

Learning by Design: Creating Knowledge Through Library Storytime Production

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ABSTRACT

Librarianship has not traditionally been considered a design practice. However, children's librarians plan, deliver, and reflect on storytimes in implicit ways that seem to align with design principles. Drawing on empirical data from the VIEWS2 study, this poster explores the premise that design principles implicitly inform the creation of these library programs for young children. Comparing models of storytime production and models of design reveals that key design principles—especially iteration and reflection—are present throughout storytime production. The reciprocal and influential nature of these design concepts combined with the model of storytime production lead to a new model of storytime design, with implications for library research, practice, and pedagogy as well as models of design.

Keywords

Knowledge creation, storytime production, social learning, design principles, program design, reflection

INTRODUCTION

Offered for more than a hundred years, public library storytimes provide not just entertainment, but also social learning spaces where children are exposed to books and activities that focus on promoting literacy (Albright et al., 2009; Celano & Neuman, 2001; Dowd, 1997) and have the opportunity to develop early literacy skills (McKechnie, 2006; Ghoting & Martin-Díaz, 2013). Children's librarians work to accomplish this by creating storytime programs that incorporate a wide variety of activities including books, songs, fingerplays, games, and other play-based activities (Ghoting & Klatt, 2014). Project VIEWS2 (Valuable

Initiatives in Early Learning That Work Successfully) was a quasi-experimental study funded by IMLS with the goal of understanding the early literacy impact of storytimes in Washington State. Researchers found that when librarians create storytimes with an intentional focus on early literacy, the program has a positive impact on the observable early literacy behaviors in the children who attend (Campana et al., 2016a; Mills et al, 2015; Dresang, 2013).

Despite this emphasis on the creation of programs like storytimes, children's librarianship still generally relies on scientific approaches and methods to assess its creations. Yet, we believe that examples of methods and methodologies inherent to design occur throughout children's librarianship.

This poster explores the premise that design principles implicitly inform the creation of these library programs for young children. We ask: what aspects of design, specifically related to knowledge creation, are currently present in the creation and development of these programs? As a preliminary investigation, we focus on the specific case of producing storytimes (McKenzie & Stooke, 2007) in libraries. Based on empirical research from the VIEWS2 study (Campana et al., 2016a), we present a preliminary model of storytime production as a vehicle for knowledge creation. We then present established models and techniques commonly found in design and compare them to the storytime model. Subsequent discussion addresses similarities between the two models, presents a preliminary model of storytime design, and broader implications.

A MODEL OF STORYTIME PRODUCTION

Throughout Project VIEWS2, it became apparent that the librarians are planning or designing their storytimes by combining books, songs, fingerplays, games, and other play-based activities to regularly create unique storytime experiences that meet the specific needs of their communities. This regular planning was highlighted as an important piece of storytime production but the VIEWS2 librarians also emphasized flexibility as crucial for storytime delivery, being able to modify their plan in the

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ASIST 2016, October 14-18, 2016, Copenhagen, Denmark.

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middle of storytime based on the reactions of the children and their families (Campana et al., 2016a).

The final year of the study examined the current landscape of storytime assessment in Washington State. Initial findings demonstrated that assessment—the observation and understanding of outcomes related to storytime practice—is still largely an emergent phenomenon that relies on informal processes such as self-reflection (considering one’s own practice and its impact and effectiveness) and peer mentoring (receiving and giving feedback in a peer community) (Mills et. al., 2015).

Many librarians reported reflecting on the behaviors and actions of the storytime attendees during the storytime to help make immediate, on-the-fly changes to their plan for that storytime. They also reported reflecting on their storytime following the program or when planning the subsequent storytime to understand what worked well and what did not.

Peer mentoring was also identified as an important assessment process in which librarians provided feedback to each other, sometimes based on storytime observations, around storytime practices. The librarians reported that these peer observation and feedback experiences also helped them to reflect on their practice.

In addition, the librarians often discussed how the information they received from engaging in self-reflection and peer mentoring fed back into their planning and delivery process for producing their future storytimes.

During Project VIEWS2 we uncovered a three-stage storytime production process represented through the model presented in Figure 1. In this model of the storytime production process, a librarian plans her storytimes; that planning informs the delivery of her storytimes; and that delivery in turn informs her reflection on that storytime and thus the planning for the next storytime. This model also represents a process that builds on itself and changes and adapts as a function of each stage.



Figure 1. Three stages of storytime production.

MODELS OF DESIGN

Despite the influence of a variety of epistemological perspectives, the influence of design has lagged, especially in libraries (Buckland, 1996). As American librarianship evolved into a profession in the early 20th century, it shifted from a discipline based in procedural training to one based in more scientific approaches (Carroll, 1970). And as the profession became increasingly steeped in formal graduate education and the academy, the emphasis on scientific research and publication over practice also increased (Richardson Jr., 1982). Various scientific methods and methodological approaches—including positivistic approaches (c.f. Butler, 1933; Waples, 1939); social epistemology (Egan and Shera, 1952; Shera, 1972); qualitative inquiry (c.f. Fidel, 1993); hermeneutics (c.f. Budd, 2001); and evidence-based librarianship (Eldredge, 2000; 2006)—have been used to gather scientific evidence to justify libraries’ social and educational value. Despite these diverse perspectives on librarianship, none have approached the field from the perspective of design (Clarke, 2016).

