A Pedagogy for Reflective Practice: Art and Design Thinking Made Visible Using an Online Learning Portfolio

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While it is commonly accepted that being a reflective practitioner is important, teaching students how to do this is often addressed. As part of larger curricular revisions, Parsons School of Design made the decision to embed the use of an online learning portfolio (LP) at the core of the first-year experience. The addition of the LP was intended to be an integral component in supporting students as they develop the reflective skills of discovering themes and patterns in their own work, analyzing their experiences, and making connections across courses and contexts. Curricular shifts emphasized reflection on the process of making in order to foreground "thinking" embedded in practice. This article chronicles a two-year pilot in which we tested strategies and refined assignment prompts using the LP, looking at both the student work and faculty development that paralleled the adoption of the LP.

Institutional Context

While it is commonly accepted that being a reflective practitioner is important, teaching students how to do this is less often addressed. As part of larger curricular revisions, Parsons School of Design decided to embed the use of an online learning portfolio (LP), developed as a WordPress platform, in revisions of the first-year curriculum. The addition of the LP was intended to be an integral component to support students as they developed the reflective skills of discovering themes and patterns in their own work, analyzing their experiences, and making connections across courses and contexts (Matthews-DeNatale, 2013).

In 2013, Parsons launched new curriculum across all 11 of its undergraduate majors. There was a decision to completely redesign the shared first-year, which currently includes approximately 1,100 students. Our array of majors spans very different disciplinary approaches, so there was much debate, discussion, and workshopping about what this shared first-year experience would include. What we found was all majors had in common—embedded in the school's mission—an emphasis on the link between making, thinking, research, collaboration, and social engagement. The changes made to the first-year curriculum represented a shift away from discrete skill building or Bauhaus-centric ideals about form (de Duve, 2005), and instead a focus on the process of making and designing. What emerged in the first-year was a set of courses with learning outcomes that expected students to demonstrate process-knowledge like iteration, risk taking, integrative thinking, and collaboration. Central to teaching these "soft skills" is developing students' capacity to contextualize new thinking and learning, which was at the core of our design for the first-year experience.

As part of the first-year curriculum, the LP was made available to all students (Figure 1). We quickly realized that the learning portfolio pedagogy was foreign to many of our faculty and further refinement was needed. We decided to test ideas, strategies, and assignment prompts through a pilot in Anette Millington's studio courses. There were two sections per semester over two years, and the goal was to learn from the successes and challenges of her group of approximately 140 students. We were interested in both refining approaches to effective learning for students and creating professional development approaches for faculty teaching with this tool. This article chronicles the work of Anette Millington, in whose classroom the pilot was conducted, and Mariah Doren, whose role as Assistant Dean of Curriculum and Learning situated her at the center of the implementation of new curriculum.

Our focus during the two-year pilot was to develop a series of assignments, prompts, and approaches, using the LP as a place for students to explore, to address the often unspoken sets of decisions artists and designers make along the way to creating finished work. We wanted to use the learning portfolio to help students build strong habits of thinking about and developing their practice, shifting emphasis away from discussions of finished work to writing, organizing and thinking about the hard to articulate goals of process. We looked for ways to teach students to actively use reflection on their own work as a critical component of their practice. We discovered three useful touch points—inquiry, curation, and intra- and extra-curricular connections—that guided our communication with faculty and the refinement of assignment prompts using this tool. At the end of the pilot, we developed a set of generalized, teachable guidelines that could then be shared with the larger group of faculty using the learning portfolio.

Reflection: The Educational Context

One of the foundational qualities of art and design practice is innovation and generative thinking. Because

