BUILDING WORD-BASED COMMUNICATION SKILLS
TRANSLATING VISUAL IMAGERY INTO WORDS

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1. INTRODUCTION

On a recent, five-day field trip, junior-level industrial design students met articulate design professionals who unknowingly demonstrated their ability to communicate effectively with process partners across multiple disciplines. These professional designers, with their honed communication skills, enabled design in their organizations to be elevated and valued to levels that were beyond the students current understanding about what design was and what designers could accomplish. The visits were transformative. Tom Greever, in his book *Articulating Design Decisions* summarizes this experience with the idea that, "Communicating *about* the designs was more important than the designs themselves." (Greever, 2018)

While theoretically understanding the role of multiple modes of communications, students are very comfortable sticking with *visual* communication – models, sketches, renderings, image boards, etc. They like to let things *speak for themselves* - which is dangerous (Dykes, 2016) - and often struggle with precisely articulating the meaning and value of their designs outside of this image-based mentality.

The aptitudes and skill-sets that might pre-dispose a student towards industrial design – summed up in *Visual*, *Adaptive*, and *Creative* thinking (Skaggs, 2017) – might also pre-dispose them *against* communicating specifically and clearly with forms that resonate more with other disciplines – i.e. words and numbers.

This paper outlines an attempt to get students to work with both pictures AND words, helping them experience the benefits of both in a creative, project-based setting.

2. COMMUNICATION

Sir Francis Darwin cautioned that "*…credit goes to the [person] who* **convinces** *the world, not to the [person] to whom the idea first occurs*" (Darwin, 1709). Bronwen Rees acknowledges that "*our ability to communicate design competently is an area in which designers need to improve*" and claims the ability to communicate design compellingly "*demonstrates intelligence, assures stakeholders that [a designer] can be trusted…are experts…there is logic to their approach*" and among other things, communicates a "*respect for others*" (Rees, 2018). Clear and effective communication in design is key.

Rochell King, a contributor to the 2017 Design in Tech report (Maeda, 2017) makes a distinction between *"Communicating or Articulating your Design"* and *"Rationalizing/defending your design".* In her list "The Design Education Gap", C*ommunication* and *Articulation* win out over rationalization and defense.

The Japanese verb for "Discern", "Tell Apart" or to "Recognize" (Miwakeru) is a combination of the characters to SEE and to SEPARATE (Figure 1). To increase their ability to articulate the value of their designs, students should be encouraged to SEE (i.e. gather, experience, listen) and then to communicate their understanding through means that provide unique separation (or clarity). Their work should enable others to "see and to separate" so they can act effectively in the design process. This includes modes of communication beyond imagery.

見分

Figure 1 - MI-WAKERU – To "Discern

3. PROJECT SETUP

This exercise was part of a short, 8-week class that met once a week for 2 hours. This short project builds off of previous work with students in identifying, defining, and applying taste terms (Fry, 2017). In this particular effort, a small group of students worked to identify, define, and apply the aesthetic taste terms ELEGANT, TECHNICAL, and NATURAL.

The process was organized around the general steps 1) Understand, 2) Synthesize, 3) Define), and 4) Express. Although easily described as a series of linear steps, this process is iterative, as described by Paul Backett in his six-part series of articles on Design Education entitled "Build More and Teach Less" (Backett, 2011). In part 3, he describes the design process as a series of circular activities, with each cycle bringing the process closer to the end solution (Figure 2).
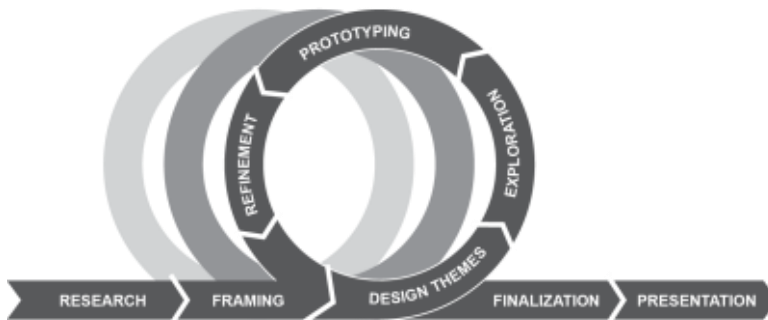

