Developing a Pedagogical Approach to Training Student Employees in Access Services

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Over the past year and a half, Access Services at IUPUI University Library has been working on re-envisioning how we train student employees.[1] We employ a mix of undergraduate and graduate students as Student Information Assistants, whose position description encompasses a range of duties of varying complexity. Those duties extend from shelving, circulation tasks, and providing library and campus information, through technology troubleshooting, to answering reference questions and providing research support. Our aim was to ensure that student staff provide patrons with consistently excellent service, and that we provide student staff with the necessary tools, skills, and knowledge to meet and exceed the requirements of their position. Training is a crucial point at which the needs of patrons and the needs of student employees intersect, and careful attention to developing an effective training program thus benefits those on both sides of the Service and Information Desk.

Our approach to designing a new training program was informed by two principles. The first is that training is learning, and as such entails the same cognitive processes as other structured forms of learning. Achieving mastery of the skills necessary to work at the Service and Information Desk looks much the same as achieving mastery in other domains: student employees too need to "develop a set of key component skills, practice them to the point where they can be combined frequently and used with a fair degree of automaticity, and know when and where to apply them appropriately."[2] Training to work in Access Services is, like classroom learning, a matter of retention and transfer, of being able to retrieve knowledge and apply it to new situations as they arise.[3] Thus the second principle we worked from is that student employee training should follow proven pedagogical approaches, and be purposefully designed to most effectively support learning.

Aiming to create an effective program focused on specific outcomes, our development process drew on popular curricular design methods, leaning in particular on Grant Wiggins and Jay McTighe's concept of backward design. Using a backward design framework challenged us to focus on outcomes (identifying "desired results" in Wiggins and McTighe's

[1] The team working on the training redesign consists of Paul Moffett, Mindy Cooper, John Cooper, and myself.
[2] Susan A. Ambrose et al., *How Learning Works: Seven Research-Based Principles for Smart Teaching* (San Francisco: Jossey-Bass, 2010), 95.
[3] Peter C. Brown, Henry L. Roediger III, and Mark A. McDaniel, *Make It Stick: The Science of Successful Learning* (Cambridge, MA: The Belknap Press of Harvard University Press, 2014), 2.

terms) and assessment (determining "acceptable evidence of learning").[4] In attempting to identify our desired outcomes, however, we found ourselves facing an unmanageably encyclopedic list of training goals, likely to stymie learning and induce cognitive overload. We therefore turned to our desk statistics to get an evidence-based picture of what student staff need to know, rather than what we thought they ought to know.

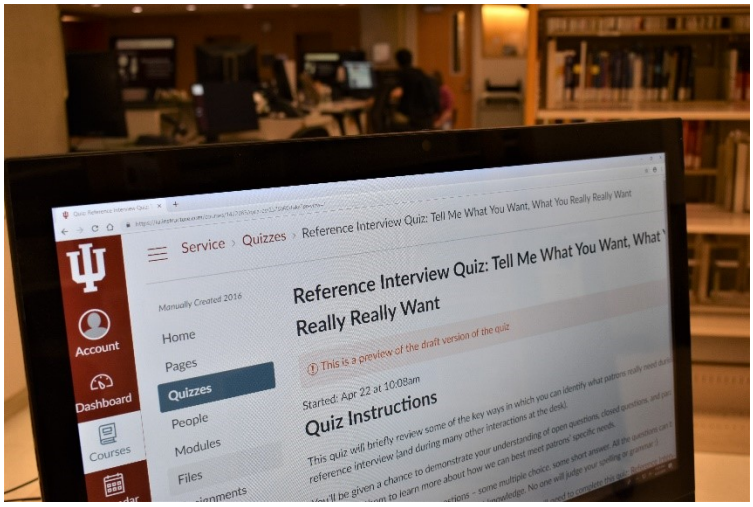
This reduced list of goals also allowed us to manage cognitive load by organizing material into bite-sized "chunks" appropriate to the knowledge level of new employees, each focusing on a coherent group of training goals and cumulatively building on the preceding chunk.[5] The overarching structure of the training program was framed by the principal responsibilities of the position and Access Services' commitment to customer service. New employees receive a general orientation to the library and the department, then receive training in what we term "desk smarts" – the soft skills necessary to successfully navigate desk interactions and provide outstanding service. They then move on to modules dedicated to circulation, reference, and technology. Within each of those modules, we bundle together small groups of training goals focused on related tasks or skills. So, for example, the first chunk of the circulation module addresses training goals solely related to creating, finding, and manipulating user accounts.

If the organization and content of the training program is determined by specific, achievable training goals, the central component supporting achievement of those goals is a series of knowledge checks. These knowledge checks occur at the end of each training chunk, cumulatively at the completion of modules, and culminate in a final knowledge check at the end of the program that requires new employees to synthesize the knowledge and skills they have acquired. Our knowledge checks not only enable us to ensure that student employees have learned what they need to know, but also seek to harness the learning benefits of the testing effect, or the retrieval-practice effect. As Mark McDaniel notes, "testing is not just an assessment of knowledge; it also modifies memory;"[6] evidence from cognitive psychology shows that the retrieval practice provided by testing can greatly improve retention.[7] In this context, testing is not a fear-inducing exercise designed to trip up student employees, but a valuable learning tool that helps them rehearse and encode the knowledge and skills necessary for them to do their job well. Testing here is simply an occasion to compel students to recall information from memory, which can take a multitude of forms.[8] Our knowledge

