DESIGN WITH A BIG "D": DEVELOPING DESIGNERS FOR THE NEW DESIGN WORLD

Robert Lopez[1]

[1]School of Art and Design, Southern Illinois University Carbondale, Carbondale, IL, roblopez@siu.edu

ABSTRACT:

The current job market demands job flexibility, "interdisciplinarity", problem solving abilities, critical thinking skills and creativity. These skills are also the cornerstone of the design field. In order for design students to be prepared for the multi-person, multi-disciplinary teams that they will be working on in the field, there has been a push in design education to teach collaboration skills, business and marketing skills and even cultural awareness skills. At its root, this education model is to be commended, but at what cost? It is already difficult to teach the fundamental design skills needed for each design specialization at the undergraduate level, let alone trying to expose students to marketing, business, anthropology, etc. Furthermore, the need for change in design education is apparent, not because of the lack of jobs available, but because of the evolving nature of the places these design students, both industrial designers and graphic designers, will be working.

1. INTRODUCTION

The Communication Design and Industrial Design specializations at rurally located Southern Illinois University Carbondale (SIUC) are situated in the School of Art and Design, which is part of the College of Liberal Arts. The approximately 400 Art and Design students make it the second largest area in the College. The design students specifically make up more than 240 of the roughly 400 total art and design students.

The Design Department was established at SIUC with eight students in 1955. Later in the decade, the famed R. Buckminster Fuller was appointed to the position of Research Professor. During his time at SIUC, he understandably had a profound effect on the students and faculty of the department while similarly making his mark on the world. The primary focus during Bucky's time at SIUC, and subsequent to his departure, was to train the students to be problem solvers, a "jack of all

trades, but masters at nothing" in the terms of alumnus from that era. Students were exposed to principles of design, with no specific direction or specialization. Work during this time included typography, early computer modeling, and hands on design experimentation. Alumnus of the program from that era speak glowingly of their experiences in the design department, and despite the pros and cons of their generalist design educations, they credit their professional success to their SIUC experience.

2. CURRENT MODEL

The eighties and nineties brought about changes to the design department and led to its current configuration. In the eighties, the School of Art and Design became part of the College of Liberal Arts and at that time the remnants of the design department evolved into the Product Design specialization and the Visual Communications specialization. This was a natural development as the field at the time was calling for more specialized knowledge from its designers. Finally, in the nineties, the current Industrial Design and Communication Design specializations were put into place.

In 2008, the faculty of the two design specializations focused their attention towards hiring new faculty that had a broader range of design experiences in order to pursue a more holistic approach to design. There was no desire to offer a single design degree, rather, the goal was to use the experience of the current and new faculty to enhance the individual design education experiences of the students of each respective specialization. The new faculty hires would be expected to teach in both the Communication Design and Industrial Design specializations and tout the new motto "Design with a big D". Before a discussion of the co-habitual relationship of the current model, it is important to briefly discuss the curriculum of each individual specialization in order to better understand the merits of the pedagogical and curriculum changes made since 2008.

2.1 COMMUNICATION DESIGN

The Communication Design specialization at SIUC is traditional Graphic Design at its finest with an emphasis on traditional hand skills and concept development while also exploring the latest design theory, design software and design hardware. Students interested in specializing in Communication Design can declare it as their "major" during their freshman year. There is no initial portfolio review in order to declare and students must complete a traditional Bauhaus inspired foundations program, which includes drawing courses, 2d and 3d design courses, and art history courses. Upon completion of their foundations year, students, typically sophomores and transfer students, complete a year of 200 level design courses including: Communication Drawing, Introduction to Computer Art, Print Technology, Process and Presentation, Typography I and Typography II. At the conclusion of the 200 level courses, students are required to pass a portfolio review in order to register for 300 and 400 level classes that include Graphic Design 1, Graphic Design 2, Graphic Design 3, and Senior Thesis. Students who pass this review are required to purchase a MacBookPro and required software in order to successfully complete subsequent classes. Finally, students must

pass an exit portfolio review during their last semester. Communication Design students are encouraged to find design opportunities on campus and to date have worked as designers for the SIUC Athletic Department, Alumni Association, Student Recreation Center, Student Center, the Daily Egyptian (the University newspaper), Student Housing and University Communications. Furthermore, students have had successful relationships with local clients through internships, externships, class projects, Mind's Eye Graphics (the Communication Design, design group) and through corporate sponsored projects.

