On-Demand Modules for Teacher Professional Development:
The Importance of Adult Learning Theory

Valerie Simmons
Sanford Inspire Program
Mary Lou Fulton Teachers College
Arizona State University
Valerie.Simmons@asu.edu

Ryen Borden
Sanford Inspire Program
Mary Lou Fulton Teachers College
Arizona State University
Ryen.Borden@asu.edu

Abstract: This paper is a detailed description of how a grant within a resource one University is incorporating adult learning theory in to the creation of differentiated professional development resources for pre-service and novice in-service teachers with the goal of helping prepare teachers to inspire their students towards powerful academic and social outcomes. This is done through deliberate design decisions regarding content, format and delivery method of the On-Demand Module which takes into consideration the needs, interests, experiences and motivations of adult learners.

Introduction

Today, more than ever, teachers are being held accountable for their role in student learning. Schools rely on professional development to bridge gaps in knowledge and skills. These options tend to vary widely in quality, and often teachers and school administrators lack the time and money to access the resources they need. Recent survey data from the Boston Consulting Group (supported by the Gates Foundation and presented at the 46th annual Learning Forward Conference) highlighted this very problem. Survey results showed a clear disconnect between the types of professional development teachers want and the types administrators are willing to pay for. Specifically, it noted that administrators preferred to spend professional development money on in-house professional learning communities and workshops while teacher preferred to have professional development delivered via courses or conferences (Quattrocchi, 2014). It also noted that only 16% ($3 billion of the $16 billion spent yearly on professional development) of professional development money is spent on resources from external providers (Quattrocchi, 2014). This is important because while professional learning communities and workshops can be useful, they are not the type of professional development teachers today desire. This disconnect demonstrates a failure to consider key principles of adult learning theory in the professional development offered to teachers, which unfortunately can lead to low levels of teacher investment.

With this in mind, our grant-funded program housed within a southwestern, resource one University creates On-Demand Modules designed to build teacher's knowledge and skills so they can inspire students toward powerful academic and social outcomes. Our free, research-based, online modules are organized into five domains of practice (Learning Environment, Planning & Delivery, Motivation, Student Growth & Achievement, and Professional Practices) and are aligned to commonly used teacher evaluation frameworks. We design these modules with an adult learning theory orientation and believe that teachers who develop proficiency in these areas will have the foundation needed to maximize student potential.

Each of our On-Demand Modules is grounded in current research and provides teachers with a tool or strategy that can be used in the classroom immediately. On-Demand Modules are available anytime, anywhere via a free online resource repository also developed by our resource one University. Data is used at every stage of development to ensure our modules address the needs of teachers. To begin, we use survey and performance assessment data to prioritize topics for production. Then, subject matter experts and designers synthesize current research on the topic to create a self-guided, self-paced lesson. Next, we conduct extensive pilot testing and use this feedback to ensure all modules meet a high standard of content quality, ease of use, and relevance to teachers'

immediate needs. Once our finished modules go live, data also informs their implementation in schools as principals and university supervisors use observation data to direct teachers to the module that will meet their individual professional development needs. Our On-Demand Module development process considers the needs of teachers at every stage from design to implementation.

Literature Review

Adult Learning Theory

Adult learning theory was originally known as andragogy, and was first defined by the German educator Alexander Kapp in 1833 (Bedi, 2004; Henschke, 2005). For Kapp, andragogy consisted of learning strategies that focused on the adult learner and how to engage them in their learning experiences (Bedi, 2004; Henschke, 2005). By the early 20th century, American psychologist Edward Thorndike had shown that, contrary to conventional wisdom, adults do in fact have the ability to learn (Knowles, 1978). From this, American educator Malcolm Knowles re-framed Kapp's andragogy into a theory of adult education, differentiating it from pedagogy entirely, noting that "adult education required special teachers, methods and philosophy," (Nottingham Andragogy Group, 1983). Currently, the term andragogy has fallen out of favor and has been replaced by adult learning theory which has been utilized by researchers in a variety of disciplines including vocational training and higher education.