Figure 1
A Student Learning Portfolio Front Page
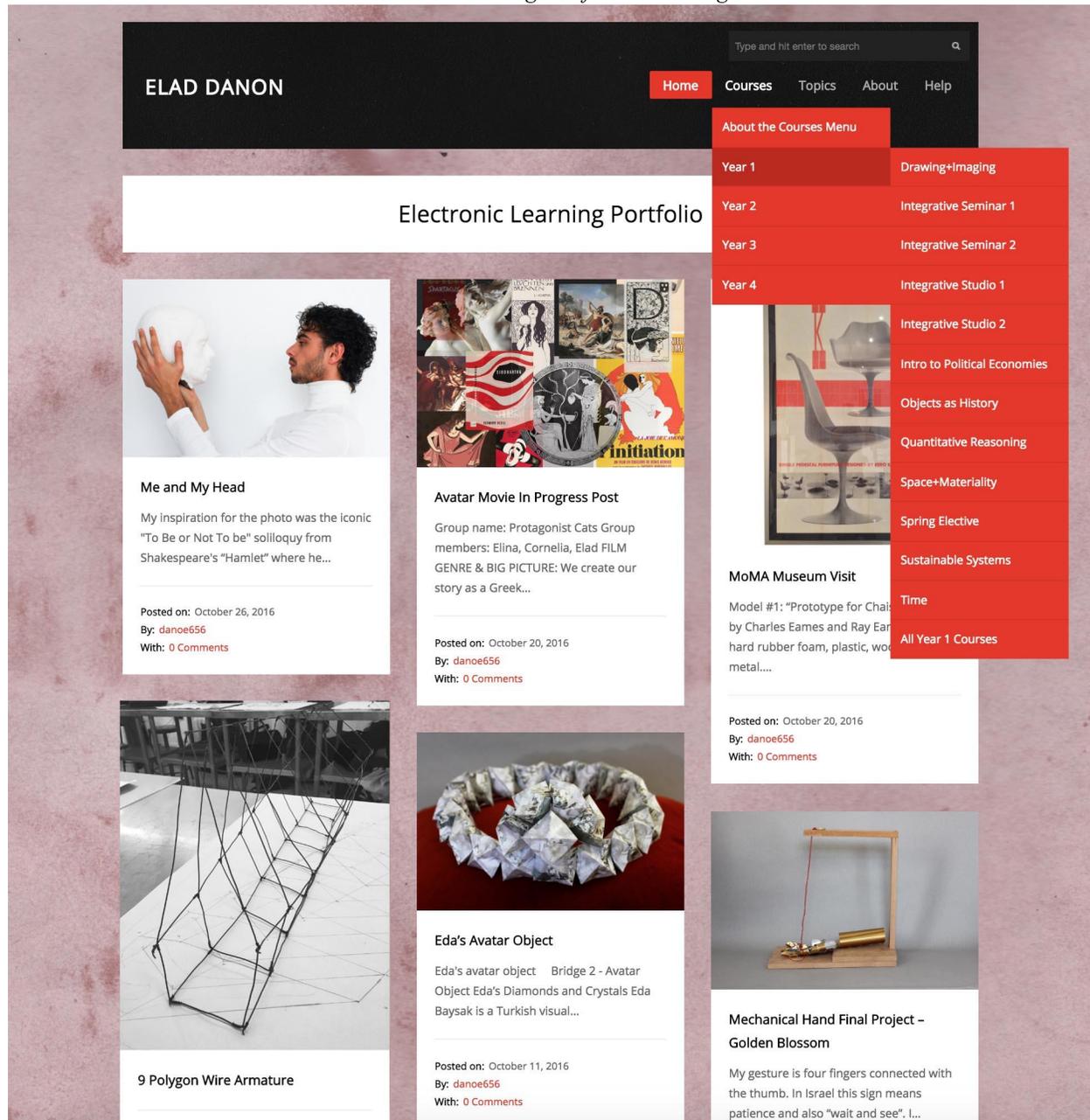
we ask our students to make something new, the finished products of their work often cannot be predetermined. There is no singular "correct" answer to a studio assignment prompt. We specifically value and celebrate outcomes that surprise us or are unanticipated. In this environment, it makes sense to focus our teaching on the process of making, the methods used to discover an idea, set a problem, learn from failure, take risks, develop research, and etc. While focusing

attention on these aspects is important, if we want students to understand how to build a sustainable practice, these process-oriented methods are often not visible in the finished studio projects. We decided to ask students to reflect on the work during planning, in process, and after the work was completed as a way to make visible the methods used to make each project, and to value this as real knowledge (Kottkamp, 1990). We learned that in order to engage students in

meaningful learning from reflection, we had to create separation between the process of working and the finished product. Art is a discipline with a long history of maintaining a binary between "embodied experience" and the linguistic expression required for reflective practice. Traditional theories about art making describe the process as a "frenzy . . . full of intuitions, impressions and fantasy" (Wolf, 1988, p. 144), when in fact "the genesis of an artwork arises from a complex context of art making, thinking, and ongoing experience" (Mace & Ward, 2002). In the Parsons' curriculum, we require that students write about exploration–as they are working–and have found that the framing and structuring process–the work they do along the way–is integral to understanding and developing their studio work.

