INTRODUCING THE THESIS GRID
A WRITING AND DESIGN PROCESS

Andy Law / **Christina Galvez**
alaw@risd.edu / cgalvez@continuuminnovation.com

Abstract: If writing is a process of thinking, why is it not a critical component of the design studio syllabus? This project was conceived and inspired by the difficulty undergraduate industrial design students experienced writing about their work. Their difficulty, and often fear, of writing revealed how rarely their design education engaged writing. In contrast, we discovered that these same students – all Millennials – amassed written content, not in the studio or classroom, but on their blogs, their Twitters, their texts, and hashtags.

This pedagogical project addresses the problem - opportunity above: can the design and writing processes, rather than antagonizing one another, engage each other into one dynamic practice for students. We looked at ways to integrate the two by considering writing in terms of tangible making and production: accumulation, curation, framing, publishing (as both broadcasting and sharing with peers). We tested these approaches with our design students during their final semester senior, thesis, studio (a course in the Industrial Design department with a long history).

Our work culminated into the working prototype we share with you here, The Thesis Grid: a collection of methods, exercises, and small assignments that generate, almost by default, a published project document. Our students, who were once petrified or wary of writing, published thesis books and websites that both exceeded departmental standards for design work and also demonstrated an improved level of original thinking. We believe based on these results that the Thesis Grid has potential for other studios outside of the Rhode Island School of Design although we are continuing to test with other students this academic year.

Keywords: Design Process; Writing; Audience; Millennials.

1. INTRODUCTION

Writing is a fundamental means of sharing and testing out ideas. In fact good design hinges upon communicating fresh ideas that resonate with an audience. So why is writing not assigned to or engaged by our students? We have noted an absence of writing as part of undergraduate students' design process and resulting documentation. In our department, degree project books or websites are rarely assigned. In the rare instance they are, students write in a rush, often at the last minute and still in the whirlwind of their project, resulting in incomplete reflections and sentences. When asked to write about their work, Industrial Design (ID) students are often hesitant, even resistant or resentful. Asked to write a project description for a potential thesis proposal, a senior put it plainly, "I hate writing. I don't know why I have to write if what I'm thinking is evident in what I'm doing." A classmate reinforced this typically antagonistic relationship to writing, observing, "I use as little words as possible to get ideas across. Words confuse my ideas more than clarifying or expressing them."

These attitudes are troubling. The fact that our students approach writing as 1) a chore; 2) a cumbersome practice that occludes rather than clarifies ideas; and 3) something to put off to the last minute, is a problem. This problem—the remarkable gap between writing and the design process—begs for action. It's time to ask and figure out what writing is according to design students and what role does it, can it, actively play in the their studio process. This question is important both for our students' academic success and for the department as a whole. The ID program, Rhode Island School of Design's (RISD) largest and fastest growing, provides no past or current models for writing in its curriculum. Increasingly students are expected to share and present work through websites or blogs, but what content populates

these venues of communication? How are students using words to broadcast and explain their work? How can a written practice support and develop work? How can the department provide a model for writing when the design process is so individual and often improvisational?

Figure 1. A typical design studio course scene demonstrating evidence of research, ideation and communication in progress. Original and referenced writing is not only integrated into presentation and organizational material but clearly appears in sketching, photography and notation. Photo credit: Christina Galvez

To address these issues, we attempted to create a method that better aligns the writing process with the design process. Through it, we hoped to establish, or at least propose, a writing practice suitable for the department and specifically for thesis and project documentation. We were chiefly concerned with identifying methods that might support writing in tandem with a highly iterative and often seemingly unclear design process. This process, a model espoused by RISD ID, is messy, fragmented, personal, and social, if not highly collaborative. In an effort to not only bridge the gap but weave writing and design processes together, we designed prompts and methods that break down the “epic-ness” of writing into a sketch process based more in modules, iterations, and improvisations than in abstracts, body paragraphs, and conclusions. In addition to mirroring the design process, these shorter writings were expected to provide a less daunting approach to writing about the design process.

In the following report, we share a collection of prompts we developed and assigned in studio to get students to write not because “they have to” but because it supports their process and thinking, and as a result, improves their work. The core of this approach is a prototype method for generating thesis or project “books”: the Thesis Grid.