2.2 INDUSTRIAL DESIGN

The strength of the Industrial Design specialization at SIUC lies in its approach to research, mandate of physical mock-ups and appearance models and its tradition of corporate sponsored projects. Like the Communication Design majors, ID students can enroll in the major as freshman and must take the foundations year courses. These students, and transfer students, must then complete two concurrent Industrial Design courses: Rendering and Graphics and Basic Materials and Processes. Students are then required to present a selection of work from the two courses for review. Students who pass the review are able to sign up for the next 200 level courses. Students who pass the review are also required to purchase a laptop and required software for use in subsequent classes. While not as successful as Communication Design students in regard to design opportunities on campus, the ID program has successfully offered a wide range of corporate sponsored projects. These opportunities provide great experience for the students, and allow the ID specialization to remain current in regard to design and business trends, technology expectations, and curriculum needs.

2.3 FACULTY

The current make up of the design faculty is essential to the continued success of each specialization and to the co-habitual model to be discussed later. As of this paper, there is one full professor and two term lecturers who teach only in Communication Design. There is one faculty member, a full professor, who teaches solely in Industrial Design. Finally, there are two tenure-track faculty members who teach in both Communication Design and Industrial Design including the author. A more detailed breakdown of this current configuration shows a good mixture of academics and professionals who teach in the program part time. Furthermore, the academics have substantial professional work that supports the academic mission of the design area.

2.4 CO-CURRICULUM DEVELOPMENT

In the 2009 paper titled "Helping Design educators foster collaborative learning amongst design students", Prof. Yee, et al. suggests that design education "… needs to provide a wider skill base to work across disciplines…" (Yee 2009) With this in mind the, co-habitual arrangement of the SIUC design area is based on philosophical and pragmatic rationales and opportunity. The philosophical rationale looks at larger issues in design. We want our design students to be creative problem solvers in addition to

designers in their respective fields. Their technical knowledge, and creativeness can be focused on any problem, design or otherwise, that comes their way. This goal is lofty but attainable as evidenced in our recent successes. The faculty can look back at the rich tradition of the generalist problem solving and creativity education started by Bucky Fuller in the late fifties as a point of inspiration, but we can further this tradition by applying current technology, pedagogy, and professional expectations.

The pragmatic rationale looks both at the profession of design and the academic model of teaching design. In the field, designers' rarely work alone. Even the celebrity designers: Karim Rashid, Phillipe Starck, Marc Newson, and Michael Graves work with a multi-disciplinary team to execute their ideas. These famous designers, and many design firms, bring together Industrial Designers, Graphic Designers, Engineers, Ergonomists, Marketing Specialists and more recently, social scientists, among many. All of these unique disciplines are brought together to problem solve and innovate for their clients. These individuals must be able to communicate and work together in order to be successful. With the idea of teamwork in mind, an important consideration of these team members is how well each individual can do their job. Furthermore, the design field and the workplace in general, is looking for employees who are flexible and have many skills to offer. Of the ten common "soft-skills" listed for what employers want, three relate directly to designers; Flexibility/Adaptability/Managing Multiple Priorities, Problem Solving/Reasoning/Creativity, and Teamwork (Hansen).

The relationship between competent team members and employee expectations strengthened our decision to allow students to be specialists in regard to a certain design area, but by introducing skills, theory and methodology of the other design discipline, our students have more "feathers" in their proverbial caps and have experience with other fields that they are likely to encounter. Students can decide to be specialists and pursue career paths in traditional product design or graphic design, but they can also explore opportunities individually or at firms that work on a larger range of design problems including design research, structural packaging or exhibit design. Paul Backett, Industrial Design director at Ziba, in his discussion about design education says" Many of today's Industrial Design programs ask their students to be social scientists, technologists, business analysts and brand strategists—just about everything. The reality is, most of these skills are best learned through experience on the job…" (Backett 2011). One of the benefits of the approach offered by SIUC is that students get a wider skill set and are thus more employable when they graduate.

Opportunity has proven to be one of the main drivers for our co-curricular development. Over a four-semester time frame, the SIUC design area has been presented with the opportunity to put the co-curricular structure to the test. The design faculty realizes that this co-curricular development is not necessarily a new concept, yet the current blend of faculty, research agendas, and enrollment in the design specializations, provides us with a great opportunity to push the field of design and design education.