This focus on the process of making is a messy way to approach student work. Embedded in iteration and productive failure are half completed notes, abandoned sketches, and seemingly similar prototypes. Using the learning portfolio as a virtual studio, we asked our students to organize material in a way that was to be legible to others. The process started with thinking about the work they had completed and writing about the process—their plans, decisions, choices, and responses. Reflection is a method for turning experiences into knowledge that starts with looking back and describing what was done and why (Brooks & Brooks, 2001). Students had to frame their understanding in words, learning what an experience meant as it was integrated into the web of things they already know. This expression and explanation through writing is never a direct mirror of what happened; as they were working, students made choices about how to represent their own thinking. In this way, they shaped and modeled content as they articulated the influences and confluences involved in each decision. The process involved sorting pieces of information, ideas, and feelings to identify themes that emerged through repetition. Students used analysis of their reflective writing to develop metacognitive awareness of how they "usually" behaved and responded in their studio practice (Brooks & Brooks, 2001), which promoted awareness and sensitivity to the situations where they were most likely to succeed (Eynon, Gambino, & Török, 2014).

As students developed the ability to articulat—through writing—how a project developed, they also increased their ability to give and receive feedback from others. The critique of studio projects, which is a discussion around the purpose and meaning of the work produced, lies at the core of art and design school pedagogy and is a central aspect of studio culture more broadly. The learning portfolio helped prepare students for this expectation. Writing about process was used as a way to represent their visual work. The communication skills they developed prepared them for

more dynamic interactions with others when they discussed the work (Bhika, Francis, & Miller, 2013).

We ask students to reflect because we want them to become reflective practitioners. The goal is to develop internal mechanisms for understanding the way you work, focusing on assessment of actions taken in the midst of making. When Stephen Brookfield (1995) wrote about critical reflection, he described a process where "we identify and scrutinize the assumptions that undergird how we work" (p. xii). Reflective practice includes the thoughtful consideration of one's own experiences, which is a method for checking and monitoring as we move toward a finished product. The approach is cyclical—examining assumptions and practices as a way of acting and reflecting in order to act again. Being reflective challenges students "to identify which aspects of performance need improvement, it also challenges them to elucidate and clarify…[as] we develop an ability to articulate that knowledge" (Osterman, 1990, p. 138).

Establishing Reflective Studio Practice at Parsons School of Design: The Learning Portfolio Mandate and Anette's Pilot

The learning portfolio at Parsons is a blog platform. Students make "posts," which are entries that include writing, image galleries, and keyword tags. All of the post prompts were assignments developed by Anette, specifically for the learning portfolio and used exclusively in sections of integrative studio that she taught as part of the pilot. The results, tested, adapted, and refined over two years, were guided both by Anette's approach, insights and values as an instructor, and by our desire to discover the best practice for using an LP to teach process-based learning outcomes that are central to the goals of Parsons' curriculum.

Anette assigned posts to the learning portfolio in ways that supported student development. She asked students to use the blog like an actual studio space: to test ideas, to play, to assemble things and leave them behind, and to take unused ideas and bring them into new projects. Most importantly, she asked them to develop the habit of using reflection to understand their own practice. As art and design practice has both a visible process and a tangible product, one of the major goals has been to foreground the thinking embedded in the design process. In the words of a first-year student, "Critique is where I learn what other people think about my work. The learning portfolio is where I learn what I think about my work."

In the first year of the pilot, Anette used a strategy of dividing assignments into categories that represented the sequence of project development: research, process, and presentation. Posts were assigned at the beginning, middle, and end of each project. As the pilot progressed,

the prompts were refined, shifting away from narrating the temporal progression through a project to something more directed and specific. Asking students questions that related to curation, inquiry, and cross-course connections helped build reflective capacity and took better advantage of the visual, textual, and networked container of an electronic portfolio.

The learning portfolio was introduced on the first day of class and used consistently across the semester as a component of long-term projects and as a site for short assignments. Students were instructed in the technical use of the LP by the instructor who was already familiar with the CampusPress/WordPress platform. Additionally, students responded to prompts in weekly homework assignments. We found that the most thoughtful work was produced when students were given specific, directed prompts instead of asking for open-ended descriptions. We started asking them to interrogate their own choice-making—to explain why, to what end, and then what else—as they worked on projects. As this process became a habit, we began to see more dynamic responses across the range of student aptitudes in each section.

