver was their reason for leaving the workforce for a period of time. An additional 12.5% indicated that they left the workforce for a period of time because of family issues.

According to the data in Figure 2, males only indicated leaving design careers for a change in career (29%), retirement (29%), and unemployment (14%). None of the females indicated unemployment as a reason for leaving a design career. Women, on the other hand, listed change in career (14%) and retirement (14%) for reasons for leaving design careers. Females also indicated that they left design careers because of a poor job market (50%), limited or outdated job skills (29%), poor pay (21%), and children or family (14%). None of the male respondents indicated any of those four categories as reasons for leaving a design career.

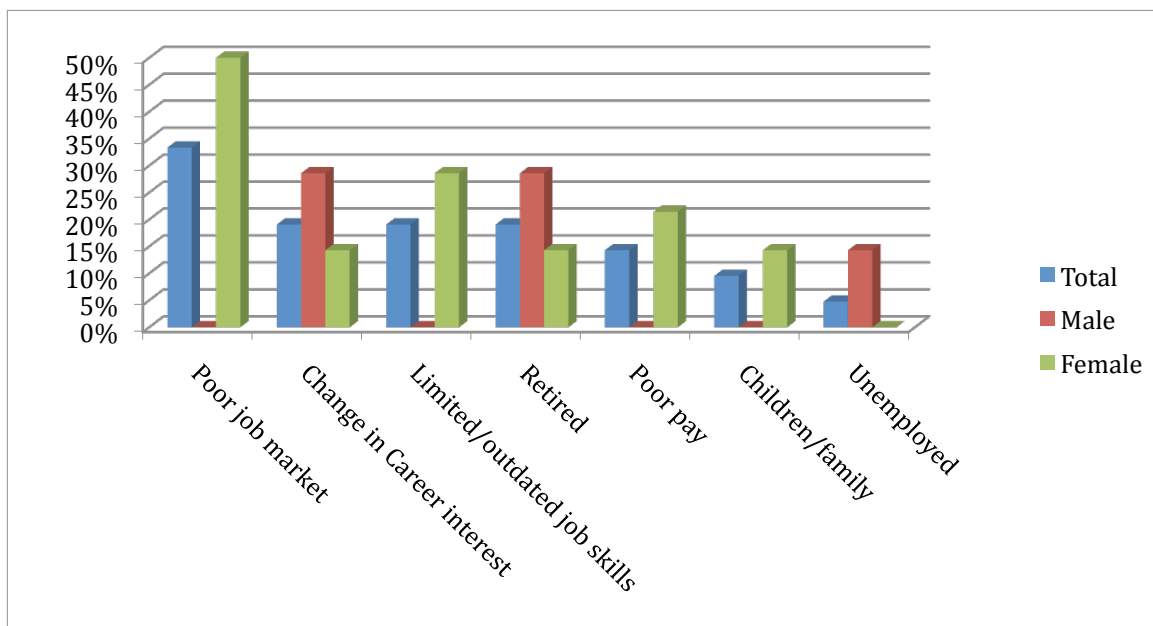


Figure 2. Reasons for Leaving Design Careers by Gender

## Respondents No Longer in a Design Careers

The percentages of people who identified themselves as still working in their current field varied greatly by discipline. Architecture had the highest number of respondents who identified themselves as still in their career.

Gender, as seen in Figure 3, had a statistically significant difference between the responses of men and women. Men indicated that they never or were not affected by their gender in the school or work environment. Women, however, indicated that they were uncertain if their gender had affected their school or work environment.

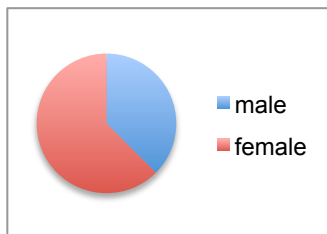
Of the respondents, 27.4% indicated they were no longer in design careers. Males left design to change careers at 35%, females left design to change careers at 65%. The primary reason given for leaving design careers was a poor job market at 33%.

