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Learning to Teach, Teaching to Learn: A Cognitive Apprenticeship Model to Train Instruction Librarians

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INTRODUCTION

As academic libraries become increasingly user- and service-oriented, librarians and library staff are expected to take on the role of instructor, teaching standalone and course-integrated library classes. As educators, librarians are challenged to develop meaningful lesson plans in order to create outreach and programming that meets the needs of student populations that are increasingly academically, culturally, and educationally diverse. Even with this increased emphasis on instruction, MLS programs are not always able to provide in-depth teacher training to prepare librarians for this role. As a result, instruction librarians need to develop strategies for training teacher librarians who are already hired and active in the field.

Our LOEX 2015 presentation introduced a specific approach to preparing teacher librarians: the cognitive apprenticeship. Designed to pair an apprentice with an experienced mentor, the cognitive apprenticeship model presents a series of stages where the mentor models teaching strategies and values, giving the learner increasing degrees of independence. The cognitive apprenticeship is a highly efficient model which has the benefit of getting new teacher librarians observing, and even participating in, teaching and lesson planning from the very start of the program. Encouraged to learn by discussing and participating in instruction, the apprentice contextualizes teaching strategies and develops her own teaching style with the guidance of an expert.

This presentation was based on a cognitive apprenticeship between the authors during 2013-2014, designed to supplement the apprentice's graduate MSLIS studies. The initial goal of this learning model was to provide her with skills and perspectives for a career in library instruction. Drawn from the research of Barbara Brandt, James Farmer Jr., and Annette Buckmaster (1993), the cognitive apprenticeship model traditionally has five phases, each marked by specific goals and defining characteristics: Modeling, Approximating, Fading, Self-Directed Learning, and Generalizing.

PHASE 0

In preparation for the LOEX 2015 conference, we reviewed our cognitive apprenticeship and realized that there was an additional phase which preceded the others in the model presented by Brandt et al. We called this Phase 0: Preparing. This phase is characterized by openness and goal setting for both the mentor and the apprentice. The mentor's role in Phase 0 is to interpret the apprentice's goals, anxieties, and experiences with an eye toward designing and developing appropriate learning opportunities that meet the goals of the apprentice and the goals of the institution. Similarly, the apprentice's role is to assess current skills and identify desired competencies with regard to professional standards. This evaluative stage is when the mentor and apprentice decide if the cognitive apprenticeship model is (or is not) an appropriate approach to meet those goals.

For us, Phase 0 took place in June 2013, when we discussed our desires and objectives for this project. In addition to identifying the goals of learning and practicing pedagogy for the academic library setting, we also discussed summative projects to reflect upon the cognitive apprenticeship, including presenting at the 2015 LOEX Conference.

PHASE 1

Phase 1: Modeling is where Brandt, Farmer, and Buckmaster's model of the cognitive apprenticeship begins. It is marked by articulation and domain-specific heuristics. The mentor's role is to model real-life activity for the apprentice, and to share "insider knowledge." Modeling involves performing professional tasks in front of the apprentice and stating the "essence" of the activity out loud while revealing "tricks of the trade." As such, this is more than just mere shadowing: the mentor is encouraged to think out loud while working into order to reveal tacit knowledge to the apprentice. During this process, the apprentice's role is to observe the performance of the total activity, not merely the individual steps in order to develop a mental model of what the "real thing" looks like. For us, these steps included the preparation of a lesson, emails to and from professors, the use of tools, and the mentor's mental process along the way.

In our project, Phase 1 started in September 2013 when the apprentice observed the entire process of scheduling, planning, teaching, and assessing a workshop for an interdisciplinary seminar called *Becoming Global: Europe and the World*. During the process, the mentor modeled the use of canned responses in her email correspondence with the professor, explained the rationale behind the pedagogical approaches she used (including the Cephalonian Method to start the class and a group activity), and the apprentice reflected on these activities and the class session as a whole.

Training programs often end after this modeling phase, even though many instruction librarians require more training and support before they are comfortable teaching entire classes solo. The following phases of the cognitive apprenticeship bridge this gap, providing situations that contextualize and broaden the concepts that the apprentice observes in Phase 1.

PHASE 2

The next phase is Approximating, which is marked by scaffolding, coaching, and reflection-on-action. In this phase the mentor coaches the apprentice and provides support when needed, cultivating an environment for experimentation. The apprentice approximates doing "the real thing," and articulates its essence by reflecting on the mentor's performance and using self-monitoring and self-correction along the way.

For us, phase 2 was in October 2013. The mentor and apprentice divided up the teaching, with the mentor managing the bulk of the duties of co-teaching a *New Student Seminar*. This one-shot instruction session was similar to those the apprentice had observed before, and we decided that the apprentice would develop a brief "bell-ringer", or "warm up activity", to begin the class and prime the students for the session. After this warm up activity, the apprentice would help the mentor with the rest of the class. We chose this activity because it drew upon the apprentice's prior training in teaching, but when the time came to teach the class it quickly became apparent that the bell-ringer wasn't going to work: there had been a miscommunication between the professor and the students about where (and when) the class would be meeting. Because students did not arrive all at once, the bell-ringer was impractical.

Although this was a stressful experience for the apprentice, this is the essence of the Approximating phase: the apprentice was encouraged to feel out her style and observe what strategies did (and didn't) work, while creating a safe environment for failure. Because the mentor is still present in Phase 2, the apprentice is able to benefit from expert guidance and support and learns how to adapt to changes in a class by pivoting her approach on-the-fly.