Finally, to make the co-curricular set-up work, all of the design faculty must be on the same page. To that end, the faculty agreed on some basic principles that must be consistent and constantly reinforced in the classroom, with potential students, and within our School and College. The principles are: 1. In order to get students to think about other areas of design and to new approaches to their specific design discipline, there will be faculty members who teach in both specializations. 2. Allow students to focus on a particular

discipline, while learning about larger design issues, and a related discipline. This approach allows students to be masters in a specific discipline but aware of similar methodologies, and problem solving techniques. 3. Allow students to double major. The current curriculum set-up allows students to double-major without causing course conflict. Faculty will continue to promote this option to students and reinforce its benefits. 4. All courses will place an emphasis on process; process both in terms of how but also what. All Communication Design courses and Industrial Design courses will emphasize hand and digital sketching, hand and digital mock-ups, and presentation of the process as part of the grading process. 5. Faculty and courses will emphasize cross-discipline skills in cases that are not covered by process. The Communication Design courses will continue to develop both 2d and 3d mock-up skills and the Industrial Design course will consider graphic layout as part of project grading.

2.5 INITIATIVES

In addition to curricular development, the design area has looked at a range of initiatives to reinforce the "Design with a big D" agenda. The most prominent initiative is the annual Design Days event. This two day student centric event brings design alumni and other invited designers to Carbondale. Starting in 2009, the design faculty decided to both raise the overall quality of the event but to also bring professionals and students from both Industrial Design and Communication Design together to reinforce the design area initiative. Previous to 2009, the event was ID centered. The first day of the event includes two keynote speakers, one from each area, presentations by design alumni and topical panel discussions. The second day of the event includes portfolio reviews and workshops. Of the many benefits of this event, two in particular stand out. The first benefit is the shared knowledge of the professionals who attend. This ever-evolving knowledge brings a sense of reality to students from both areas. The exposure to professionals in the "other" design area always seems to enlighten the students. The communication design students frequently comment about the "cool" work done by the Industrial Designers and realize why process is being stressed more in their curriculum. The ID students typically comment on understanding why the Industrial Design faculty now expects branding and typography consideration in their product development. The second benefit is in regard to portfolio reviews. Students are encouraged to have their portfolios looked at by professionals in both areas. This tests the professionals at times, but also gives a much wider range of feedback to the students. Lastly, the feedback from the design professionals has further reinforced the goals of the current initiative.

The second initiative is collaborative projects. Each specialization already has a strong tradition of classroom based client projects and corporate sponsored projects. At SIUC, the classroom based client projects have typically been in the Communication Design area. Projects have included traditional graphic design projects for local clients. The Industrial Design area has typically done the corporate sponsored projects. The sponsorships help to fund ID initiatives and have included paint application concepts for Masterchem, St. Louis, MO; public-seating concepts for Landscape Brands, St. Louis, MO; and a mobility device for children project with Radio Flyer, Chicago, IL. Despite the continued success of each specialization in regard to these types of projects, there was no recent collaboration between the two disciplines. As a result, the design area actively pursued opportunities for collaborative projects

between the disciplines. Simultaneous to this new pursuit, Symrise Inc., Teterboro, NJ, became interested in working with the SIUC design area based on a visit to our design gallery.

The final initiative of note is workshops suitable for both specializations. As of this paper, there has only been one workshop in this vein, but it specifically addressed the co-curricular agenda. Andrew Manocheo, partner at Designproject, Chicago, IL led a one-day research, branding, brainstorming workshop that focused on both 2d and 3d aspects of design similar to what his firm does. He urged the students to worry less about their area of specializations, but to focus on creativity, problem solving, and innovation. Students were asked to create marketing boards, sketches, and final drawings of concepts with justifications of their design decisions.

Lastly, the design faculty and students have become more involved with the St. Louis (about 100 miles away) professional chapters of the Industrial Designers Society of America (IDSA) and AIGA, The Professional Association for Design.

