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## 1 EMPower: Offering Tools to Adult Education Teachers

# EMPower

OFFERING TOOLS TO ADULT EDUCATION TEACHERS

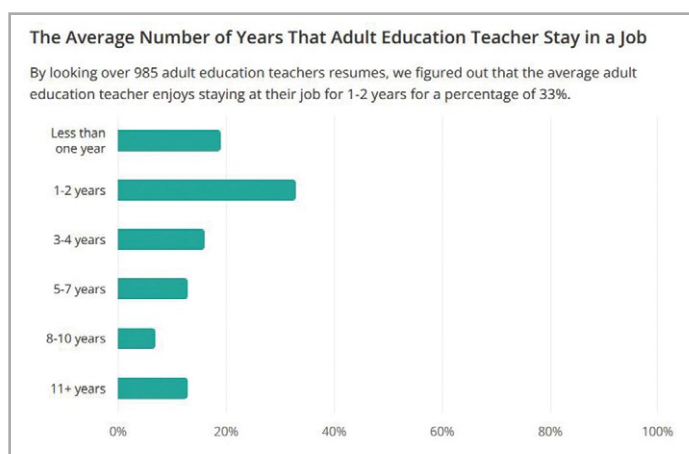
BY HEIDI SCHULER-JONES



**WHEN I BEGAN TEACHING IN ADULT EDUCATION IN GEORGIA IN 2006**, I was given multiple classes spread across three counties and three different programs. None were leveled by assessment scores, so students reading on a third-grade level were mixed with students reading at a ninth-grade level. I was told I would be teaching all five subjects on the GED: Reading, Writing, Math, Science, and Social Studies. My new boss pointed to a wall of thrift store bookcases weighed heavily with aging, mismatched booklets and told me I could use those for my lessons, but that most materials would have to be shared because there weren't enough copies to go around. She left the room with a smile of deep gratitude that I'd accepted this part-time teaching job.



That was my introduction to the world of teaching in adult education. Unfortunately, things have not changed all that much since then. The uncertainty and lack of structure in instructional materials and classes, inadequate working conditions, lack of professional development and proper training, and minimal administrator and/or collegial support (Smith & Hofer, 2003) led to many new teachers leaving after two years or less (Adult Education Teacher Demographics and Statistics in the US, 2022.)

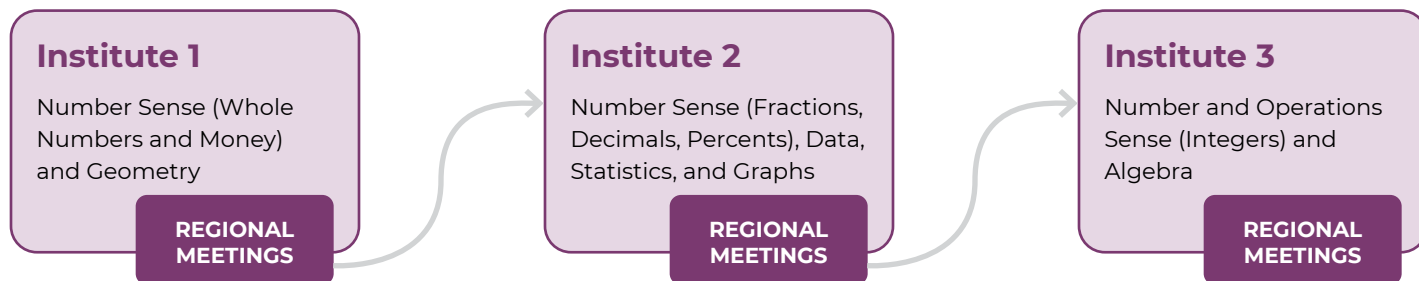


To be honest, I didn't expect to stay long myself. That all changed in 2010 when I was invited to participate in the pilot of the Adult Numeracy Instruction – Professional Development training (ANI-PD). It was during this intensive series of three two-day institutes that I was finally given the right tools, instructional routines, and training to do more for my math students than I ever imagined possible.

