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Developing Designer Identity Through Reflection

Monica W. Tracey
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As designers utilize design thinking while moving through a design space between problem and solution, they must rely on design intelligence, precedents, and intuition in order to arrive at meaningful and inventive outcomes. Thus, instructional designers must constantly re-conceptualize their own identities and what it means to be a designer. Within instructional design, professional identity development is intimately linked to the concept of design precedents. Reflective practice appears to be a natural avenue for supporting identity development in student designers, as it challenges them to think deeply about concepts and experiences through interpretation, evaluation, and revision. The authors conducted a preliminary study examining how graduate students in instructional design use reflection to build their identity as instructional designers within a design thinking framework. While this study was preliminary in nature, it represents an important first step in exploring how instructional design students can use reflective practice to develop the foundations of their professional identity, particularly within the design thinking framework.

Introduction

Scholars and instructors focused on design discuss specialized activities and particular habits of thought termed *design thinking* (Cross, 2007; Lawson & Dorst, 2009) and *reflective designing* (Lowgren & Stolterman, 2004). In this view, no single approach to designing can address every future situation effectively, so designers must be prepared to appreciate design situations subtly and with discipline, invent and re-invent processes, and take personal responsibility for the effects of their designs rather than handing off responsibility for quality outcomes to a single process or theory (Nelson & Stolterman, 2003). Designers act as human instruments, analogous to researchers in a naturalistic study, bringing their own acknowledged perspectives to the enterprise, working within emergent frameworks and adapting to situations unknown and unknowable in advance (Boling, 2008).

Students of instructional design and technology (IDT) bring different backgrounds and abilities to the classroom along with very different understandings of what design is and their role in it. Historically, IDT has focused on the systematic design process, client, and content, with very little on the designer role in design situations.

Aligning Instructional Design with the Broader Design Community of Practice

There is a growing trend in instructional design to shift from traditional, process-oriented conceptions of the field toward a view that aligns instructional design with the broader design community of practice and cross-discipline design thinking. Rather than being driven by models and strategy selection, this approach characterizes design as containing all of the activities and resources required to move from an ill-defined problem to a new and innovative solution that satisfies user needs. In this view, design is complex and iterative (Visscher-Voerman & Gustafson, 2004), requiring designers to embrace uncertainty as a motivating force; balance abstract principles against concrete details; alternate periods of intense work with relaxation in order to nurture inspiration; use models and prototypes to refine concepts and solutions; and leverage failure as a way to gain information and insight into the design problem (Cross, 2011).

Those who view design through this lens, and who study how it occurs in practice, present design not as a smooth, systematic process, but instead state that designers' values, belief structures, prior experiences, knowledge and skills, and their approach to design affect final outcomes (Nelson & Stolterman, 2003).

As such, design thinking highlights the central role that designers play in developing novel, functional solutions to ill-defined problems (Siegel & Stolterman, 2008). Designers recognize that problems and solutions are entwined concepts, but that the relationship between the two is complex, evolving, and often oblique. And as designers move through the design space between problem and solution, they must rely on their design intelligence and intuition, derived from large pools of experience and lessons learned from

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prior successes and mistakes, in order to arrive at meaningful and inventive outcomes. These experiences are also known as design precedents, or episodic memories of design experiences, both experienced and observed, that designers store, refine, and continually access as they make design decisions (Tracey & Boling, in press).

Thus, as the identity of instructional design evolves, instructional designers must also begin to re-conceptualize their own identities and what it means to be a designer. Developing a professional identity that is aligned with design thinking will exert an ongoing influence on designers' professional actions, values, beliefs, decisions, and commitments. They must position themselves as active drivers of the instructional design activity, whose judgment, experience, and intuition guide the efforts and resources needed to move between problem and solution. This raises questions related to how professional identity is developed and what experiences support that process for established and emerging designers.