**Table 1. Gender Significance for Those who Left Design Careers**

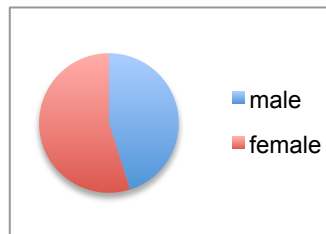
	Gender	Number	Mean	Std. Deviation	Std. Error Mean	Sig. level
Gender	Male	8	1.88	0.83	0.30	.001
	Female	15	2.80	1.57	0.40	

Table 1 shows the statistical significance between males and females in how they perceived the impact of gender on their careers. Females significantly think they are more affected by the impact of gender than were their male counterparts.

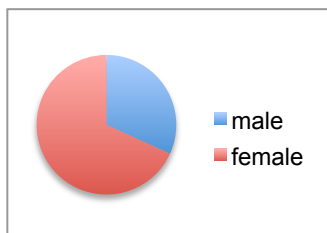
Comparing respondents in design careers with those no longer in design careers, as seen in Figure 3-3, females are leaving design careers in higher percentages than their male counterparts. This is true when leaving both temporarily and permanently (figure 3-1 to 3-4).



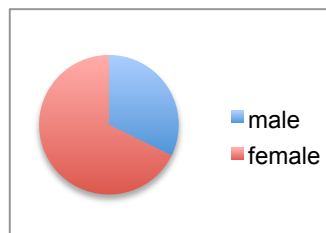
**Figure 3-1 All Participants n=80**



**Figure 3-2 still in design career (n=61)**



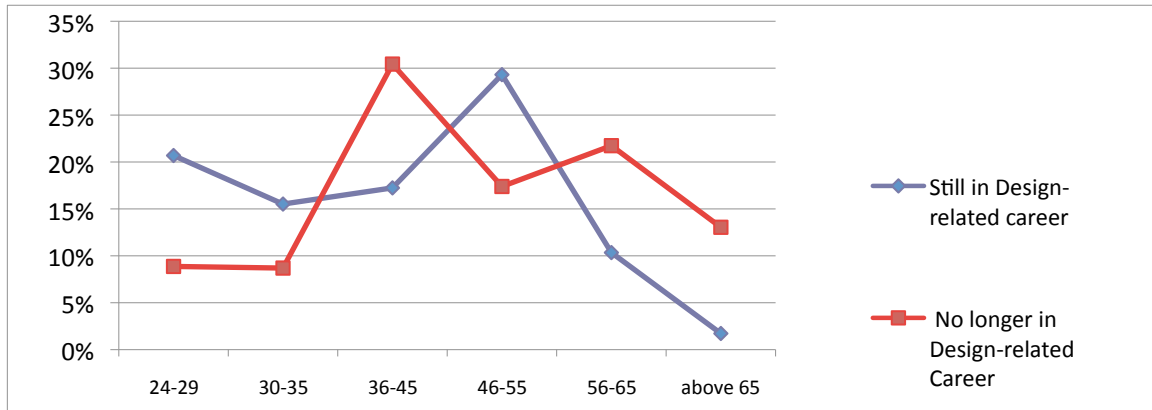
**Figure 3-3 no longer in design career (n=22)**