2.6 CURRICULAR COMPARISONS

Two Universities that offer undergraduate curriculums similar to the ones posed by SIUC are the University of Michigan and North Carolina State University. The University of Michigan (UM) offers the curriculum that is most similar to the one in progress at SIUC. The main difference between the SIUC Design curriculum and the UM curriculum is that the UM curriculum does not allow for a distinct area of specialization, rather it "… does not emphasize the usual disciplinary distinctions (painting, printmaking, graphic design, industrial design, animation, illustration) but focuses on the creative skills that are common to all of these practices. Creative process, critical thinking, project development, community engagement and collaboration are at least as important as learning mastery of technique and craftsmanship." (Undergraduate). The creative process is what the SIUC design area is teaching as well, but feels that a distinct focus allows the students to further explore at least one specific discipline a little deeper. In addition to Industrial Design and Graphic Design, North Carolina State University offers a Design Studies degree that gets "Undergraduate students unfamiliar with the breath of design and may eventually want to enter a professional degree program will be introduced to the range of career options in the fields of design" (College). This approach is similar to the SIUC approach in that it, in much more detail, looks to provide a much broader overview of design in general, but is not tied in specifically with a particular design discipline. The author is interested in finding out the success rates of these programs as we move forward.

3. CASE STUDY

Starting in fall of 2009 and ending in the spring of 2011, students from both design specializations have worked with Symrise Inc. on four separate team-based design projects. Symrise is the world's fourth largest supplier in the fragrances and flavorings market. These successful collaborations have brought approximately $14,000 to the design area.

The initial project in the fall of 2009 brought together Industrial Design students, Communication Design students and M.B.A. Marketing students. In collaboration with the SIUC Center for Innovation, this research based project served as a feeling out project for the client, to see what we could deliver, and for us, as we were just getting the "Design with a big D" initiative going. The two faculty members that teach in both specializations hand selected three Communication Design majors and one double major (Communication Design and Industrial Design) to work with the MBA students. The project culminated in a presentation to Emmanuel Laroche, VP Marketing & Sensory Consumer Science and Adrian Yong Senior Market Research Analyst Marketing and Consumer Insight of current trends and technology in tradeshow booths. The success of this initial research project allowed the SIUC design faculty the opportunity to propose projects to Symrise that could be executed by the design students within the confines of a semester long course.

The second project, in the spring of 2010, was a tradeshow booth design built on the research from the previous semester. The project was situated in the junior level, AD383 Practicum in Industrial Design course. Five teams were created consisting of two industrial design students from the class and one hand selected communication design student who was both talented and available to meet during the ID class time. This project set-up the protocol for the subsequent two projects with outstanding results. The five teams were responsible for a research presentation, a web conferenced concept presentation with Symrise, and a final concept presentation to the clients on the SIUC campus that included a digital presentation, 3d computer models of the booth concepts, and a full scale mock-up of one particular detail of the concepts. One of the concepts delivered by the students (Fig. 1) was used for as the basis for the booth put into production by Symrise to be used for three years (Fig. 2).

Figure 1: Symrise Tradeshow Concept

Figure 2: Symrise Tradeshow booth at IFT 2010.

The third project went in more of a communication design direction and was situated in AD423 Industrial Design Research and Professional Practice, a Junior Industrial Design course, and AD452 Graphic Design 2, a Junior/Senior Communication Design course. The charge for this project was to develop interior design concepts that unified the Symrise brand identity for two boardrooms, a commons/lunch room, and a new lobby space. The teams consisted of three to five Communication Design students and one Industrial Design student. Similar to the previous projects, students did a research presentation, a concept review and a final concept presentation to the client on campus. Many of the ideas presented at the final review are currently being implemented.

The most recent project, completed in Spring 2011, was a package delivery system. The design faculty felt that this project was ideal for implementing a 1:1 ratio of Industrial Design students to Communication Design students because of the 2d/3d relationship of packaging. Each team consisted of two Industrial Design students and two Communication Design students. In addition to the typical research presentation, concept review, and final concept presentation, students were asked to fill out a peer review form and a survey about the collaborative project they had just completed. The survey was distributed at the end of the project as a fillable PDF that posed four questions and provided an opportunity for comments. Students were asked to rate their attitude before the project and after the project on a range from extremely positive to extremely negative towards the four following questions: 1. The cross-disciplinary nature of the project. 2. The focus of the project. 3. Your previous design team experiences. 4. Your rate of knowledge of the other discipline. The results are shown in Tables 1 through 8.