Developing Designer Professional Identity

While little attention has been paid to this topic in instructional design, the development of professional identity has been studied extensively in other fields (Luehmann, 2007). Drawing on this literature, several core principles emerge: professional identity is socially constructed via interactions with others, particularly those in one's community of practice; professional identity is constantly being formed and reformed, although changes to core identity features may develop slowly; and professional identity is constituted in and emerges from dynamic interpretations and narrations of experiences (see Luehmann, 2007, for a review). Through these parallel activities, identity emerges, and the individual is recognized (by self and others) as being a particular type of person (or designer).

Within instructional design, professional identity development is intimately linked to the concept of design precedents introduced earlier. As mentioned, design precedents constitute an individual designer's internal reference bank of design experiences that influence and feed ongoing design decisions. For instructional designers working within the design thinking framework, identity development will entail the formation of design precedents that address relevant aspects of design thinking, such as uncertainty, intuition, failure, the balance between the abstract and the concrete, and the role of prototypes in design.

Experienced designers already have a rich portfolio of memories and beliefs; thus, identity work will involve reconsidering and recasting prior experiences in light of these concepts, and assimilating new experiences within the design thinking paradigm. Even

with this foundation in place, however, reshaping professional identity involves assuming risks and accepting vulnerability, as the new identity is assimilated and aligned with core features of an individual designer's existing identity.

For novice instructional designers, who lack the broad pool of experience, knowledge of their beliefs about design, and self-awareness of their emerging identity as designers, the process of identity formation will require substantial guidance, support, and feedback in order to overcome the risks inherent in the process as they construct a preliminary store of design precedents and establish a vocabulary for narrating and interpreting their experiences. A key component of graduate training in instructional design may rest in helping novice designers build the preliminary foundation of their professional identity.

Reflection and Design

Reflective practice appears to be a natural avenue for supporting identity development in novice designers, as it challenges students to think deeply about concepts and experiences through interpretation, evaluation, and revision. The emphasis on reflection as a means of learning extends back to Dewey (1991), while its use in the construction of professional identity was highlighted in the work of Schön (1983) and his conceptions of reflection-in-action and reflection-on-action. Reflection-in-action focuses on narratives and interpretations that arise while work is occurring, while reflection-on-action is centered on narratives and interpretations that emerge as prior experiences and practices are (re)considered and (re)constructed (Schön, 1983).

Novice designers can leverage reflection to interpret and manage issues of uncertainty, instability, uniqueness, and conflicted values that are inherent in ill-structured design problems, both during and after the design experience. Thus, reflection can be an important tool in supporting novice designers as they begin the important work of constructing design precedents and establishing professional identity.

Reflection to Build Designer Identity

In order to explore these concepts and ideas, we conducted a preliminary study examining how graduate students in instructional design use reflection to build their identity as instructional designers within a design thinking framework. The subjects included 40 instructional technology graduate students across two semesters of a foundational course in instructional systems design at a large, urban research university in the Midwest region of the United States. As part of the course requirements, students were required to maintain a reflection journal, which was shared with the instructor via Google documents for feedback and

assessment over the semester. In addition, the course included a case study component, which gave students hands-on experiences in developing instructional design plans.

Because novice designers may benefit from scaffolding in order to better understand the concepts associated with design thinking, we opted to use structured reflection, or reflection in response to assigned topics or questions, to spur narratives and interpretations that align with specific features of design thinking. Lin, Hmelo, Kinzer, and Secules (1999) describe such prompts as providing "learners with a means of externalizing mental activities that are usually covert" (p. 49), particularly when they focus on helping students understand decisions and actions by exploring and understanding their underlying reasoning and learning processes. For this study, reflection prompts were centered on concepts, beliefs, and experiences with relating to design and the self-as-designer, and typically asked students to delve into the "how" and "why" behind their responses. More specifically, reflection prompts urged students to explore:

- **Beliefs about design:** What is design, what is instruction, and what do designers do?

- **Experiences with design:** Personal experiences with design, uncertainty, and inspiration.

- **Awareness of emerging designer identity:** Why they want to be designers, their personal characteristics relevant to design, how will they develop their design intelligence, and what does it mean to them to be a designer?