Figure 2. Iterative Design Process (Backett, 2007)

3.1 UNDERSTAND

Students initially gathered familiar, image-based resource material and were asked to bring a poster of images to share. These individual image collections reflected each student's pre-conceived visual definition of the targeted taste term (Figure 3). Students were also asked to engage in an inspirational "excursion" to a local mass-market home décor store and have "in-person" experiences with trying to identify real-life examples of the assigned taste-term. Rather than looking online for extreme versions of the taste-term, students looked for and photographed items people could have in their daily lives that expressed or embodied the taste term.

Figure 3. "Technical" Internet Image Search and "Natural" Excursion Imagery

It is easy for students to provide full and impressive image boards. These boards amount to a visual *description*. However if asked to verbally *define* and *communicate* the essence of the taste-term they have difficulty and find they don't have clear, concise "talking points". They are unable to say what they want to.

More so than just visually defining a taste-term, this activity then becomes an exercise in pointed, effective communication – especially helpful to those outside of the design discipline. This is related to how effective a student can be in communicating the value of a variety of things – from the pointed definition of a taste-term, to the value of what a designer does, and how it might affect other disciplines.

To push students out of their visual comfort zone, and begin the transition from *description* to *definition*, they are asked to engage in word-based discovery activities for the assigned taste-term – e.g. to search out and share definitions, synonyms, antonyms, quotes, sayings, etc. (Figure 4). They are encouraged to "chase" neighboring idea threads in order to build a vocabulary/knowledge base that clarifies and separates the specific taste-term from related, neighboring concepts.

FIG 04. Word-Based Inspiration (hinative.com, 2017)

3.2 SYNTHESIZE
After reviewing the collection inspirational imagery, excursion photos, and word/concept exploration, the next task is to discuss the findings, and give the overwhelming body of data meaning. Students have an abstract visual knowledge base, but they still lack a concrete set of words to describe their findings with clarity.

With the visual information available for reference, students SPEAK words that are then WRITTEN on the board. As they READ the words and continue to VERBALIZE concepts, their aesthetic ideas are translated from IMAGE to LANGUAGE (Figure 05)
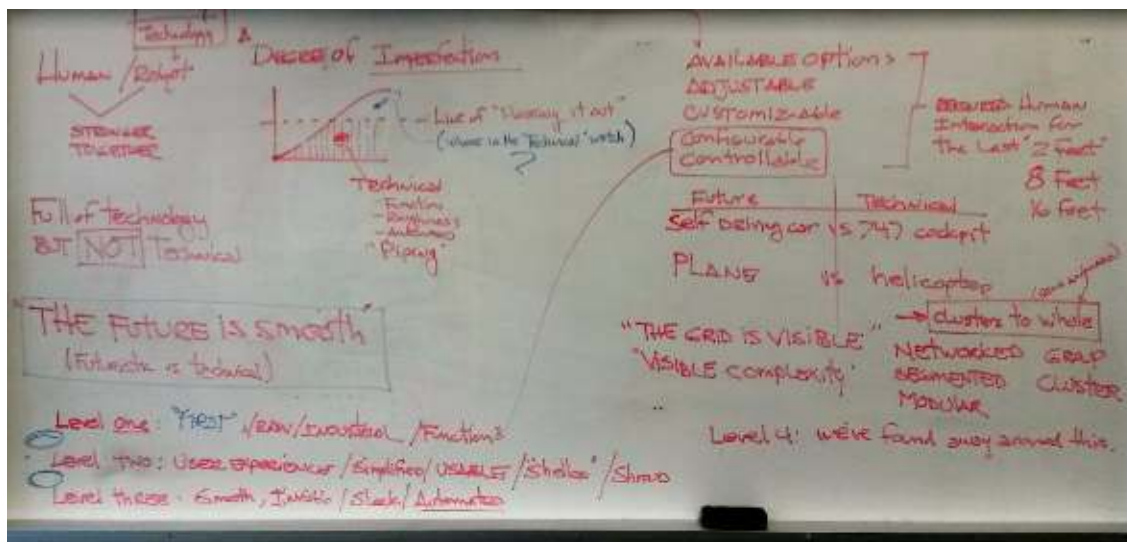