2. CONTEXT

Although our experiments address a problem local and specific to ID, our work responds to and engages perspectives in a larger cultural context: millennial writing. On the one hand, our millennial students consider writing an act unrelated to the ID curriculum and even their overall education at RISD. A senior in ID explained an academic divide between when he writes and when he works, "I really only write in Liberal Arts classes, classes that assign papers. Design, my work, is about making things." Another ID student, when she realized a thesis document would be a studio deliverable, confessed, "The last time I wrote something remotely structured or of any length was in high school. I keep a journal for my thoughts but I don't write for class unless I have to." As awkward as they felt with writing, these very students were at the same time generating copious amounts of written, language-based content effortlessly, constantly, and with abandon. Their venues were not the classroom or studio but Twitter, Facebook, Snapchats, Blogs, Tumblr, and Instagram. Students were writing all the time; they just didn't know it or were not defining these forms of writing (tweets, snaps, texts, emails) as "writing." How could we direct such ease in language-based communication "outside school" into their studio practice? How could we re-frame the concept of "writing" from assigned Liberal Arts activity to a valuable aspect of studio practice?

Our observations about ID students echo findings that Andrea Lunsford, Professor of Writing and Rhetoric at Stanford University, has observed over the last ten years with her Stanford Study of Writing. (Lunsford, Fishman & Liew 2013) From 2001 and 2006 Lunsford and her team collected 14,672 student writing samples ranging from in-class assignments to online chat sessions. Her findings demonstrated the vivid presence of writing in millennial culture thanks in great part to social and digital media. In 2009 she talked with journalist and culture writer Clive Thompson about what Wired magazine touted as the "new literacy." (Thompson 2009) In the discussion, Lunsford provides a portrait of millennial writing relevant not only to Stanford in 2006 but also to RISD ID in 2014:

"The modern world of online writing, particularly in chat and on discussion threads, is conversational and public. […] The fact that students today almost always write for an audience (something virtually no one in my generation did) gives them a different sense of what constitutes good writing. […] Stanford students were almost always less enthusiastic about their in-class writing because it had no audience but the professor: It didn't serve any purpose other than to get them a grade."

Lunsford's research begs to be applied to the writing practice in RISD ID. Like Lunsford, we observed that our millennial students can write, but they think they "can't" or they "don't want to" within the confines of academic curricula. How can we take millennial students' natural impulse to write for audiences outside the classroom and develop it to serve their studio practice?

3. METHOD

Our own process in selecting and creating prompts was experimental, unstructured, and improvisational. In many ways, we started from scratch, since the department currently has no past or current writing standards. As diverse and rough as our prompts were, they each circulated around the same guiding research intentions:

- How could we approach writing through a design process/thinking lens?
- How could we not only facilitate student writing but also introduce it as something fundamental in the creative (design) process?

Applying Lunsford's insights, we looked to millennial writing habits and patterns for inspiration, observing the following qualities:

- brevity or concision
- snippets versus "the essay"
- the stylist, curator, remixer vs. the authoritative "genius" or "mastermind"
- everyday versus formal language

Our project participants and "testing ground" were the undergraduate students of the Senior Studio. This course is highly selective and offered in the last semester of senior year. Students in the course are admitted through a competitive process based on academic standing and the integrity and potential of a research-based project presented in a written proposal. Despite their seniority and the fact that they had all written "successful" project proposals, eleven of fifteen students expressed little experience with writing in their four years at RISD.

This limited writing experience triggered our first basic question: What is writing to these design students? During the first week of class, we interviewed students and posed this question in different forms as a way to attempt some definitions. For example, we asked: Do you write? If so, when? What do you write? Why do you write? Answers were generally similar. When they did write, it was often for "required, academic, Liberal Arts courses" where written components (papers, responses) provided teachers material to grade or assess performance. We discussed writing as brainstorming or a means of working out thoughts. We asked them to show us how they brainstormed. Their brainstorming examples, all language-based, were compelling: post-it maps, stream-of-conscious writing in notebooks, and combinations of both, parts that compose a greater idea through an ongoing process that is physical, social, and often displayed on the studio walls. In these examples, we saw the promise of new approaches to writing for ID students.

The range of writing prompts we prototyped share a goal of generating written content that nourishes an ongoing process of iteration and modification essential to design. Our prompts directly relate to the design process model practiced by the ID Department: Research, Ideation, Communication, Professionalism (RICP). Examples, whose details we will share later, include, the Survey prompt which supports students' initial and ongoing research; the Table of Contents prompt which pushes students toward Communication and engaging with a broader audience through a book, website, or a public event, such as an exhibition.