From the beginning, the LP was meant to be an exploratory space, so the assignments and grades students received were low stakes. The focus was on their habits of work: Does the post respond to the prompt? Does it consider the prompt deeply as evidenced in thoughtful writing? Does it use visuals, titles, and tags to tell a story related to the prompt? Meaningful evaluation of student work happened at the end of the project. LP posts were one part of a larger rubric where assessment is based on the art or design work produced. Because the details a post contained helped inform feedback and in-process teacher-student dialogues, LP posts might also be reviewed in weekly student-teacher meetings. A reflection on process might inform new strategies, or a curation of inspirations might spark a concept. In this sense Anette's approach was to model of how reflection can help frame next steps in a project. This regular engagement with articulating choices and forcing art and design students to bring into language the thinking they do in the studio also improved the level of dialogue that happened between peers during class critiques.

Anette also observed that the learning portfolio allowed her to respond and give feedback in a more individualized way. The evolution of student thinking about a particular project over the course of the semester could be easily accessed through the learning portfolio, so her responses to the work could be tailored and specific. Because a student's reflective writing is a subjective summary of experience, including it in the understanding of their studio work allowed her to evaluate the development of individual ways of working as part of the project. Reflection involves a kind of "cognitive housekeeping" (Moon, 2004, p. 185) that lies at the center of learning. Often, sorting things out in your head and representing them on paper prompts the "a-ha" moments. Students recognize on their own what the next

step should be, that they have learned something new, that they have more work to do, that they need more information. Because new experiences are filtered and framed through past ones, each student's experience of learning is unique. Using the LP gives the instructor better access to their thinking about process.

The assignment prompts used during the pilot asked students to post documentation of the inspirations that led to their initial investigations. Often these inspirations were materials-based and the posts were evidence of the course learning outcome, which was "Explore visual representations of abstract ideas (using 2-D, 3-D and/or 4-D media)." Student M wrote about abstracting ideas into material form:

> I then sketched out the possible forms that my armor could take, collecting materials and trying to draw relationships between those and my concept. Here I considered which materials I could use which would help me maximize the distortion of the body, considering the time limit for the assignment. I also wanted materials to appear lavish, scintillating, imposing and crystal-like when constructed around the body, to emphasize the idea of extreme embellishment.

Student M is beginning to understand both the meaning of forms and how to work with her current skills under time constraints, thus monitoring her own development and adjusting strategies for learning. This sense-making process involves accommodating new ideas and phenomena with existing beliefs and knowledge. The construction of ideas also includes the context and what she was doing (sketching as a means of exploring) and an articulation of what she intended as outcomes of the process (Figure 2).

Another learning outcome for the integrative studio course is "Engage with art and design as a generator, embodiment and transmitter of cultural ideas. Demonstrate an understanding of value systems as social constructs." When Student A wrote about how she narrowed ideas for a fashion project and accompanying research paper, she pushed herself to think through the connections between design and cultural values:

> I would like to examine the different aspects of the veil and its significance. As fashion it is reflective of certain societal and cultural traditions and view, the interpretation of the veil is varied and diverse in its complexities. . . . My understanding of fashion, specifically designer fashion, is that the process of dress is an elaborate act of presenting oneself to the world. It is the first method of communication. . . . Veils serve and present a strange, complicated element to this process as it connotes a barrier, protective and distancing communication. This particular aspect is personally fascinating.