According to Knowles, andragogy rests upon six main assumptions related to the motivations of adult learners. These include: (1) Readiness: Adults are motivated by learning that satisfies their personal needs and interests. (2) Foundation: An adult's accumulated life experiences provide the basis for learning activities. (3) Self-concept: Adults are self-directed, autonomous learners. (4) Orientation: Adults are oriented towards learning that can be applied to solve problems. (5) Motivation: The source of motivation for adults is more often internal than external. (6) Need to know: Adults need to know why the learning is necessary (Beavers, 2009; Bedi, 2004; Chan, 2010; Knowles, 1978; Merriam, 2001; Zmeyov, 1998). While today some have argued that adult learning theory is not so distinctly different than pedagogy, it is at least a comprehensive set of best practices for learners and better understanding the learning process (Smith, 1996; Smith 1999; Smith 2010). These practices inform our work designing professional development for teachers. The content, format, and delivery method of our On-Demand Modules takes into consideration the needs, interests, experiences, and motivations of adult learners.

On-Demand Module Creation Process

The Sanford Inspire Program On-Demand Modules are designed with sustainability and far-reaching impact in mind. Data helps identify topics of need and prioritize topic areas of focus to guide the research our teaching and learning specialists complete. In designing the modules, our subject matter experts leverage the expertise and resources available at our resource one institution to create learning modules that are available to teachers anytime, anywhere, at no cost. Each module includes three distinct parts: foundation, resource, and application. Each module includes a take-away resource that can be immediately implemented in the teacher's classroom upon completion of the module. Teachers can move through the open-entry, open-exit modules at their own pace and many modules include the option to differentiate the experience based upon the teachers' grade band specialization with examples, resources and research directly related to their grade bands.

Each module synthesizes prominent research in the field on a specific topic to create the Foundation Section. This content is also enhanced and/or refined by faculty expertise from within the college. The Resource Section introduces the teacher to a tool or strategy they can use in their classrooms. It also includes built-in checks for understanding which provide teachers with feedback as they progress through each module. During the design process, each module undergoes several rounds of review by teaching and learning specialists, instructional designers, teachers and teacher educators to ensure the content is accurate, concise and presented in a way that engages and supports the adult learner. Throughout the development process, modules progress through multiple rounds of review against a large list of quality indicators to ensure each module meets a high standard of content quality and usability. Upon successful completion of an in-module assessment, teachers receive a certificate for mastering the objective of the individual module. A final section, Application, provides teachers with support in

transferring knowledge gained from the online module into their real-life classroom. After earning a certificate of completion, teachers can return to the modules at any time to revisit content. These design features respond to what teachers expect from high-quality online training.

Innovation

Adult learning theory is utilized throughout the creation of our On-Demand Modules to assure they are successful in supporting pre-service and novice in-service teachers seeking to refine their practice. Not only is it the basis for why we focus on specific topics that can be completed in 60 minutes or less, it is why we clearly state our objectives, build in real life scenarios and characters, and deliver training online. Below are examples of how adult learning theory was employed in our design process, along with direct quotes from teachers and teacher educators who participated in pilot testing or our On-Demand Modules.

Readiness: *"Now that I have been teaching for a few months I notice that I have been giving less explicit instructions and I think that it is an important skill that all teachers should revisit."*
~Elementary Teacher's reflection after completing the 'Giving Clear Directions for a Task' module

Through surveys and focus groups with teachers, we learned that teachers want professional development that meets their individual needs. Adult learning theory uses the term "readiness" to describe the motivation that adults possess when learning is aligned to their needs or interests (Beavers, 2009; Bedi, 2004; Chan, 2010; Knowles, 1978; Merriam, 2001; Zmeyov, 1998). We take this into consideration by designing each module to focus on a specific topic. For example, to address the topic of consequences we created three separate modules (Understanding Consequences, Creating Consequences, Delivering Consequences), as opposed to a single all-encompassing module. The narrow focus allows teachers to find and complete a module aligned to their specific area of need. Teachers can select to complete as many modules as needed, in any sequence, to meet their unique needs.