**Figure 3-4 left workforce for a period of time (n=31)**

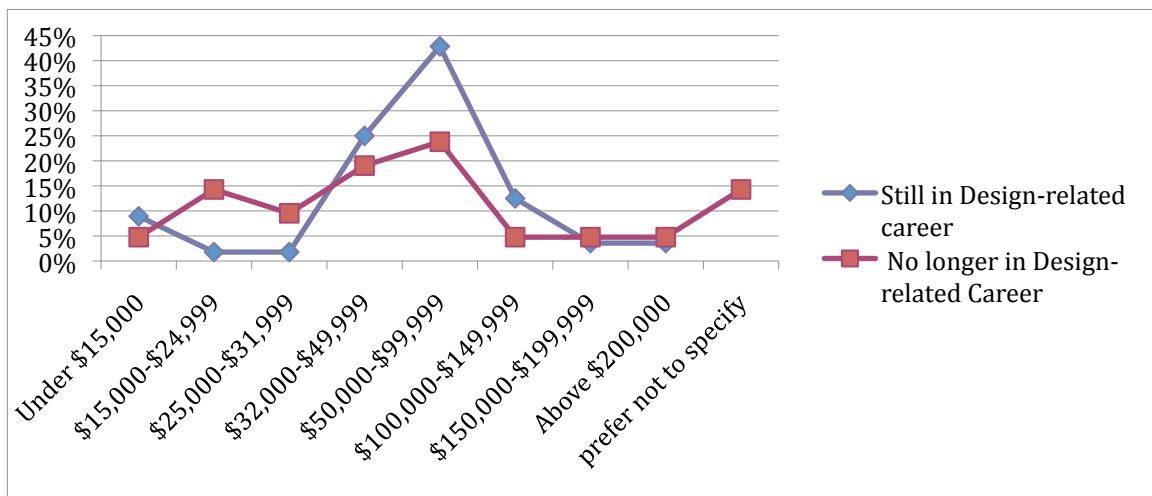
Age, as seen in Figure 4, seems to affect the number of people who are in design careers according to a number of factors. The peak age for leaving design careers is between the ages of 36 and 45 (30%). This may be caused by factors such as career change or family issues.

Another peak time for leaving design is between the ages of 56 and 65. This is more likely attributable to retirement. However between the ages of 46 and 55 there is a resurgence of people returning to design careers.



**Figure 4. Age Comparison of Persons in Design Careers and No Longer in Design Careers**

Respondents in higher income brackets, as seen in Figure 5, were more likely to stay in design careers. Those with lower income levels were more likely to leave design careers. Low income was indicated as a reason for leaving design in this survey.



**Figure 5. Income Comparison of Persons in Design Careers and No Longer in Design Careers**

## Conclusions

The analysis in this research is focused mainly on the respondents who left design careers on either a temporary or permanent basis. Leaving the workforce for a period of time, such as for returning to school (25%) or becoming a primary caregiver (22%), was greater among those respondents who identified themselves as no longer in design-related careers. Among those still in design careers, the vast majority indicated that they had not left the workforce even for short periods of time.



Of the respondents who left design careers, women indicated poor job markets, limited or outdated skills, poor pay, and children/family as the top four reasons for leaving design careers. It is possible that temporarily leaving the job market leaves women at a distinct disadvantage compared to their male counterparts in design careers.

Based on this research, design curriculum needs to address the different life situations experienced by men and women. Men tended to leave design careers based on changing careers, retirement, and unemployment. For men, there were fewer obstacles to their success. For this reason, design curriculum seems to be working well in the current business climate.

Because women are greatly affected by temporary leaves from design careers, it is important to equip them with education in areas such as business and entrepreneurial studies. This would allow them another career option other than simply returning to their previous positions. It is also important to provide women with role models and mentors in successful design careers and businesses.

### ***Limitations***

The study was limited by the number of respondents and the geographic area. This research was also restricted to the alumni of one university and should be expanded to see if similar outcomes are obtained from additional data collection sites. In addition, this study did not distinguish between part-time and full-time employment in design careers. This distinction may be significant with regard to the final outcomes.

### ***Areas for Future Research***

This study will be expanded to include a larger number of respondents from a wider geographic area. It will also include part-time and full-time data sets. From the current data, curriculum changes will be proposed and implemented for further testing with regard to their impact on retention in design careers.