In the 1960s, design emerged as a legitimate alternative to traditional scientific epistemologies. The major epistemological division between traditional science and design stems from the idea that science concerns itself with observing and describing the existing natural world with the goal of replicability and prediction. Design, on the other hand, centers on the artificial world: objects created by humans to institute change and solve problems. Science is about *what is*, while design is about *what could be* (or arguably *what should be*) (Liedka, 2004). The objectives of design are to “create things people want” by “addressing problems or ideas in a situated context” (Konsorski-Lang and Hampe, 2010; A. Telier, 2011). Thus design epistemology is one based in the creation of things that solve problems. Such an inherently different purpose calls for different methodologies and techniques of practice, and therefore requires a fundamentally different way of viewing and evaluating knowledge creation: what Cross calls a “designerly way of knowing” (1999; 2011).

Early scholars conceptualized design as a rational and systematic process. Design was generally characterized as a multi-stage progression with variations of the following stages: 1) analysis; 2) synthesis; 3) evaluation (Jones, 1963; Archer, 1965; Luckman, 1967; Thomas and Carroll, 1979). The first stage, analysis, consisted of understanding and formulating the problem to be solved. The second synthesis stage represented the actual creation or formulation of a solution. The final stage addressed how well the solution fit the problem (see Figure 2).



Figure 2. An early linear model of the design process.

However, it quickly became evident that design could not be reduced so simply. Unlike the linear approach modeled above, where one first defines a problem and then creates a solution, researchers increasingly note that problem identification in design is ongoing throughout the process. For instance, Darke (1979) found ethnographic evidence refuting the idea that designers identify constraints in a formalized way. Instead, designers impose a “generating concept” or a set of objectives from one particular perspective in order to find a “way in” or to frame the problem a certain way. Even early proponents of the aforementioned three-stage model noted that designers continually cycle through these stages, rather than progressing linearly (Luckman, 1967). Archer (1965) also observed confusion between and overlapping activities among stages, while Levin (1966) noted numerous feedback loops and cycles of decisions, and Akin (1979) saw constant regeneration of new goals, problems, and sub-problems throughout all stages of the design process. Subsequent work shows that design problems and solutions develop together, concurrently, in an interconnected and interdependent way (Davies, 1985). Rather than follow a straightforward linear path, designers move quickly back and forth between explorations of the problem and ideas for solutions (Rowe, 1987) and hone definitions of problems by making attempts at solutions (Lawson, 1990; 1994). Contemporary models of design, such as those increasingly used to apply “design thinking” concepts to fields like business organization management or service delivery, reflect the design process not as linear, but as an iterative cycle (see Figure 3).

Although the verbiage varies across visualizations of the model, it still represents four major phases: an investigative phase, wherein a problem is defined and understood; a planning phase, where ideas are generated; a development phase, where products or artifacts are actually created; and an evaluative phase, intended to assess the product. In this model of design, new understandings emerge from evaluation and thus begin the cycle anew. However, despite the popular adoption of this model across many fields, it still does not include any back-and-forth interconnectedness between phases as observed by ethnographic research regarding the design process. Additionally, it does not represent ongoing reflection throughout the design process, such as described by Schön (1983; 1987), but instead relegates reflection solely to the evaluative phase.

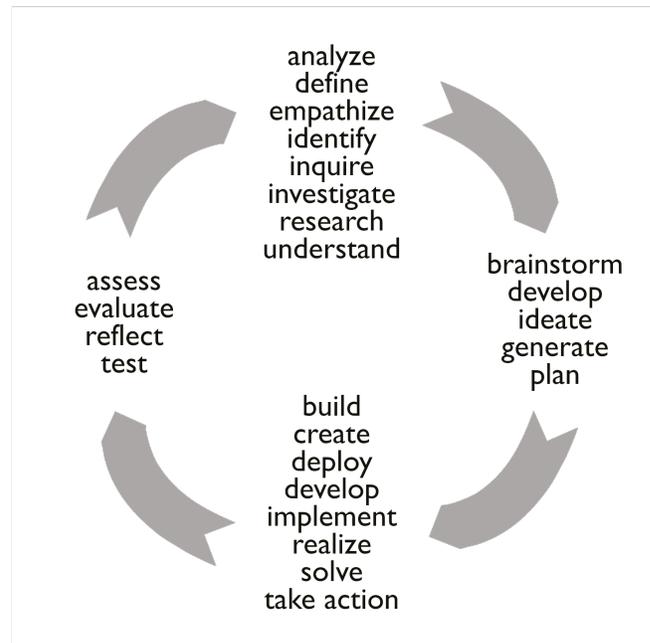


Figure 3. A more contemporary model of the design process as an iterative cycle.