In our teaching at RISD, we provide students with a version of RICP that incorporates educational psychologist John Biggs's SOLO Taxonomy. (Biggs & Collis 1982) This framework for setting and assessing learning outcomes for educators can also help design students assess their own and peers' work at any point in the creative process. It's another way of asking students to map out their design process, but with an added feature of assessment "checkpoints."

We combined the SOLO structure and the department's standard RICP into a RICP-SOLO Taxonomy worksheet for validating projects and process. (Hook 2006) We then located writing prompts within the RICP-SOLO taxonomy at moments appropriate to the design process. The prompts are grouped here into four "parts: " Survey, Shifting Styles, Table of Contents, and Miscellaneous. Together, this worksheet was the first prototype of The Thesis Grid: a system that students can practice to generate work, both written and physically built.

3.1. SURVEY

At the beginning of the course, we assigned students a survey that transferred the RICP-SOLO Taxonomy checkpoints into a questionnaire. The resulting four-page gridded document served as a nested punch-list not only to validate work but, with ongoing use, to generate a rough draft for a project book. From this raw material, students could edit, deconstruct, curate, cull, and filter collected content into documents completely their own. We wondered if students might gain more confidence in their final document since it was a natural extension of the questionnaire rather than a last minute reflection. The survey eventually became our own prototype for our developing method, the Thesis Grid. Here is a sampling of survey questions:

- I came to this research interest after investigating … (relevant texts, etc.)?
- Who is this product for? (Medium Market Segment) Why do they need this product?
- Does your project planning, monitoring and measuring fit with other schedules?
- What are the communication concepts?
- What is your professional mission statement?

We focused on short questions to better engage conversation and dialogue rather than an epic one-way composition. We asked that answers be concise, like single sentences, tweets, or texts. We made clear that answers could be of any formal quality: incomplete sentences, single word replies, hash-tags, emoji, declarative statements. Through the sheer amount of questions, the survey served as a multi-pronged probe to better understand what students were thinking regardless if they felt lost or "on track" and to encourage them to think more broadly about their thesis project.

We distributed a hard copy of the survey to students in class. They were given a few days to answer as many questions as possible. Answers were discussed on the following studio day. Students were asked to continue to fill out the survey throughout studio.

Feedback from students was diverse. This selection reflects the range of sentiments:

"I didn't know how to start. But just thinking about the questions has already helped me in developing project objectives."

"This document is completely overwhelming. Reading all the questions made me really stressed out because it made me realize how much I have to do and how much I don't know yet."

"I think it helps as a tool to consider what I'm thinking about and what I'm actually doing. It's like tracking. If I can manage it, I'll definitely use it. Seems like it would make documentation really easy. Like automated."

"So exhausting. But I got through half of questionnaire so I think that's pretty good. It made any material I had before more organized but it seemed like a lot of work."

"This was like going to a therapist for my project. Like asking me all these questions to make me realize a bigger take-away with my project."

Of the students who provided printed thesis books at the end of the semester, those who maintained and referenced their survey demonstrated more compelling work. These documents competed, in our opinion, with the graduate thesis books. Some students developed their work with the survey into a product website. Two students never produced a book. We observed that they had not used the survey past the first week of class.

In the future, we would provide an overview of the survey at the start of the semester and then assign portions of it throughout the semester, rather than assigning all the questions in one day to the students. Half of the class felt overwhelmed and intimidated by their inability to answer questions and this likely inhibited their initial efforts in trying it out. Because each section of the survey aligns with the RICP-SOLO model, one could strategically schedule critiques around different points of the writing-design process. For example, during the Professionalism section of the course and survey, I could invite a specialist in entrepreneurship into class to pose their own questions, as validation points, to students. They could perhaps edit or add to the existing survey.

3.2. SHIFTING STYLES

A month after the survey, we introduced "Shifting Styles" to the students. This exercise asked students to use different rhetorical styles to communicate their work. Media formats, tones, intentions, and constraints ranged from a fable to conference minutes to Craigslist postings. (Perloff 2010) & (Goldsmith 2011) Through Shifting Styles, students practiced communicating their work for specific audiences. The process in adopting their chosen rhetorical style by nature required critical reflection: What am I doing? What do I want to say about it? To whom?

Students could adopt any format. All ultimately chose a rhetorical style that related to their thesis idea or product. For example, a student questioning archives, public access, and museums as educational institutions wrote a public safety notice reporting the "crime" of a student handling and studying through

touch an artifact in the museum collection. Another student designing goods with the Toyota LEAN system in mind explored potential customer feedback through an Amazon review.