Prior to ANI-PD, I'd considered myself a decent math teacher, but I soon realized I could be doing so much more, especially around teaching math conceptually, i.e., explaining the *why* and not just the *how* behind the math. The best part of ANI-PD was that I not only learned how to teach math with a focus on conceptual understanding, but I finally had instructional materials that were designed to teach adults that way. That was my first exposure to the *Extending Mathematical Power (EMPower™)* book series. I'm still promoting its use more than a decade later.

To say the *EMPower* books and the ANI-PD transformed my teaching is an understatement. Those experiences shaped my approach to education as a whole and modeled for me the importance of teachers having access to background knowledge and support on guiding students through collaborative learning where the teacher probes for deeper understanding through questions rather than quick solutions. I learned that traditional lecture and drill instruction limited the opportunity for adult learners to apply the collective wisdom they brought to the learning space from their years of experience as workers, consumers, and parents. I learned the teacher was better placed as a guide, armed with the kinds of tools and training that made her feel confident enough to explore math and not just teach procedures the way they had been taught for generations.

Years later, I am now the director of the Adult Numeracy Center (ANC) at TERC, the birthplace of the *EMPower* book series and of ANI-PD (originally called Teachers Investigating Adult Numeracy—TIAN). Never did I imagine being in a position to explore ways to enhance the impact of the *EMPower* series for other adult educators, yet here I am, proud to carry forward the vision of bringing the series to other teachers in a new digital format.



The Adult Numeracy Instruction Professional Development (ANI-PD) model included a series of three, two-day Institutes, spaced with time in between for teachers to practice their new understandings and reflect with colleagues..

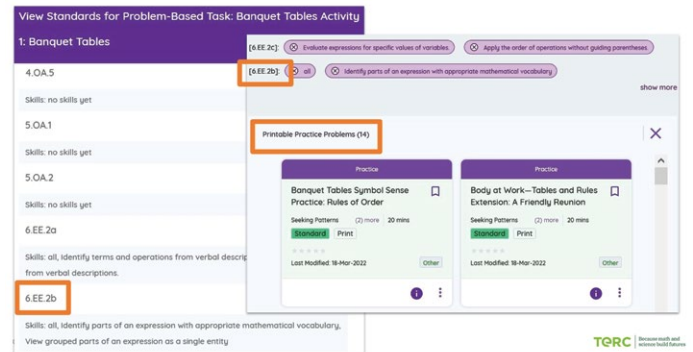
## Expanding EMPower's Reach

With TERC's distribution contract expiring in April 2021, we determined the series could best be served by identifying a new distributor, potentially one with a digital platform to increase accessibility for adult learners. While meeting with potential distributors early in 2021, we also surveyed the adult education field, including current *EMPower* users, about what they would like to see improved to make the books more user-friendly and a better fit for their program's needs. Due to the overwhelming shift towards remote instruction with the advent of the COVID-19 pandemic, many respondents expressed the desire for online materials. However, programs were concerned that *EMPower*'s heavy reliance on manipulatives and collaborative learning made it impossible to use with remote instruction. Teachers working in corrections settings also noted the difficulty of using manipulatives due to security concerns. It was clear that while many longed to go back to face-to-face instruction, the reality was that remote learning was here to stay. *EMPower* didn't seem to fit in that kind of instructional setting.

Given this feedback, we narrowed our search for a distributor who could help us expand *EMPower*'s reach to those teaching remotely and those in need of options beyond printed books and physical manipulatives. In Walch Education, TERC found a partner that not only could handle printing and distribution of the books, but that also had a learning management system (LMS) that could make an online *EMPower* experience a reality. The LMS, called *Curriculum Engine (CE)*, would allow teachers to assign *EMPower* lessons, activities, practice, and assessments to students electronically, using CE or other common LMS platforms.