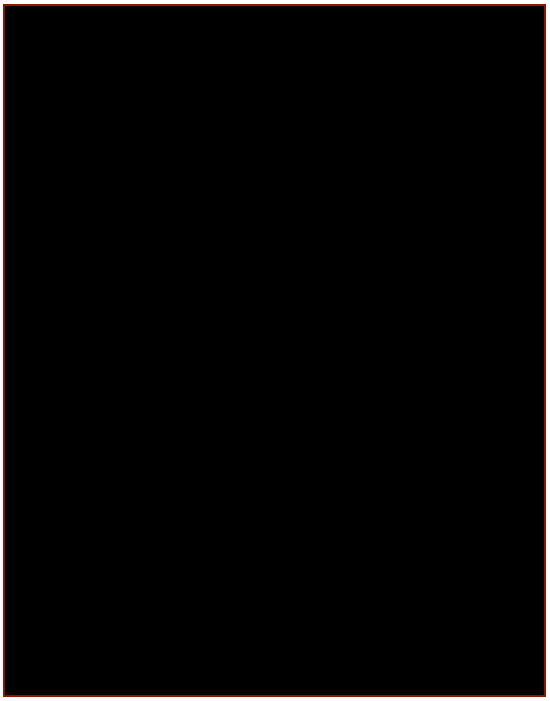

Table 1: Cross-disciplinary nature of the project; **Before**.

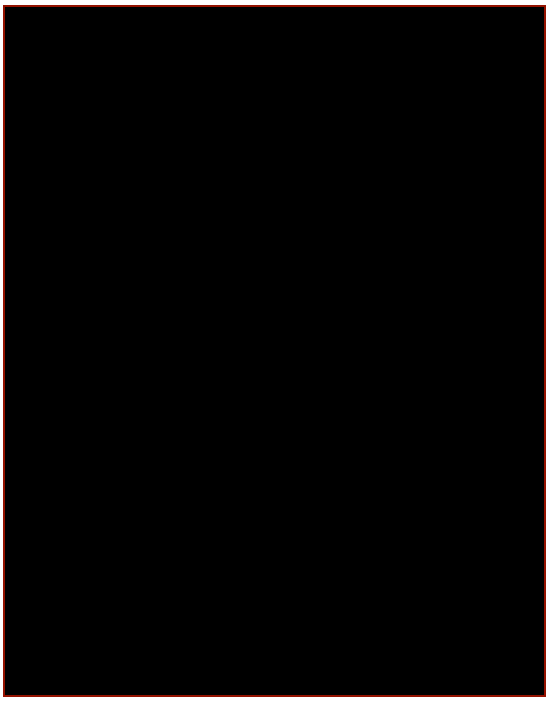

Table 2: Cross-disciplinary nature of the project; **After**.

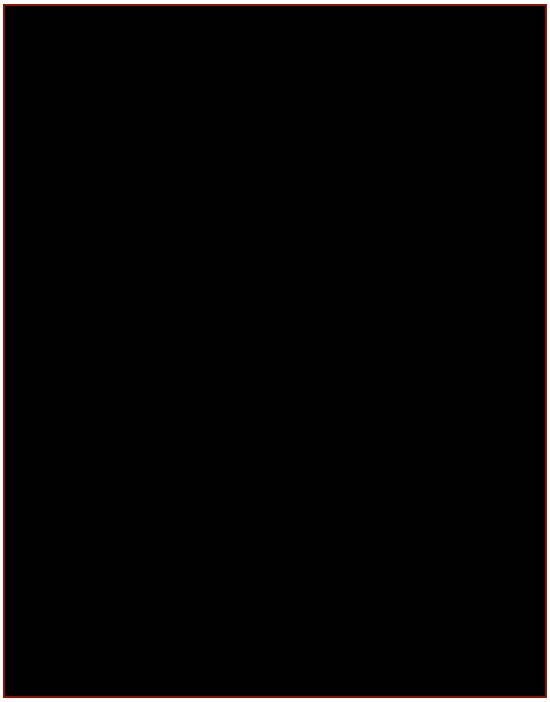

Table 3: Focus of the project; **Before**.