Students were asked to reflect in their online journals in response to these prompts at established points during the semester, primarily during the first several weeks of the class and then again in the final weeks, as they completed work on an instructional design case study. The course instructor had access to the journals and provided formative feedback within the document itself. Formative feedback is typically developmental in nature and should serve to provide a "course correction" (Berge, 2002, p. 187) to ensure that student responses are moving in the direction of deeper reflection, which was the approach taken for this class.

The online context used for this course was particularly conducive to providing students with formative feedback, as the ease of access supported prompt instructor responses that could be easily incorporated in subsequent student responses. Furthermore, the journal became a "living document" that allowed students to witness and review their own progress and development as additional reflective entries were added over the semester.

Unproductive and Productive Reflection

When assessing student responses for the purposes of this study, it was crucial to develop clear guidelines for determining whether or not genuine reflective learning was occurring, which were distinct from the grading procedures used in the institutional context. Several approaches to evaluating reflection exist in the literature, typically focusing on conceptualizing degrees of reflection along a scale encompassing mere description on one end and continuing through deeper levels of reflection, such as evaluation, dialogue, critical analysis, etc. (see Blaschke & Brindley, 2011, and Davis, 2006, for reviews). In establishing the criteria for this study, we drew on the work of Davis (2006), who proposed unproductive vs. productive reflection as binary categories for assessing student responses.

Unproductive reflection is characterized as mainly descriptive, lacking in analysis, and reliant on unconnected lists of ideas or issues. Productive reflection, on the other hand, includes integration and analysis, the questioning of assumptions, and multiple ways of seeing, all of which support the type of narrative considered necessary for developing professional identity. It should be noted that unproductive reflection is not necessarily a negative label; instead, it might better be considered pre-reflection, or the foundation for moving into productive reflection with support, feedback, and experience.

When assembling student reflection for this study, we began by removing any identifiable information and aggregated student responses per question in a master spreadsheet. This allowed us both to view the response set as a whole and to set up a variety of comparison scenarios. During initial data analysis, we followed an iterative process of reading, rereading, and taking notes about what the data was saying to document emerging questions and patterns. An inductive content analysis approach was used for segmenting the data to identify productive and unproductive reflection and to identify themes and concepts on beliefs about design, experiences with design, and awareness of emerging designer/identity/self-as-designer.

As these themes and concepts emerged, we relied on the following research questions to guide our analysis and interpretations:

- Are there trends in productive reflection across the semester and, if so, what are their implications?

- Are there trends in productive reflection within prompt domains (i.e., beliefs, experiences, and identity awareness), and, if so, what are their implications?

- Were students able to use reflection to begin to construct aspects of their own designer identity, particularly relating to uncertainty tolerance and solution ambiguity?

First, we considered productive vs. unproductive responses across the course of the semester in order to understand whether students were able to demonstrate improvements in reflective skills within the structured reflection approach. We discovered a persistent trend across the weeks toward a greater number of reflective responses, moving from less than half of responses qualifying as productive during the first week, to 70% labeled as productive for the final entry. This finding demonstrates that reflective skills can show improvement with time, practice, and guidance. It also lends support to the idea that unproductive reflection can provide the foundation for future productive reflection, with the appropriate formative feedback and support.

One student in particular illustrated how reflection can be developed in an individual student in this context. This student was unable to generate productive reflection during the first week, which included prompts related to defining design, personal design experiences, and uncertainty. However, the student was able to effectively incorporate formative feedback and became consistently productive in responses during later weeks. This student also had a clear understanding of personal identity as someone who was able to learn from failure and maintain a positive attitude, and appeared to be able to leverage these qualities, in tandem with feedback and experience, to improve performance throughout the semester. Perhaps more importantly, the student was also able to connect these existing identity characteristics to the emerging identity as a designer, and frequently referred to them as valuable to future work in instructional design throughout the remainder of the course.

We also considered productive reflection in relation to the reflection prompt domains (i.e, beliefs, experiences, and identity awareness) to explore whether novice designers were more productive in relation to particular types of design precedent topics. However, no clear trends emerged in this analysis, although there was a modest tendency for greater reflection over time within each domain. We were curious whether some design precedents were easier for subjects to consider within the reflective framework, but our findings suggest that students need support in developing reflective skill in relation to multiple identity constructs.