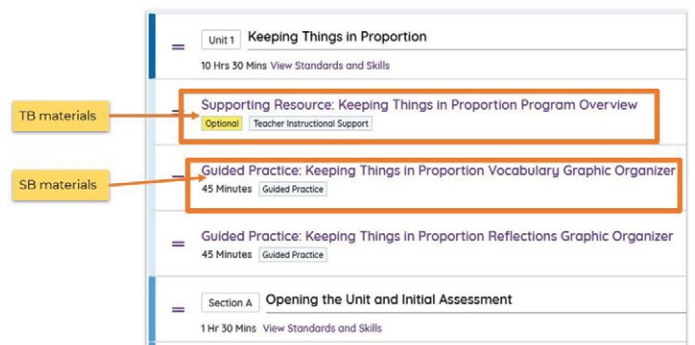
## How Curriculum Engine EMPowers Teachers

- All seven titles are now fully-aligned to the *College and Career Readiness Standards for Adult Education (CCRSAE)* and the eight Mathematical Practices. Every activity, practice page, and test practice is aligned with these.
- All content is now searchable by the CCRSAE, Math Practices, key words, learning type (application, procedural, conceptual), and type of resource (guided activity, practice, assessment).



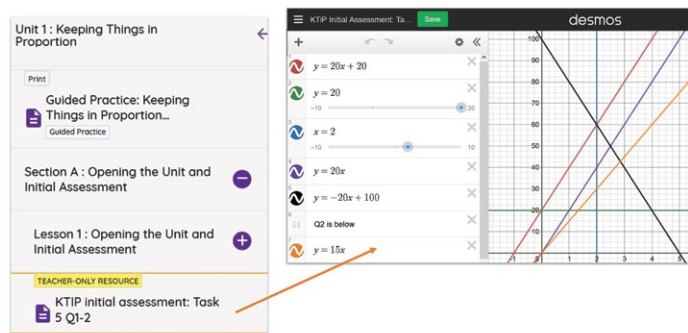
Teachers now have the ability to search *EMPower* for content that aligns with specific College and Career Readiness Standards for Adult Education and type of resource (guided activity, practice, assessment).

- All Teacher Book (TB) resources for a lesson are now in one place, i.e., all Blackline Masters are attached to the end of the teacher material for that lesson and followed by the Answer Key for the activities in that lesson.
- Student Book (SB) pages are organized directly after the TB resources and can be rearranged into a custom order, including selecting resources that work best for a class, such as Graphic Organizers.



All of the necessary teacher and student materials for an instructional unit are organized in one place.

- Teachers can combine activities and practice pages from each *EMPower* title they have licensed to create a new *EMPower* course.
- Teachers can add external sources to their *EMPower* courses, such as OERs like Desmos, virtual manipulatives, or teacher-created content.



Curriculum Engine allows teachers to incorporate OER resources (such as Desmos, featured here) into *EMPower* lessons.

- Teachers can assign start/end dates or specific days of the week for instruction and choose which activities/practice will be done in class and which will be assigned for homework. All of this is tracked on the teacher schedule in the system.

Unit 2 > Section B > Lesson 2: Banquet Tables			
Date: 30-05-2022			
Learning Object(s)	Type	LO Type	Duration
Banquet Tables Warm-Up	Classwork	Warm-Up	30 mins.
Banquet Tables Activity 1: Banquet Tables	Classwork	Problem-Based Task	45 mins.
Banquet Tables Practice: Toothpick Row Houses	Homework	Printable Practice Problem	20 mins.
Banquet Tables Extension: The Importance of Order	Homework	Printable Practice Problem	20 mins.

Curriculum Engine allows teachers to designate activities/practice as in-class work or homework.

- EMPower* courses set up in CE can be exported to a different LMS (including Google Classroom and Canvas) through a Common Cartridge Export feature built into the Course Management Options.

## Supporting Teachers

During our earliest CE conversations with Walch, we realized there were some important caveats and considerations we needed to address regarding how much flexibility we wanted to allow in digital books, especially for teachers who were new to teaching math conceptually and might not have access to high-quality PD on math instruction beyond teaching procedures. For example, we knew teachers were excited by the prospect of being able to organize their own digital version of an *EMPower* “book” with the lessons they teach from various books all in one place. We knew they were interested in organizing the books or specific lessons based on course length, student levels, or specific math content and then loading them into their program’s LMS. However, we also recognized potential pitfalls of giving teachers too much flexibility in pulling apart cohesive lessons aligned to a set of objectives that touched on multiple math topics at the same time. For example, what if teachers only used the practice pages without comprehending and addressing the math concept discovered in the lesson activities? Likewise, what if teachers only viewed the instructional support for an activity without seeing the connection of the activity to the opening and closing student discussions? In the print version, teachers are exposed to *all* the teacher and student materials owing to the simple fact that the book components are bound together. In a digital version with no restrictions on customization, they might only see the specific pages they selected and potentially miss important concepts and instructional suggestions.