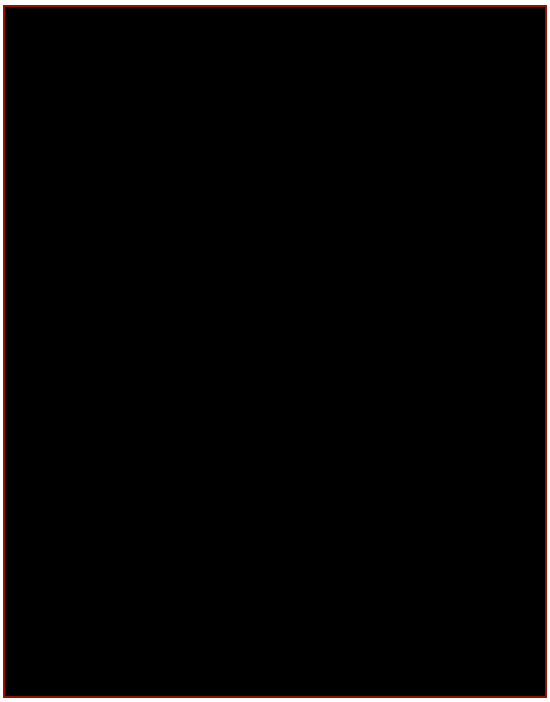

Table 4: Focus of the project; **After**.

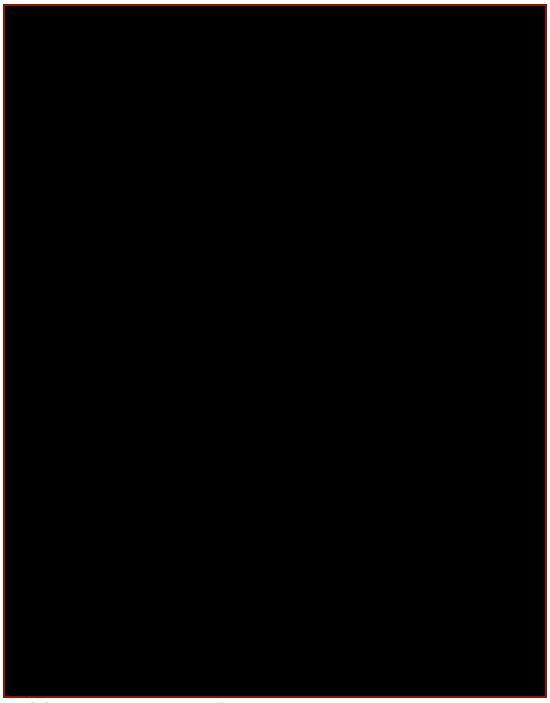

Table 5: Previous design team experiences; **Before**.

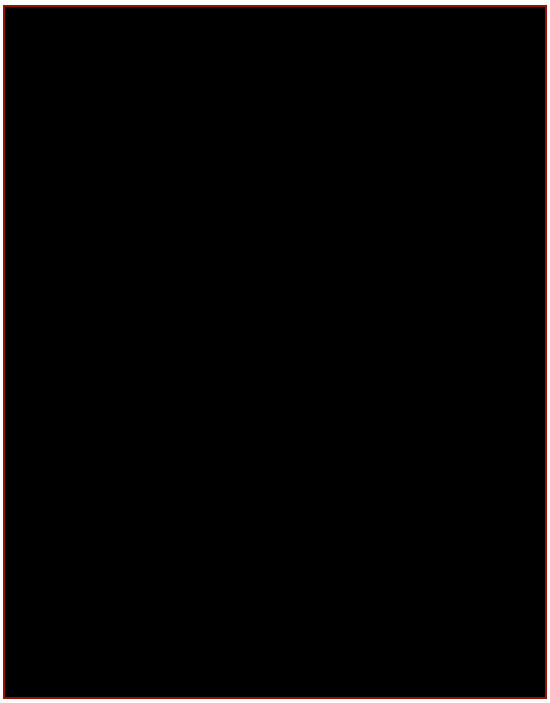

Table 6: Previous design team experiences; **After**.