Figure 5. Word-based Chalkboard Discussion

To facilitate this process, the instructor acts as discussion leader, helping students re-state concepts (*"I don't quite understand that, could you explain it to me again using different words?"*), compare one statement to another (*"Is this the same as your previous statement or is it different?"*), and to clarify and simplify as they go (*"If you had to combine that statement into one word, phrase, or idea, what would it be?"*). And even, "*How does the aesthetic express itself in behavior, and other facets of life beyond aesthetics?"*

It is important to push this part of the process as far as it will go. Rabinowitz reminds us that *"When there are conflicting opinions – especially when both can be backed up by reasonable arguments – the real discussion starts"* (Rabinowitz, 2018). However, at some point, the students have "had enough". But they now also have a word-based vocabulary to complement their visual vocabulary.

3.3 DEFINE
> *"There are six main characteristics of effective language. Effective language is 1)concrete and specific, not vague and abstract; (2) concise, not verbose; (3) familiar, not obscure; (4) precise and clear, not inaccurate or ambiguous; (5) constructive, not destructive; and (6) appropriately formal."*

Taking the above listed "*Characteristics of Effective Language,*" (Zent, 2001) into consideration, students summarize their new/current understanding down to a LIMITED number of specific principles or concepts that, for them personally, drive the given aesthetic. These *principles* are presented in the form of a word or phrase that acts as a concept *title* with a series of short *supportive statements* and appropriate visual *reference image(s)*.

The back and forth process of grouping similar ideas, summarizing (or *abstracting*) through titles, ranking in order of importance, and ELIMINATING less important information is difficult. However, when they are done, the students are always surprised by the clarity of their final result (Figure 6).
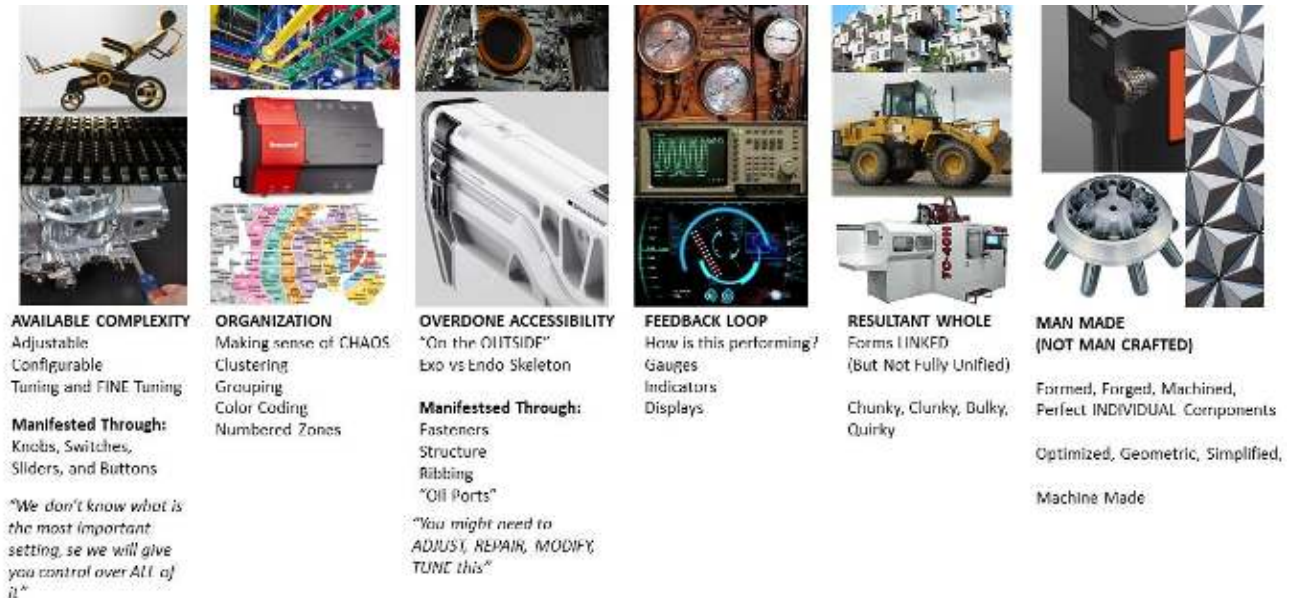