Students had a lot of fun with this assignment. One student's experience especially demonstrated the value of Shifting Styles as an exercise for project clarity. Her project centered around childhood education. Her project and its scope at that point in the course were unclear. She chose a children's book as her rhetorical style since children were primary stakeholders in her project. As she read the story to the class, her ideas and intentions clarified. Adopting a children's book had pushed her to articulate complex, in-process ideas into concise image- and action-based language. Her piece was not only compelling but also the first time the class understood what she really wanted to investigate and do with her thesis.

This exercise was a quick and valuable writing prompt. In another iteration, however, it would be useful to contextualize this assignment within a larger goal, such as knowing one's audience. We are unsure if students were aware of how they could apply this exercise to a larger practice or working process. Also, we would ask students to explain their rationale in selecting certain rhetorical styles.

3.3. TABLE OF CONTENTS

Midway through the semester, students were asked to produce a table of contents for their thesis document book. We went to the RISD Library and looked at various thesis books, with special attention to the Master's ID thesis, as examples. We discussed what comprised a strong thesis book. Students concluded that a "good" table of contents directly related to a "good" project because it provided the audience/reader with a clear project map or journey. As we perused a diverse collection of thesis books, students also realized that structure does not mean "rigid" or "boring" as much as clear and compelling.

At first, many of the students were at a loss about where to start on their own table of contents. Some students "plugged" their project into an existing table of contents and iterated from there. Several built bullet point lists using popular argument structures. (Minto 2002) Others transferred content from their Survey as the groundwork for a process book with a layout reflecting the structure of the questionnaire: Research, Ideation, Communication/Validation, Conclusions. As projects neared the end of the semester, the Table of Contents provided not only an outline but an organizational system for creating ongoing content. (Eco, Farina, Farina & Erspamer 2015)

The class held a collective exhibition to share their work together during exam week in May. Student's books were displayed alongside their work.

3.4. MISCELLANEOUS

In addition to the Survey, Questionnaire, and Table of Contents assignments, we gave a collection of miscellaneous prompts. These included:

30 Images

Students asked people they knew outside RISD to describe themselves in thirty photographs they had either taken or had in their possession. (Gaver, Dunne & Pacenti 1999) Students worked in groups of three to exchange the thirty images and write persona biographies based on the images. Then they created scenarios that involved both the personas and their project ideas. This exercise asked students to design for people who were much more complicated than a fabricated "customer." It also helped students find and contact potential research participants.

Figure 2. Typical presentation material from the group analysis of the 30 Images grids, comprising of multiple notes and photographs. The Persona biographies were created after this presentation and discussion. Photo credit: Andy Law

Image Parsing

Students translated their thesis project ideas into systems using Pictionary-esque icons emphasizing actions and tasks. (Raeder 1984) After "composing" their own project, we asked them to combine their images with another student's. The resulting image parsing helped students articulate key components of their project and demonstrated the act of "re-mixing" these components into new ideas and combinations.

4. CONCLUSION

All fifteen seniors produced a book or website comprised of content generated from our writing prompts. Students demonstrated they could write about their work because they did write about their work. We found that their writing excelled in clarity and concept and attributed this success to a structured framework that organized the writing process into a series of steps embedded into a design process already familiar to them in the department.

We believe that "good" writing, regardless of department, targets an audience, an idea or question for that audience, and proposes evidence to validate the idea's value or relevance. An important aspect of these writing prompts was a social one: we required students to read written pieces out loud and to share works with one another and provide feedback. Writing became a practice of individual reflection supported by peer-to-peer activity, collaboration, and active author-to-audience participation.

To help students produce "good" writing, this set of methods provides a strong starting point for a method worthy of development, The Thesis Grid. The Thesis Grid almost automates a thesis book with its slot/bucket/punch-list format that organizes and generates content. What it leaves to the student is the significant process of organizing, curating, and filtering content into their own ideas. We would define this simultaneously personal and critical process of arranging content as well-suited to the ID department.

This paper introduces the Thesis Grid as a starting point for a broader conversation about writing. Specifically, we want to observe and learn from the differences and/or similarities between individual and group collaborative writing in addition to graduate and undergraduate students. We intend to explore how writing is structured in other design departments at RISD. We believe that there is a broader opportunity

to see if writing as part of the design process has a place in other departments and disciplines (at other departments at RISD including Textiles, Apparel, Ceramics, Painting and Sculpture among others).