SIMILARITIES BETWEEN MODELS OF STORYTIME PRODUCTION AND DESIGN

By examining the above models of storytime production and design, we can identify several similarities. Both models present an iterative practice (Schön, 1987), a cycle in which knowledge created throughout the cyclical process informs each part of the cycle. Additionally, these models both emphasize reflection, specifically the idea of reflection-on-action (Schön, 1987), in which a practitioner thinks back on an event that has passed and considers successes and challenges in order to improve and adapt it for the future. The similarities between these models show significant overlap between the processes of storytime production and design, meaning that storytime production can be viewed as a form of design itself. Furthermore, the reciprocal and influential nature of the design concepts of iteration and reflection-on-action lead to a combined model of storytime design (see Figure 4). This preliminary model (Campana et al., 2016b) provides a visualization that incorporates reflection and peer mentoring into the cyclical planning and delivery process of storytime design.

The storytime design model is composed of two interconnected iterative phases—planning and delivery—that influence one another. We have teased apart planning, delivery, and reflection, observing that reflection occurs throughout the planning and delivery process. Reflection-on-action is represented by two approaches, self-reflection and peer-mentoring, which occur together throughout the process, helping librarians to iterate on and transform their storytime planning and delivery.



Figure 4. A combined model of storytime design.

For example, as a librarian plans a storytime, she is reflecting and making changes based on her own experiences from previous instances of storytime as well as on any peer feedback she may have received in the interim. When she observes a peer delivering storytime with the goal of providing feedback, she is also reflecting on her own practice and thinking of new ideas and activities she can employ.

Additionally, as she delivers the storytime, she is thinking back on her planning and making real-time adjustments according to the dynamics of the families and children. This in-the-moment reflection clearly illustrates the form of ongoing reflection identified by Schön (1983; 1987), demonstrating the need to incorporate a more holistic and interconnected representation of reflection in models of design.

IMPLICATIONS

Comparing models of storytime and design reveals interesting implications for research, practice, and pedagogy.

First, in terms of research, this new design-based consideration of storytime production offers new models for assessing storytimes that are intrinsically based in understandings and epistemology of design. This can help libraries and librarians move beyond the traditional quantitative measures of assessment, like attendance numbers, and offer new ways of communicating the value of library services like storytimes.

Second, although implicit aspects of design are evidently occurring in storytime practices, this new, design-integrated model of storytime makes these design elements explicit. This new design-based model of storytime production can be used to help practitioners by offering them an ideal model of storytime production to which they can aspire.

Third, to achieve this ideal, practitioners will require education in conceptualizing storytime production as a form of design. Pedagogy for librarianship needs to explicitly incorporate design elements such as active reflection and constructive critique. This may take the form of formal LIS

education (such as in MLIS courses), part of continuing education and similar practice-based training, or both.

Additionally, this model's explicit acknowledgement of the design aspects of storytimes reveals that library storytimes have not been traditionally considered as explicit design projects. Thus librarians are performing design work in an implicit way, without express knowledge of the innate iteration and reflection taking place. This means that time, support and value are often not accorded to these practices. Were librarians given the opportunity to understand their practice as one of problem-solving and reflection, they could be more intentional with these processes and better able to advocate for themselves and the time and space they need to do this creative work. Building time into already busy schedules is challenging, but an explicit acknowledgement of the overlap of design and storytimes can allow for increased infrastructural support, such as time, networking opportunities, and travel for peer evaluation, for design to be accorded and integrated into library practice. Furthermore, considering storytimes as design work may allow for more innovation and adaptation in storytime production and library programs for children, which may help to place the focus more on the creative process and less on a standardized product and assessment outcome.

CONCLUSION/FUTURE WORK

Comparing models of storytime production and design reveals significant commonalities between implicit techniques used by librarians for storytime and explicit practices in design, especially regarding iteration and reflection. Therefore, we posit that design is one way of understanding the storytime production process. We also argue that understanding storytime production in terms of design also helps hone contemporary models of design and offers significant implications for research, practice, and pedagogy.

We expect to continue this work-in-progress by investigating other aspects of storytimes and additional library services that parallel design, as well as considering modifications to current representations of the design process. Additionally, understanding storytime production as a form of design reveals potential for viewing library practice overall from a design perspective. To harness this potential, future work aims to provide suggestions and structures for supporting more explicit design approaches in storytime production and other library services.

ACKNOWLEDGMENTS

Project VIEWS2 was funded by the Institute for Museum and Library Services (IMLS). We would like to thank all the librarians for the hard work they contributed towards their important role in this research. We would also like to acknowledge our deceased Principal Investigator, Dr. Eliza Dresang, for her development of and leadership during this grant.

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