PHASE 3

This "safeness" decreases in Phase 3: Fading, which is characterized by Advising and "Coach on Call." Here, the mentor's role is to remove some of the scaffolding from the prior phases, functioning now as a coach on the side. The apprentice continues to approximate "the real thing," operating in increasingly complex, risky, or ill-defined situations.

Phase 3 of our cognitive apprenticeship lasted from January-February 2014, when the apprentice prepared and taught a library class alone, with the mentor providing support and suggestions along the way. In preparing and teaching the class, the roles and division of responsibilities between the apprentice and mentor in Phase 2 were effectively flipped: the apprentice researched the course context, communicated with the instructor, created the lesson plan, and taught the class; the mentor was present only as an observer and helper. As she prepared the course, the apprentice followed the model established by the mentor to develop instructional goals based on communications with the professor and the course syllabus.

PHASE 4

Phase 4: Self-Directed Learning is marked by independence, separation, and reflection-in-action. Now, the Mentor's role is to provide assistance only when requested by the apprentice, whose role is to practice doing "the real thing" independently, within limits that are acceptable to the institution and the profession.

Our Phase 4 began in September 2014, when the apprentice was hired as an adjunct instruction librarian at NYU. She independently designed and taught library introductions, new student seminars, and research workshops for writing courses and *New Student Seminars*. In addition, a large part of her teaching duties included teaching four sections of the College of Arts & Science First Year Cohorts program. For this series of classes, almost 20 librarians taught 44 sections over the course of two weeks. The lesson plan for this session was highly regimented, with every piece timed to the minute: it included an opening reflection, a short video, a tour led by a senior student-leader, and group work. When a scheduling error started one section of the apprentice's classes late, the apprentice needed to condense an hour-long class into just 45 minutes—and she had to do it on the spot, with no time to plan. This situation is familiar to anyone in education, but while teachers in training can be told to “expect the unexpected,” few new teachers would feel prepared to handle situations like this. The apprentice, however, had a year of hands-on training during which she observed her mentor quickly adapt to similar situations, such as the class they co-taught in Phase 2. As a result, she found that she was able to reflect in the moment and skillfully reconfigure the lesson.

PHASE 5

Phase 5, the final phase, is Generalizing, which is marked by autonomy, friendship, and trust. The mentor's role is to discuss ongoing learning (as a peer) and to be available for counsel and coaching, while the apprentice's role is to apply what was learned through the apprenticeship and to align it with her personal professional philosophy.

For us, Phase 5 began in October 2014, when the apprentice completed her graduate studies and was hired as an adjunct reference and instruction librarian at NYU. Now, new hires at the library were observing classes that the apprentice taught as part of their training, and the mentor and apprentice reflected upon their project in order to share the cognitive apprenticeship with their colleagues and at conferences. The following January, the apprentice was hired as a full-time Reference and Subject Specialist Librarian at NYU Shanghai, and she and her mentor were now colleagues and peers in the NYU network and the professional community of academic librarians.

THEORY

The mentorship component of the cognitive apprenticeship is one of its signature characteristics, allowing the mentor to teach professional skills as well as supporting and guiding the apprentice as a whole person. Providing mentees with emotional, intellectual, and psychosocial support (Baranik et al. 2010).

The cognitive apprenticeship incorporates and expands upon the traditional mentorship model by teaching the apprentice in an intentional, scaffolded manner that takes into account professional community, the needs of the individual apprentice, and the vision of the institution in which the apprentice is training. Situated in a constructivist approach to pedagogy, the cognitive apprenticeship acknowledges that genuine learning occurs through critically engaging with and exploring other perspectives and epistemologies through dialogues, collaboration, and cooperation. The constructivist approach understands that learning is an active, not a passive endeavor (Merriam, 2007).

Not all constructivist models are equal, though. In David Kolb's Experiential Learning Model, the learner first experiences a concrete learning moment wherein she performs a task, reflects upon that task, and then applies that abstract reflection to experimenting with the new skills and fitting them into her own (Merriam, 2007). While this model does include reflection, it is criticized for being overly cerebral, not accounting for the learner's context, which includes her social life and environment as well as her inner, emotional self.

Peter Jarvis built upon Kolb's Experiential Learning Model, including this social context. Although learning begins with experience, humans construct experience through their personal understanding of a situation, which is founded upon their personal “psychological history” and biographical history (Jarvis, 2001). Thus, for Jarvis, the learner's emotional state is an essential component of learning and pedagogy. Knud Illeris, a Danish learning theorist, proposed the “three dimensions” of learning”, which brought together the cognitive, emotional, and environmental factors which influence a person's experience (Merriam, 2007).

These three dimensions of learning are closely aligned to the communities of practice, which are discussed in Jean Lave and Etienne Wenger's research of situated learning. The cognitive apprenticeship is a pedagogical model that is supported by these communities of practice. According to Lave and Wenger (2000), it is practice itself which makes a community of practice effective: this concept goes beyond performing tasks and situates practices in the social context that gives them meaning and structure. In fact, it is this social view of practice that begets the communities in the “communities of practice”:

Like gardens, they respond to attention that respects their nature. You can't tug on a cornstalk to make it grow faster or taller, and you shouldn't yank a marigold out of the ground to see if it has roots. You can, however, till the soil, pull out weeds, add water during dry spells, and ensure that your plants have the proper nutrients. (p. 143).

The cognitive apprenticeship model allows a mentor to bring the apprentice into a professional community of practice, supporting her personally and professionally. By the end of our project, the mentor had not only introduced the apprentice into her present community of colleagues, but modeled and taught the skills she would need to develop her own personal philosophy of librarianship, instruction, and professionalism in the professional context where she would apply those skills and perspectives.

LOEX PRE-PRINT

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