Figure 2
Using the Learning Portfolio to Track Materials and Process
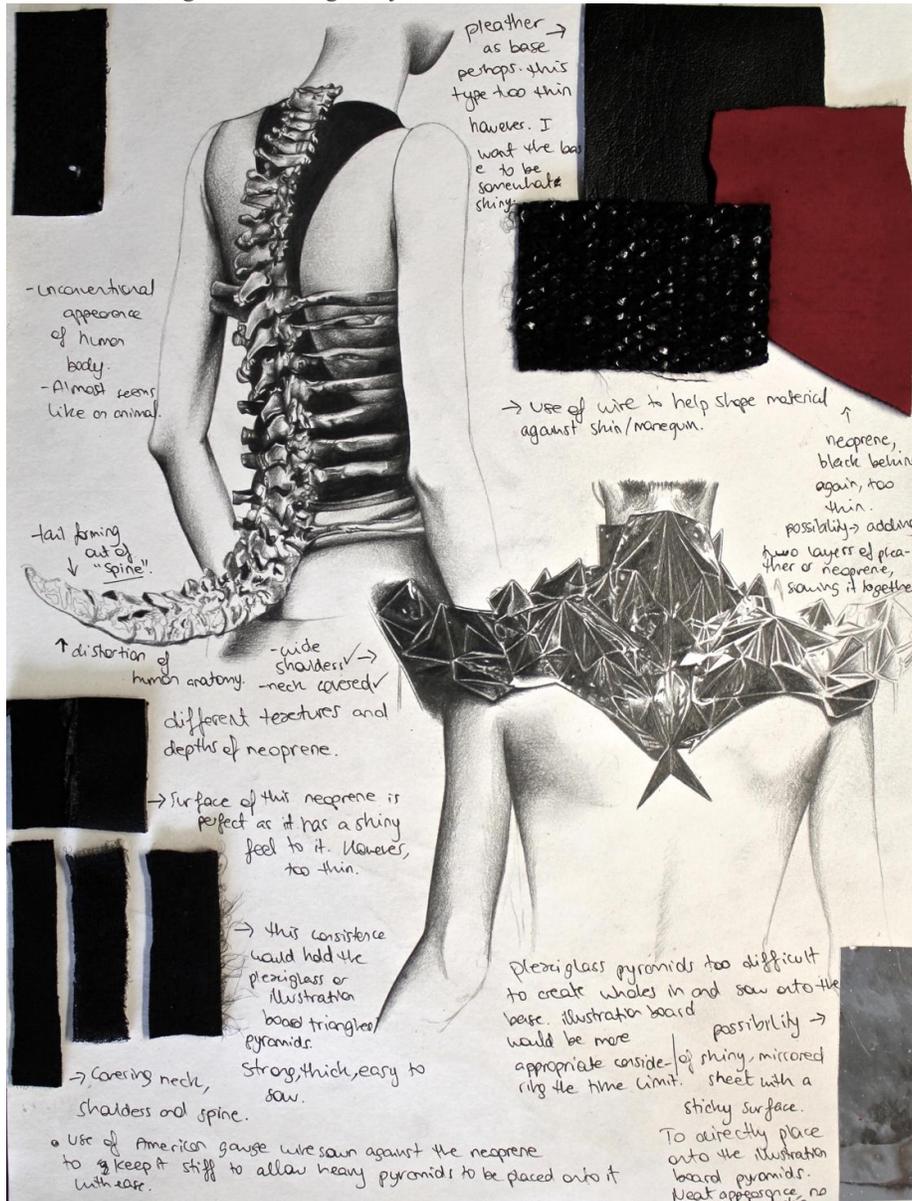
What is exciting in Student A's writing is that we saw her constructing her own questions from her "fascination" with a topic (Figure 3). The structure of our reflective assignments helped her begin to internalize, reshape, and transform new information (Brooks & Brooks, 2001). By asking her to reflect on her own process, the new ideas that emerged were meaningful, in part because they were acquired in a personally relevant context. When key ideas are indexed to the features of the situation in which they are relevant–contextualized within her own studio project–

opportunities for cognitive development are greatly enhanced (Marra, Jonassen, Palmer, & Luft, 2014).

In the context of art and design, process is often described as the sequence of events that shape the fabrication of an object or image. Donald Schön (1987) wrote about a way of knowing in professional practices, such as design and architecture, that he called *reflection-in-action*. He describes a "high ground" where problems are solved using theoretical knowledge, data and academic formulas. This is opposed to the "swamp" where hard-to-solve, shifting,

Figure 3
Writing as a Design Tool

Figure 4
Documenting Experiential Learning

and yet socially important questions that "defy technical solutions" (Schön, 1987, p. 3) are found. He described this process as involving a dynamic kind of decision-making based on experience and "problem setting" in new situations that require "improvisation, inventing, and testing" (Schön, 1987, p. 5). Schön believed that this situated knowledge can only be discovered through doing, and that the process of learning centers on an ability to reflect as you go and to respond immediately. Eynon et al. (2014) described reflection as "a bridge between inquiry and integration" (p. 1). Here the idea of problems and questions raised at the moment, as inquiry, are integrated into knowledge through the process of thinking back and framing ideas for analysis as the process of reflection.

People sometimes innovate, invent, or stumble upon good solutions in unusual ways or in the process of doing something unrelated. This might be described as serendipity, or we might think about it as the situated knowledge Schön referred to. Students wrote in-process posts that mapped their project's development. The writing was composed after the fact, but the photographic documentation was taken "in action." These photographs offer a window to see the work happening outside of class time. This made the course learning outcome, "Employ visual and perceptual thinking as a problem-solving tool across multiple art and design applications," easier to assess. Images and captions were used on the blogs to document and curate the project story. Play and experimentation in action were visible and became part of the expectation of a project. Student K wrote about a group project that included recreating historical paintings:

> Heading back to the subway we encountered a set of very tall columns placed in a moderately open space which gave the same sense of depth as the setting in which the Horatii brothers are undertaking the Oath [in David's Oath of Horatii]. . . . Our intention was to take three different shots of the figure posing covered in fabrics following the geometrical figures in which the three groups in the painting are placed... Right before leaving we started playing with some moving images. This time we programed [sic] the camera to take the pictures in a slightly longer period of time. This is how we came up with our final piece.