To assist teachers in finding the right module quickly, we provide information about alignment to several data sources that are common drivers for teachers seeking professional development including: teacher evaluation rubrics, student surveys, teacher self-assessments. In addition, each module includes a clearly stated objective. This is presented up front so that teachers can assess relevance of the module for their specific area of need. These factors, targeted focus and alignment to professional development data sources help ensure the training addresses an area of teacher need or interest and thus support teacher motivation to learn.

Foundation: "*I enjoyed the comparison to the basketball coaching and thought the case study of Mr. Stanley was easy to follow. I also think it was beneficial to include the reasons why some students don't perform procedures or appear as if they aren't following them and why it isn't always because they are deliberately disobeying the teacher, which is a common misconception."*
~Elementary Teacher's reflection after completing the 'Teaching Procedures' module

Another principle of adult learning theory is "Foundation," the idea that adults possess a lifetime of experiences that form the foundation for any new learning. We acknowledge this in our modules by providing opportunities for teachers to actively recall experiences from their classrooms and by opportunities to form analogies between new learning and familiar life experiences. For example, in our 'Teaching Procedures' module (the last of a three-part series on classroom procedures), we detail the story of Mr. Stanly, a teacher who has thoughtfully created procedures for his classroom, but is confused when students are not able to simply follow them. This real life example is one of many that are woven into our modules that teacher stop and reflect upon how their real life experience are analogous.

Additionally, the Application Section of each module became an integral part of utilizing the users experience during the On-Demand Module. In this section, teachers are prompted to consider how they will incorporate their learning from the module, as well as the new strategy or tool, into their classroom. Finally, realistic scenarios and characters placed throughout the modules help users to apply newly learned information from the modules to situations that they very likely have or will face in their roles as educators. We have also begun to

incorporate pilot feedback for more videos of real classrooms utilizing our resources, in order to help teachers bridge their learning into the classroom even more easily.

Self-Concept: "[The module] was easy to navigate. I liked that I was able to come back to the point where I left off. "
~Teacher educator's reflection after completing the 'Causes of Misbehavior' module

Adult learning theory acknowledges that teachers are self-directed, autonomous learners. This principle of Self Concept informed our approach to designing online, open-entry/open-exit courses. Our On-Demand modules operate within the Moodle Learning Management System. The non-facilitated modules allow teachers to start a course at any time, access content asynchronously, and complete the course on their own schedule. The narrowed focus for each individual On-Demand Module also allows us to design courses that can be completed in less than 60 minutes, and allows the user to leave the module and return to pick right back up from where they left off. Given the limited time available in a teacher's schedule, we design courses that deliver quality content in an efficient manner. This both supports a growing demand for flexible professional development by teachers and respects the desire of adult learners to complete the modules anytime, anyplace, and at any pace.

Orientation: *"Giving instructions efficiently and effectively helps eliminate many of the problems that novice teachers are most likely to struggle with."*
~Teacher candidate's reflection after completing the 'Giving Clear Directions for a Task' module

An assumption of adult learning theory is that adults are more oriented towards learning that is centered on problem solving rather than simply learning new content. We take this into consideration in the design of our On-Demand Modules. Frequency, modules begin by presenting a scenario of a classroom teacher grappling with a common problem of practice (ex- students have difficulty following classroom procedures even though they are posted). As the teacher proceeds through sections of the module, they gain knowledge and skills to help the fictional teacher solve his/her problem. In the Foundation Section, teachers are introduced to underlying theories and research to build their knowledge base around the topic so that they can accurately understand the problem and generate appropriate solutions (ex- a misconception is at work suggesting students should just be able to follow procedures without them being modeled or reinforced regularly). In the Resource Section, teachers are introduced to a tool or strategy to assist in solving the problem (ex-Teaching Procedures Template to plan procedures and engage students in them). In the Application Section, teachers have the opportunity to apply new knowledge to solve a similar problem from their own classroom (ex- teacher practices using the Teaching Procedures Template and plan for engaging students in the procedures through reinforcing their regular use). This problem-solving orientation has been well-received by teachers who are motivated by learning that helps them address challenges they are facing in their classrooms.