Reflection on Designer
Uncertainty and Ambiguity

Tolerance for uncertainty is a key skill for designers

within the design thinking framework, so we were interested in whether students could use reflective practice as an avenue for incorporating this quality into their identity as designers. Subjects were asked to describe experiences and feelings relating to uncertainty and their personal tolerance for this state, first in Week 1 and again in Week 5 of the class. We found that students were able to generate higher levels of productive reflection in response to the second uncertainty prompt (55% productive for Week 1 vs. 70% productive for Week 5). Perhaps more importantly, we found that many students who displayed a negative orientation toward uncertainty during Week 1 were able to reframe their perceptions of uncertainty in alignment with the value that design thinking places on this state. Of the 24 students who indicated an initial negative orientation toward uncertainty during Week 1, all either displayed a positive orientation toward uncertainty during Week 5, or qualified negative orientation by addressing its value and their intention to overcome their discomfort with uncertainty, with some including specific plans and actions that they would take to make this shift.

We were also curious as to whether uncertainty tolerance had a relationship to the desire to preserve ambiguity in the design space. In Week 4 of the course, students were asked to list several phrases that would describe how they planned to work as a designer, and 19 included a reference either to preserving solution ambiguity (N = 6) or pinning down a solution early in the design process (N = 13) in their responses. We then looked at how this set of subjects reflected on uncertainty during Weeks 1 and 5. We found that, among those that would preserve solution ambiguity, two students displayed positive uncertainty orientations in Weeks 1 and 5, while the remaining four moved from a negative orientation in Week 1 to a positive orientation in Week 5. Among the 13 students who identified with pinning down a solution early, two had previously indicated positive attitudes regarding uncertainty in Week 1 and 5 responses. The remaining 11 followed a negative/positive uncertainty orientation pattern in their responses to Week 1 and Week 5.

While these findings may appear contradictory, in that students who aligned themselves with early solution identification also moved toward greater uncertainty tolerance, it is important to remember that identity development is a complex, ongoing, and recursive process that may include contradictions and inconsistencies as beliefs and experiences are interpreted and incorporated by the individual.

Conclusions

While this study was preliminary in nature, it represents an important first step in exploring how

instructional design students can use reflective practice (including both reflection-on-action and reflection-in-action) to develop the foundations of their professional identity, particularly within the design thinking framework. The data indicated that scaffolding via prompts and feedback can support students in moving from unproductive to productive reflection and can lead to development of an emerging designer identity. Within these results, we saw that this practice was particularly useful for helping students conceptualize, modify, and solidify identity attributes relating to uncertainty tolerance, a crucial quality within the design thinking approach.

This study has produced numerous additional opportunities for future research on this topic. First, we are interested in looking more closely at the reflection prompts; it is certainly possible that revising the structure, content, and/or number of prompts may prove useful for supporting the development of reflective skills in students. We also believe that deeper research is necessary in relation to the prompt domains (beliefs, experiences, and identity awareness); while our preliminary research did not reveal any trends, further investigation of these constructs and their role in identity development is warranted. The online learning context may facilitate the incorporation of peer feedback into the reflective learning process. Given the importance of discourse and dialogue to the social construction of identity (Gee, 2000), providing students with peer reflection groups may provide additional opportunities for feedback and exposure to multiple perspectives.

Finally, because identity development is both social but also intensely personal, exploring the relationship between reflective practice and identity formation may also be well-suited to individual case studies, where factors that enable or impede identity development can be examined more closely and within the same subject over time.

As the instructional design community continues to redefine the field's identity through alignment with the larger design community and design thinking approaches, it will be necessary to reconsider what it means to be a designer within this framework. Graduate programs in instructional design will also need to consider how they can support students in establishing a preliminary sense of professional identity through instructional practices and curricular requirements.

Reflective practice is an important tool for identity development commonly used in other professional training programs, and as this study demonstrates, it holds great potential for supporting instructional designers in developing design precedents and other significant foundational factors of designer identity. ☐

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