The active experimentation that Student K described, "right before leaving we started playing," is an aspect of reflection-in-action that can be separated into a four-step process: "concrete experience, observation and reflection, formation of abstract concept or generalization, and active experimentation" (Osterman, 1990, p. 135). Looking at the process rather than the

product is a useful first step in helping students learn how to be experimental. The model allowed us to conceptualize a process that we could then evaluate, rather than looking to the object created as the basis of success. Schön (1987) insisted that reflection-in-action cannot be taught through theories or transmitted as a body of knowledge but happens through the "naming and framing" (p. 5) of multivariate information only discovered in action—the process of doing. However, we have noticed that as students record and photograph process, they begin to embrace experimentation and become more open to, and skilled at, improvisation (Figure 4). They learn a way of operating that is repeatable in a new context and can be used as a teachable methodology of the discipline.

At the resolution of a project, we asked students to step back and examine the results. Because learning must be anchored in, and indexed by, relevant contexts (Marra et al., 2014), where they were and what was happening is an important component. Often, we store these knowledge and skills as stories (Schank, 1986). The narratives we asked them to write about the work became the primary medium of conversation and development of shared understandings with other people. We found that the knowing embedded in these stories was central to our students' learning.

The presentation posts placed the project in a larger context of ideas and summarized results. Working within the blog format, students often paired images of work with short captions. They worked with the blog galleries to sequence their work in slide shows or juxtapositions in thumbnail galleries. The students tagged posts with their own invented keywords, much like they would use hashtags on Instagram. Looking across the writing samples, we could see that students were starting to see "self as designer" in a way that pointed to the development of their own voice in making choices about methods, ideas, and styles. The collection of posts across different courses and semesters might allow peers and faculty to consider the whole student when viewing the learning portfolio. The LP is invaluable in making student learning visible. The course learning outcomes "Demonstrate an ability to integrate concepts, material skills and techniques from other courses and experiences into project work" become clearly assessable.

A Broader Framework for Teaching Reflection in an Art & Design Classroom

We used the learning portfolio pilot to test strategies, question assumptions, and collect a lot of student posts. Because use of the learning portfolio was embedded in the first-year curriculum, the expectation was that all 1,100 students and the corresponding (approximately

250) faculty would adopt this tool in their courses. One of our goals in developing the pilot was to understand and anticipate faculty professional development needs. In the new curriculum, many of the learning outcomes required a nuanced set of skills to be taught. We found that using the LP as an archive of reflective components in a course was extremely helpful for assessing student learning. Additionally, we learned that the habit of writing about process helped students in critiques as they became better prepared to talk about their projects and improved the quality of feedback that could be offered. Our next step was to develop a series of workshops and online resources to guide faculty. We sought to translate the things we learned in Anette's specific experiences to a more generalized approach, to reframe our findings for a larger group and more varied contexts. Our framework introduced LP practices as (a) *inquiry* as the space where problem setting occurs, (b) *curation* to emphasize storytelling in the process of making a project, and (c) *intra- and extra-curricular connections* to focus on transferring their experiences across contexts.

Inquiry

We started with the idea that inquiry is the process of asking questions to investigate an idea. It is different from simply posing questions as it implies a formal structure and progression. Maughn Gregory (2007) described a framework for inquiry that articulates specific stages as a kind of roadmap for this work. These include identifying relevant issues, formulating and organizing relevant questions, developing hypotheses in response to these, clarifying and testing, and then experimenting with solutions (Gregory, 2007).

To work productively in the design world our students need to know how to observe, wonder, question, and collect research. In moving through this process, students often define and then re-define a problem. These explorations and iterations are "discovery-oriented behaviors" that lead to more creative outcomes (Csikszentmihalyi & Getzel, 1971, p. 50). Students writing about how or why they solved a problem might also notice how they questioned, abstracted, analyzed, and synthesized their research and ideas, thus underscoring the importance of such critical thinking abilities.

In one assignment, students were asked to pay close attention in everyday life, noticing sensory information, situations, and interactions. The Hmm Collection project foregrounds the habits of close looking. In the project, students assembled a collection of 10 artifacts that document moments of "Hmm," which are moments when one noticed something that stops him or her, makes the person pay attention, or sparks curiosity. Students collected actual objects and/or made photos, drawings, or videos. These objects were catalogued in visual form: plastic baggies, a book, a video, a photo series, a box or container, an installation, etc. As students reflected via the learning portfolio, they became self-aware of both their own inspirations and the methods that they might use to collect that inspiration.