Ultimately, we identified the guardrails we wanted in place to encourage teachers to review the complete lesson, not just certain activities, so they could benefit from understanding the coherence between content and math concepts as they related to all the objectives in a lesson. Walch helped us navigate a balance between meeting the digital needs of instructors while minimizing the pitfalls of allowing too much flexibility when picking and choosing lessons, activities, practice, and assessment.

All the amazing features now available in CE only add to the many supports *EMPower* always has provided to teachers. What I needed most as a new adult education teacher were cohesive math lessons and engaging math activities that could ultimately become the math curriculum I needed. The *EMPower* books provided me those things as well as math background, helpful hints, suggested questions, anticipated student responses, sample student work, and a teacher



### AUTHOR

**Heidi Schuler-Jones** is the Director of the Adult Numeracy Center at TERC. She has worked in adult education since 2006, spending much of that time expanding her understanding of tools and instructional strategies that make math meaningful, accessible, and fun for adult learners. She manages the SABES Mathematics and Adult Numeracy Curriculum & Instruction PD Center, oversees updates, research, and teacher support for the *EMPower* math series, and continues to facilitate professional development such as the *Adults Reaching Algebra Readiness* (AR)<sup>2</sup> institutes. At SABES, she was the lead developer of the *Curriculum for Adults Learning Math* (CALM). She is the president of the Adult Numeracy Network.

### REFERENCES

- Zippia, The Career Expert (2022, April 22). *Adult Education Teacher Demographics and Statistics in the US*. <https://www.zippia.com/adult-education-teacher-jobs/demographics/>
- Smith, C., & Hofer, J. (2003). The characteristics and concerns of adult basic education teachers (Report #26). National Center for the Study of Adult Literacy and Learning (NCSALL).

### RESOURCES

- Adult Numeracy Center (ANC) at TERC  
<https://www.terc.edu/adultnumeracycenter/>
- Adult Numeracy Instruction – Professional Development training (ANI-PD) [https://lincs.ed.gov/publications/pdf/LINCS\\_ANI\\_flyer.pdf](https://lincs.ed.gov/publications/pdf/LINCS_ANI_flyer.pdf)
- Adult Numeracy Network (ANN)  
<https://www.adultnumeracynetwork.org/>
- Curriculum for Adults Learning Math (CALM)  
<https://www.terc.edu/calm/about-calm/>
- College and Career Readiness Standards for Adult Education (CCRS AE)  
<https://lincs.ed.gov/professional-development/resource-collections/profile-521>
- Teachers Investigating Adult Numeracy (TIAN)  
<https://www.terc.edu/tian/>
- Walch Education to purchase curriculum  
<https://www.walch.com/terc-empower/>
- Walch Curriculum Engine (CE)  
<https://www.walch.com/curriculum-engine/>

summary. All these supports, coupled with the in-depth ANI-PD training on teaching math conceptually, allowed me to deepen my understanding of math and helped me to enjoy teaching more because the students also saw their math interests and abilities deepen and their confidence soar.

### LEARN MORE

Are you interested in what *EMPower* has to offer you and your students? Download FREE sample lessons from each of the seven titles in the series and hear some student and teacher video testimonials at <https://www.walch.com/terc-empower>. Visit our FAQ page at <https://www.terc.edu/empower/faqs/> for answers to common questions such as which title to use for a specific math level or content need, or how to use *EMPower* in multilevel classrooms or with students with inconsistent attendance.

To learn more about *EMPower* Professional Development, contact us at <https://www.terc.edu/empower/professional-development/> or email [empower@terc.edu](mailto:empower@terc.edu).

### ACKNOWLEDGEMENTS

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