Motivation: *"I thought it would be beneficial for my development as a teacher."*
~Teacher educator's reflection after completing the 'Giving Clear Directions for a Task' module

Because we recognize the motivation of adult learners are largely driven by internal rather than external sources, we designed our On-Demand Modules to allow teachers to choose their own pathway through the module based upon the grade levels they teach. In fact, one entire module on Motivation theory allows users to control the path by which they progress through the module based upon their own experiences. We also plan for the modules to be utilized as a response to the teacher's individual needs and allow them to self-select the topics they complete. This helps to assure the adult learner is fully engaged in the learning experience as we have tailored the experience to be based upon their own internal desire for professional development and respond to their individual needs.

Need to Know: *"I understood what I was going to be learning about and its importance to teaching."*
~Teacher educator's reflection after completing the 'Giving Clear Directions' module

In designing professional development for adults, it was important to acknowledge their need to know the relevance of new learning. In response to this, we firmly ground all of our modules in the ultimate goal of teaching,

to have a positive impact on children. In each module, we invest teachers by explicitly stating how mastering the objective of a given module will better enable the teacher to meet the needs of their students. The in-module examples provide case studies that demonstrate how teacher proficiency with a given skill improves some aspect of classroom environment, student motivation, or learning.

Conclusion

In conclusion, by acknowledging the needs of adult learners and incorporating principles of adult-learning theory into our design, our On-Demand Modules aligned with the needs and interests of adult educators who are seeking professional development opportunities. We will continue to refine our process to include additional opportunities to engage the adult learner where possible, such as adding real classroom videos to make the connection between learning experience and classroom use more concrete. By doing so we will continue to respond to the direct needs of individual teachers so they can truly inspire their students towards success.

References

Beavers, A. (2009). Teachers as learners: Implications of adult education for professional development. *Journal of College Teaching and Learning*, *6*(7), 25–30.

Bedi, A. (2004). An andragological approach to teaching styles. *Education for Primary Care*, *15*, 93–108.

Chan, S. (2010). Applications of andragogy in multi-disciplined teaching and learning. *Journal of Adult Education*, *39*(2), 25–35.

Fuller, F. F. (1969). Concerns of teachers: A developmental conceptualization. *American Educational Research Journal*, *6*(2), 207–226.

Henschke, J. A. (2005). Considerations regarding the future of andragogy. *Adult Learning*, 34–37.

Knowles, M. S. (1978). Andragogy: Adult learning theory in perspective. *Community College Review*, *5*(9), 9–20. doi:10.1177/009155217800500302

Merriam, S. B. (2001). Andragogy and self-directed learning: Pillars of adult learning theory. *New Directions for Adult and Continuing Education*, *89*, 3–13. doi:10.1002/ace.3

Nottingham Andragogy Group (1983). Towards a developmental theory of andragogy, Adults: Psychological and Educational Perspective, no. 9, Nottingham, England: University of Nottingham Department of Adult Education.

Quattrocchi, C. (2014, December). Misalignment. *EdSurge Newsletter*. Retrieved from https://www.edsurge.com/n/2014-12-16-learning-forward-but-back-to-basics?utm

Smith, M. K. (1996; 1999, 2010) 'Andragogy', the encyclopaedia of informal education.

Taylor, B., & Kroth, M. (2009). Andragogy's transition into the future: Meta-analysis of andragogy and its search for measurable instrumentation. *Journal of Adult Education*, *38*(1), 1–12.

Zmeyov, S. I. (1998). Andragogy: Origins, developments and trends. *International Review of Education*, *44*(1), 103–108.