Students were given the following inquiry prompts to complete on the learning portfolio:

- What does your "Hmm" collection say about your interests as a person and as a designer?
- Which object in the collection is your favorite, why?
- Which object in the collection most surprised you, why?

It was exciting to see when students noticed patterns in the objects and brought focused attention to the topics and the forms they chose to document. The writing is what moved the project from "I like it" to "I noticed this because." Student Y wrote about the balance of attraction and repulsion in her collection. In her post she questioned and redefined what she saw as tools an artist or designer might use today to take note of inspiration. She was starting to see her smartphone photography as a type of research.

It is not easy to keep a notebook with me, carrying a smartphone is much easier. I use the camera to "note" anything that inspires me or attract my attention. . . . I am not good at memorizing literal items like vocabulary, instead I am very sensitive to shapes, people.

I pay attention to details on one's body, and then I can tell when and where I have seen this person before. The "useless" and neglected things are what I care about.

Curation

Curating is the act of selecting and ordering material to convey a specific meaning or story. Art and design students readily identify patterns and understand that ordering, sequencing images, or changing contexts will change the meaning in a project. Students collected and ordered artifacts on the learning portfolio with titles, tags, labels, and a consideration of sequence and juxtaposition. In today's digital world, students gather more images than they can use; they can take 50 process shots in the course of completing a project or Google an idea and find hundreds of images. Making meaning from this excess is necessary for this type of research to be valuable. Curation is an editing process. We ask students to create order by finding matches, relationships, and combinations. Finding connections across disparate sources is part of the process

that defines that creativity and through the practice of curation topics are discovered and themes of interest emerge (Ward & Kolomyts, 2010).

In the Concept Map project, students created a map/photo-based graphic to serve as a visual taxonomy of museum and online research. For this assignment, they visited two exhibitions and looked for connections between the two exhibitions to find possible research topics. Examples of topics were gender, mythology, and geometry. Students then narrowed the pool of images into piles of the most relevant and interesting. They began to define sub-themes by sorting into folders or making word-webs. They then made a visual map in a branching, web or linear format. The most important component of the assignment was not the map itself, but the skill to narrow a topic.

Students were given the following curation prompts to complete on the learning portfolio:

- Post your finished Theme Map.
- Reflect on the experience of making your Theme Map. What new connections and ideas surfaced as you sorted the images? What sub-themes are most interesting to you? Why?
- What research questions have you drafted? List possible questions. How do your questions relate to your map?

Students wrote about the assumptions they started with and how these initial ideas shifted. They asked themselves why they choose a topic and in doing so discovered that an original interest needed to be more narrowly defined. Student L's concept map focused on "Body, Brand and Diversity." She defined sub-topics such as branding and cultural appropriation. In her LP post, she reflected on her topic and began to frame questions. The movement from what she thought was a set topic to a question for further research was vital to her project development (Figure 5).

New connections that I've seen are how designers and people use fashion to say something political or social about a certain issue. But, a few designers that I admire make mistakes that may or may not have been conscious: for example, using Africa inspired themes but then using a 100% white model population in a show. The sub themes that are most interesting for me are how marginalized communities are not well represented in the fashion industry. How is diversity at stake due to branding/marketing in the fashion industry? Why is diversity and representing marginalized communities important?

Intra- and Extra-curricular Connections

Asking students to describe connections across courses and activities outside of class is a central element in our learning portfolio framework. They come to understand that their thinking in one context is meaningful and relevant across their varied academic and extra-curricular experiences. This sense of continuity supports the development of integrated learning and a feeling of community across all of their experiences and leads to deeper and more complex thinking (Matthews-DeNatale, 2013).

Metacognition is the awareness of one's own knowledge, of one's actions, and of one's current "cognitive or affective state" (Hacker, Dunlosky, & Graesser, 1998, p. 3). It includes students' knowledge of what they know, how they learn new things, and their ability to see connections across varied or different experiences. The learning portfolio becomes more than a simple archive of work from many courses over the first-year program. It is a repository of student learning, interests, dispositions, and passions. Being able to understand one's intrinsic motivations, knowing what kinds of things consistently spark interest is important in building creative work. When "the pleasure and excitement are the drive and energy behind a task, then the end product is often more creative then if the drive is lacking or extrinsic" (Feist, 2010, p. 122).