[4] Grant Wiggins and Jay McTighe, *Understanding by Design*, 2nd ed. (Alexandria, VA: ASCD, 2005), 17-18.
[5] Wellesley R. Foshay, "Some Principles Underlying the Cognitive Approach to Instructional Design," in *Handbook of Improving Performance in the Workplace, Volume 1: Instructional Design and Training Delivery*, ed. Kenneth H. Silber and Wellesley R. Foshay (San Francisco: Pfeiffer, International Society for Performance Improvement, 2010), 11.
[6] Mark McDaniel, "Put the SPRINT in Knowledge Training: Training with SPacing, Retrieval, and INTerleaving," in *Training Cognition: Optimizing Efficiency, Durability, and Generalizability*, ed. Alice F. Healy and Lyle E. Bourne Jr. (New York: Psychology Press, 2012), 275.
[7] Henry L. Roediger III, Adam L. Putnam, and Megan A. Smith, "Ten Benefits of Testing and Their Applications to Educational Practice," in *The Psychology of Learning and Motivation: Cognition in Education*, ed. Jose P. Mestre and Brian H. Ross (Waltham, MA: Academic Press, 2011), 1.
[8] James M. Lang, *Small Teaching: Everyday Lessons from the Science of Learning* (San Francisco: Jossey-Bass, 2016), 22.

checks thus include activities such as scavenger hunts and mock desk transactions, as well as the more familiar quizzes and worksheets.

Knowledge checks provide safe spaces for students to try out new skills and knowledge, perhaps fail, and receive formative feedback, prior to undertaking more high-stakes interactions with actual patrons. Indeed, the kind of retrieval practice afforded by knowledge checks is only effective if reinforced with timely and frequent feedback that enables employees to understand their performance in relation to the goals we want them to meet.[9] Thus, for example, for the final role-playing scenarios we devised to check our new employees' cumulative learning at the conclusion of their training, we also created short rubrics to help the trainer provide directed feedback – what would a good response to this patron question look like? What would an outstanding response look like? What should the employee have asked? What other services might they have offered? The last assessment in the reference training module requires trainees to respond to an email reference question; the assessment identifies for the employee exactly which skills are being tested, and they email their response to a member of the training team, who then provides feedback on their performance in those areas.



The cumulative, scaffolded nature of our knowledge checks – which demand that student employees increasingly integrate skills and knowledge from across different training chunks and modules – constitutes varied practice, which not only improves retention but also, crucially, facilitates transfer. Working at the Service and Information Desk requires the ability to "assess context and discriminate between problems, selecting and applying the correct solution;" given the range of questions our Student Information Assistants field, they must be "adept at discerning 'What kind of problem is this?'"[10] If we want student employees to be able to analyze a problem, perceive the nature of the problem, and identify an appropriate response, then we need to provide opportunities for them to rehearse that process.[11] Hence our knowledge checks challenge trainees, for example, to think about what constitutes good customer service in different situations (say, answering a reference question via email versus helping a student physically locate a book), or to consider which questions might best help clarify a patron's need in a number of different contexts.

[9] Ambrose et al., *How Learning Works*, 6.
[10] Brown et al., *Make It Stick*, 53.
[11] Julie Dirksen, *Design for How People Learn*, 2nd ed. (San Francisco: New Riders, 2016), 185.

It is also imperative that student employees practice retrieving and applying what they are learning in contexts that, where possible, mimic those they will encounter in their work: learners should be given the chance to "practice in the same way they need to perform."[12] Many of the practice scenarios and mock transactions in our knowledge checks are therefore derived from actual questions received at the desk, and we provide student employees with opportunities to practice navigating face-to-face interactions, using the same tools available to them at the desk. Even when we utilize quizzes and worksheets, we ensure that they require trainees to apply what they are learning in ways that replicate how they will have to use their skills in actual transactions, asking them, for instance, to paraphrase a patron's question, or identify search terms that might help a patron find materials on their research topic. Constructing knowledge checks as authentic tasks helps student employees build familiarity and facility with new information and skills, whilst they construct the cognitive pathways and connections necessary to do their job effectively. It also has the motivational benefit of demonstrating the relevance and application of what they're learning.

When designing learning activities to introduce student employees to the skills and knowledge necessary for their job – the third step in the backward design process – we similarly tried to hew to effective teaching methods, such as emphasizing active learning and making connections to what trainees already know. However, as we work on evaluating and improving the program after its first year, we continue to encounter pedagogical challenges. One of those challenges returns to our initial struggle with identifying training goals: how much, and what, do student employees need to know? How, as learning designers, can we be "ruthless about including only what's really necessary"?[13] Others are additive in nature – for example, how can we incorporate the benefits of reflection and peer learning? Many of our challenges in training design are ultimately a question of empathy, wrestling with "hindsight bias" as we fail to remember, or underestimate, what it requires to learn things with which we are so very familiar.[14] It's a challenge to "continually ask the empathic question, What is it like to be a person learning something?"[15] – but one we hope to continue to meet in future iterations of the program.

We are also cognizant that training is not something that happens just once, but is a process that extends through time: support for learning, feedback on learning, and professional development should be ongoing features of student employment in Access Services. We want pedagogically informed training to constitute part of a student employment experience that incorporates "student employees into as many aspects of the department's work as could provide a learning opportunity."[16] This ensures that not just their training, but their work experience as a whole, is designed with learning in mind.

[12] Dirksen, *Design*, 106.
[13] Dirksen, *Design*, 172.
[14] Brown et al., *Make It Stick*, 115.
[15] Kevin Michael Klipfel and Dani Brecher Cook, *Learner-Centered Pedagogy: Principles and Practice* (Chicago: ALA Editions, 2017), 8.
[16] George S. McClellan, Kristina Creager, and Marianna Savoca, *A Good Job: Campus Employment as a High-Impact Practice* (Sterling, VA: Stylus, 2018), 131.