AVAILABLE COMPLEXITY
Adjustable
Configurable
Tuning and FINE Tuning

Manifested Through:
Knobs, Switches,
Sliders, and Buttons

"We don't know what is the most important setting, se we will give you control over ALL of it."

ORGANIZATION
Making sense of CHAOS
Clustering
Grouping
Color Coding
Numbered Zones

OVERDONE ACCESSIBILITY
"On the OUTSIDE"
Exo vs Endo Skeleton

Manifestsed Through:
Fasteners
Structure
Ribbing
"Oil Ports"

"You might need to ADJUST, REPAIR, MODIFY, TUNE this"

FEEDBACK LOOP
How is this performing?
Gauges
Indicators
Displays

RESULTANT WHOLE
Forms LINKED
(But Not Fully Unified)

Chunky, Clunky, Bulky,
Quirky

MAN MADE
(NOT MAN CRAFTED)

Formed, Forged, Machined,
Perfect INDIVIDUAL Components

Optimized, Geometric, Simplified,

Machine Made

Fig 06 – Simplified/Abstracted/Chunked Aesthetic Characteristics - *Technical*

3.3 EXPRESSION/APPLICATION
Bloom's original taxonomy of learning - applied widely to educational thought from the 1960's onward - listed *Knowledge, Comprehension,* and *Application (*as well as *Analysis, Synthesis,* and *Evaluation)* as a model for how people cognitively acquire and develop new knowledge, skills, and understandings. Application was thought of as one of the first ways to test how well students understood what they had learned. In 2001, Bloom's taxonomy was revised and simplified to *Remembering*, *Understanding*, and

Creating. Looking at either the original or the revised taxonomy, engaging in a creative, application-based project to test learning effectiveness is critical (Great Schools, 2014)

Therefore, to test their personal understanding of a particular taste-term, students were asked to design and present concepts for a simple household product that used their defined list of aesthetic principles a given taste-term – in this case Elegant, Technical, or Natural. These product concepts did NOT focus on usability or functional appropriateness. Rather, the larger point was to learn through application how the aesthetic principles played out in a product-like context. They were asked, "*Have you defined the taste-term with sufficient understanding to use it effectively in your own design work?*" And, "*Can you explain the rationale of your aesthetic decisions to someone outside of your own process?*"

Because of other aspects of this short course, the students were required to present their concepts through digital models/renderings. (Figure 7)

Figure 7 – Technical and Natural Product Concepts based on the application of discovered "Taste-Term" Principles

4. CONCLUSION

As all types of design become more collaborative, communication (especially across disciplines) becomes more critical for "… understanding and sharing meaning" (Pearson & Nelson, 2000). Evaluation of industrial design students points to strong aptitudes for visual thinking and visual communication. However, much of the world communicates through other means. "*The ability to communicate – visually, verbally, and in writing – forms the critical common ground of any endeavor involving people, and is vital to successfully engaging clients…*" (Best, 2010).

It is important for students to build the skill of effective, word-based communication. Helping them practice *translating* their visual acuity and holistic understanding of context and meaning into effective communication moments is important for transforming hesitant process partners into enthusiastic champions.

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