In one assignment, we asked students to compare the process of writing a research paper to the process of developing a studio project on the same topic. The reflective writing examined connections and disconnections between writing and making. The students were surprised that the paper research both stirred new ideas and changed assumptions in their studio production. It pushed the students to develop personal and often emotional connections to the design project and surprisingly, to the research paper.

At the end of a long-term project, we asked students to look back and summarize their experience. We gave them these cross-curricular connection writing prompts:

- Action: What happened? Begin the post with a one paragraph summary of your project. Include SELECTED (three to five) images of your process. Include the concept photography of the final garment.
- Thinking: Show connections that you made between the studio and seminar. Did research influence making? Did making influence research? Use studio process images and seminar paper quotes to make your point.
- Planning: What now? Make connections between this project and who you are as a designer/ person. What will you take forward in terms of making and researching?

This LP post was at the end of the term, so students were able to look back at process posts to find details. They noticed growth and development in both the paper

Figure 5
The Learning Portfolio as a Curation Tool

and project and tracked ways that each part influenced the other. They also saw how skills and concepts from other courses worked into the ideas they explored for this one. In summarizing this semester-long experience, they are also able to look ahead and anticipate ways they might work to develop a project in the future (Figure 6). Student E described the process:

The research enabled me to develop the ideas I had, opening my mind into different concepts and realizations... I found that looking at my research from

an intimate point of view [*sic*] allowed me to be more attached to the process and the creation of both projects. . . . Not only was I developing in the design, but also and most importantly on the essence of it. I think the depth of the project enabled me to contemplate on who I want to be as a designer.

Conclusion

In the rewriting of the Parsons School of Design's first-year curriculum we made visible aspects of an art

Figure 6
Finding Designer Voice on the Learning Portfolio

and design practice that are traditionally not seen. The list of outcomes for the integrative studio course focused on the process of making, including research, ideation, and problem-solving. The mandate of the learning portfolio paralleled this shift as it required a move away from the idea of a portfolio as a display of finished work but rather a location for documenting thinking and process. We asked students to reflect and write within their learning portfolios to help frame and then learn from their ongoing documentation. We were not evaluating their progress as writers or their finesse with documentation.

The reflective framework we introduced centers on the practices of inquiry, curation, and intra- and extra-curricular connections. A learning portfolio component was added to course assignments and was completed on a WordPress blog. Inquiry posts included student research and question formulation, curation posts told the story of a project in text, image, and video, and students made new connections between courses and life through prompted writing.

Schön (1987) described *reflection in action* as a natural component of art and design practice, as choices made in the middle of making. By asking students to then reflect back and notice patterns and trends in their own way of working, they were able to develop strategies for making those "in action" choices in the future. This supports the development

of a practice where they will need to be continually acting as an innovator. When Brookfield (1995) instructed us to ask our students to look at their assumptions, it is so they may act in new and different ways, growing through a cycle of action and reflection. This approach to teaching and learning puts the methodologies of knowledge construction at the center of education.

In the context of art and design, success is traditionally measured by the projects that students produce. In our pilot, we valued process over final product and in the end, this shift contributed to improved studio output: the projects became more innovative and intentional. In the reflective posts, we observed improvement in students' understanding of what creative process includes, witnessed a new focus on methodology, and a stronger sense of community in our classrooms as we talked more about making. Students began to prototype more extensively, sought feedback, faced challenges without emotional judgement, posed thoughtful questions, and developed more unique work.

As we worked to extend findings from our pilot to a larger group of faculty, we developed a set of guidelines, suggestions, and strategies to help faculty recenter their teaching so it included reflective practices. Because artists and designers use portfolios all the time, we sometimes struggled to delineate the difference between a traditional, outward-facing portfolio that showcases your best work and a learning portfolio that looks inward, is messy and

process-oriented. We used the two-year pilot in an untraditional way. We saw it as an opportunity for experimentation. This was a chance for us to prototype, iterate, and refine, thus modeling our own engagement with the LP on the design process we teach our students. We asked faculty to think of assignment prompts in the LP as investigations that did not have to lead, in a direct way, to outcomes. We asked them to think of the LP as a virtual studio visit with their students.

Orienting our discussions with faculty around the idea of the studio visit became a useful metaphor. The studio visit, familiar to art and design faculty, is an opportunity to see sketches, rejections, and all notes alongside completed work. In this way, we shifted expectations of what an LP could do—from portfolio as archive or portfolio as showcase—to portfolio as an intimate look inside the way a student of artist or designer thinks, dreams, and orients themselves in their developing practice.

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