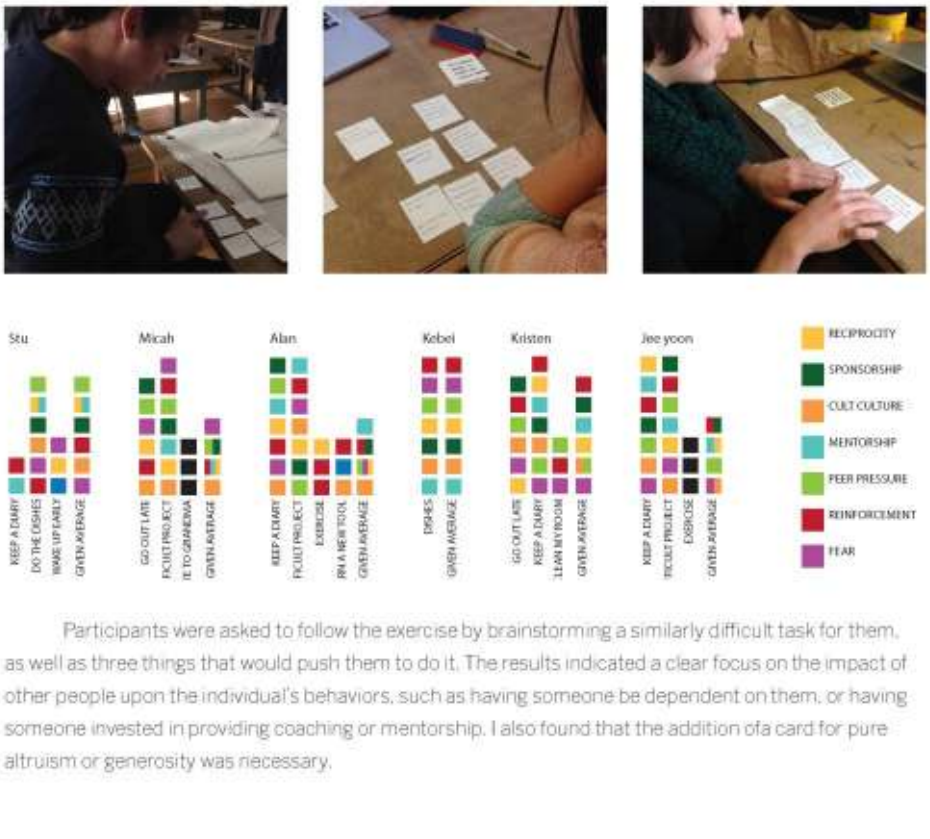

Figure 3. Extracted sample page from a book produced using the Thesis Grid method. Credit: Tess Feigenbaum

REFERENCES

Biggs, J., and Collis, K. F. (1982) Evaluating the Quality of Learning: The SOLO Taxonomy, New York: Academic Press.

Eco, U. and Farina, C.M. and Farina, G. and Erspamer, F. (2015) How to Write a Thesis. Book. MIT Press.

Gaver, W., Dunne, A., & Pacenti, E. (1999) Design: Cultural probes, Interactions, Vol 6, Issue 1, January / February.

Goldsmith, K. (2011) Uncreative Writing: Managing Language in the Digital Age. Book. Columbia University Press.

Hook, P. (2006) A Thinking Curriculum. Journal Article. Page 81, Curriculum Matters 2 : 2006. NZCER Press

Lunsford, A. A., Fishman, J., and Liew, W. M. College Writing, Identification, and the Production of Intellectual Property: Voices from the Stanford Study of Writing, Journal Article. Page 470, College English, Volume 75, Number 5, May 2013. http://tinyurl.com/pb3spo5 (Accessed 15 February, 2015).

Minto, B. (2002) The Pyramid Principle: Logic in Writing and Thinking. Book. Financial Times Prentice Hall.

Perloff, M. (2010) Unoriginal Genius: Poetry by Other Means in the New Century. Book. University of Chicago Press.

Raeder J. G. Programming in Pictures. PhD Thesis. University Of Southern California, Computer Science, Nov. 1984. http://tinyurl.com/hwosgss (Accessed 15 February, 2015).

Thompson, C. Clive Thompson on the New Literacy, Article. Wired, Aug. 24, 2009. http://tinyurl.com/qzjj4kf (Accessed 15 February, 2015).