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### **Debra Satterfield**

Debra Satterfield is associate professor of Art and Design at Iowa State University. She received a B.S. degree in computer science and art from Morningside College. She earned an M.F.A. degree in graphic communication from Iowa State University in 1991. She joined as a faculty of Department of Art and Design at Iowa State University in 2000. Her teaching and research is focused on graphic design, human interaction, and visual communication. Her research is in the areas of design for social inclusion, the design of educational experience for children with cognitive disabilities, and medical experience design. She has presented and published at numerous conferences including Interaction Design for Children Workshop on Creative Play for Disabilities, Asian Design Conference, the Design Research Society Conference, and America Institute of Graphic Arts (AIGA). During summer 2007, she conducted research with *Frito Lay* for Tostitos® Brand as a co-PI. Recently, she received the Bailey Research Career Development Award as a co-PI with Sunghyun Kang to conduct research on medical decision aids in collaboration with the Mayo Clinic.

### **Sunghyun R. Kang**

Sunghyun Kang is an associate professor of Art and Design at Iowa State University. She received a B.F.A. degree in the field of applied art from Ewha Women's University in Korea. She earned an M.F.A. degree in graphic communication from the University of Houston and an M.A. degree in graphic design in 1999 from Iowa State University. She joined as faculty in the Department of Art and Design at Iowa State University in 2000. Her teaching and research are focused on graphic design, human interaction, web based design, and visual communication. She has over 20 years of experience in teaching, research, and consulting in these areas in Korea and the U.S. She has presented and published at numerous conferences including the Asian Design Conference, the Korean Society Design Conference, and the Japanese Society for Science Design conference, the Design Research Society Conference, and the America Institute of Graphic Arts (AIGA). During summer 2007, she conducted research with *Frito Lay* for Tostitos® Brand as a co-PI. Recently, she received the Bailey Research Career Development Award as a co-PI to conduct research in collaboration with the Mayo Clinic.

### **Nora Ladjahasan**

Nora Ladjahasan is an Assistant Scientist II with the Institute of Design Research and Outreach in the College of Design at Iowa State University. She holds an MSC in Human Settlements Planning from the Asian Institute of Technology in Bangkok, Thailand, and a B.S. degree in Agriculture from the University of the Philippines. She teaches and coordinates the Geospatial Technology Training Program workshop, maintains and disseminates research data bases, assists faculty in developing research methodologies, advises students/staff on "human subject (IRB)" issues in relationship to design research. She is a member of the Design Information Research Group and has worked on projects in collaboration with the Mayo Clinic with regard to medical decision making. She is currently working on the data collection and analysis for the design of a medical decision aid for college women selecting birth control.

## **Andrea Quam**

Andrea Quam is a lecturer in graphic design at Iowa State University's College of Design. She received a BFA in Graphic Design from Iowa State University in 1997. She has over 10 years experience practicing professionally as a multimedia and print designer. She has worked with a range of clients including: McGraw Hill, Ford, Conoco, AmerUs Group, Musco Lighting, Principal Financial Group, Elsevier Science, and Meredith Corporation. In May of 2008, she received her MFA in graphic design from Virginia Commonwealth University and joined the faculty of Iowa State University's College of Design in August of 2008. Her teaching and research interests include graphic design practice and education, design methodology and innovations in design pedagogy. She is a member of the Design Information Research Group and has worked on research on the impact of gender on design careers and on medical information design for birth control decision aids.

## **Brytton Bjorngaard**

Brytton Bjorngaard is a Graphic Design graduate student at Iowa State University. Her thesis research is on the utilization of environmental graphic design and interior elements to protect patient privacy within healthcare, with respect to HIPAA regulations. Upon graduation with an M.F.A. in summer of 2010, she will begin a position at Whitworth University in Spokane, Washington as a Graphic Design Lecturer. She earned her B.A. in Graphic Design from Saint Mary's University of Minnesota in 2007. Her teaching and research focus is on graphic design, digital photography, and product design for children with Autism Spectrum Disorders. She has presented at the International Association of Society's for Design Research Conference in Korea and SIGCHI Computer Human Interaction Conference in Atlanta, competing in the SIGCHI Student Design Competition. For the past two years, she has worked as a research assistant at Iowa State University under the Bailey Research Career Development Award in conjunction with the Mayo Clinic.

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