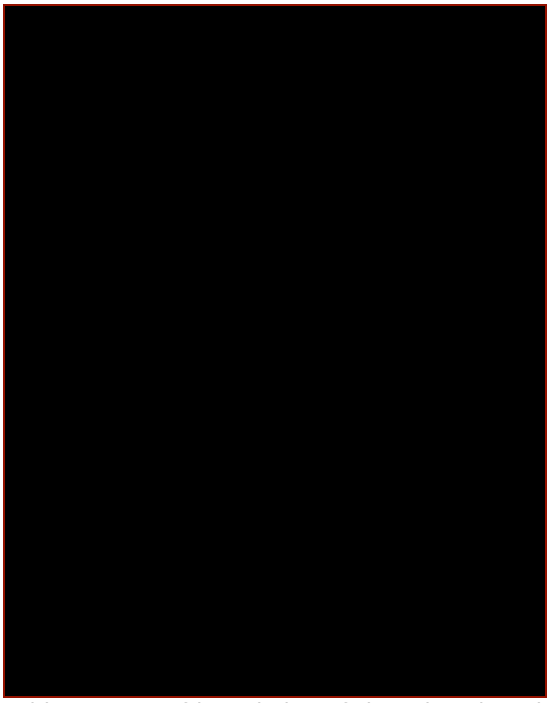

Table 7: Rate of knowledge of the other discipline; **Before**.

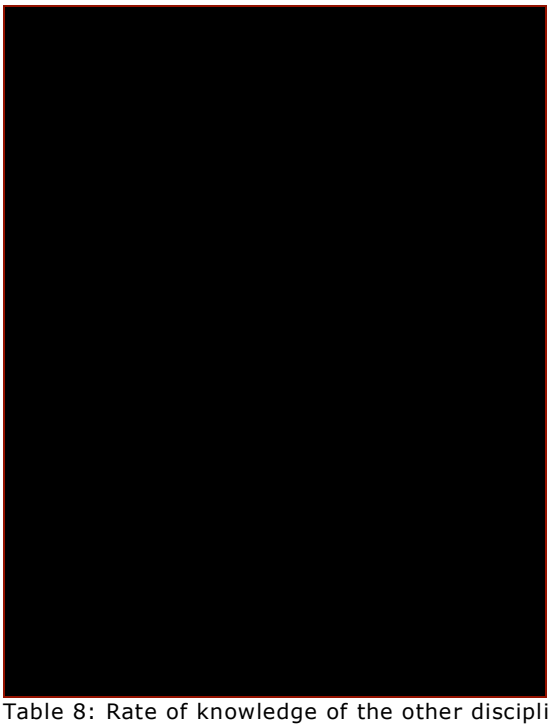

Table 8: Rate of knowledge of the other discipline; **After**.

4. CONCLUSIONS

The Design with a big "D" initiative at SIUC is a work in progress, but based on the recent success of the collaboration with Symrise, the design area is committed to pursuing this path. Despite the recent economic downturn, our graduates are getting full-time design jobs, one good assessment tool. As of this writing, the Industrial design students and double majors seem to be having the most success. Current seniors in Industrial Design were able to secure internships because of the collaborative projects in their portfolio. Recent Communication Design graduates are working as print and web designers both locally and regionally. They comment on how their experiences at Design Days and their exposure to a design process methodology helped prepare them for their jobs.

Recently, the Center for Innovation on campus lost its funding. As a result, the Design faculty is proposing a Design Research center that will build on its recent collaboration success, can be self-sustaining, and will pave the way for an M.F.A. program that may prove to be similar to the MFA Innovation Studies recently started at the University if North Texas (Ligon 2009). As design educators, it is our role to prepare the design students of today for the rigors and expectations of flexibility of the design world tomorrow. The goals set forth by the SIUC Design faculty meet this challenge head on.

REFERENCES:

Undergraduate Programs (undated) "BFA in Art & Design". http://art-design.umich.edu/programs/undergraduate/bfa

Backett, Paul (2011) "Teach Less, Integrate More ". Core77.com, core77.com/blog/education/teach_less_integrate_more_by_paul_backett_20264.asp, August 2011

College of Design (undated) "Design Studies". http://design.ncsu.edu/academic-programs/design-studies

Hansen, Randall S; Hansen, Katharine (undated) "Quintessential Careers: What Do Employers Really Want? Top Skills and Values Employers Seek from Job-Seekers". http://www.quintcareers.com/job_skills_values.html

Ligon, John Eric; Fong, Michele Wong Kung (2009) "Transforming Design Thinking into Collaborative Innovation: Meeting the Emerging Needs and Demands of a Complex World Through Design Thinking and Collaborative Innovation". In: Icograda Education Network Conference 2009, Beijing, China, 24-30, October 2009

Yee, Joyce S R; McKelvey, Kathryn; Jefferies, Emma (2009) "Helping design educators foster collaborative learning amongst design students ". In: Icograda Education Network Conference 2009, Beijing, China, 24-30, October 2009