



CSM LEARN
High Performance, for every

CSM uses next-generation adaptive learning technology to build and certify the High Performance competencies that lead to success in education, work, and life.

CSM: BOOSTING EDUCATION, WORK, AND LIFE SUCCESS

csmlearn.com

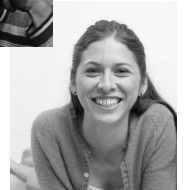
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The CSM solution

Being successful in education, work, and life is **more about how you feel, act, and think than about what you know**. Thriving in life requires being proactive in solving problems, knowing how to learn on your own, being careful in your work, having persistence, aspiring to A-level performance, and hungering for learning. Most important is *believing in your ability to succeed*: without this self-efficacy, you're defeated before you even start.

CSMlearn uses next-generation adaptive learning to simultaneously build conventional skills while also holistically building important traits and competencies to academically and personally prepare students and adults to take on the challenges of education, work and life.



High Performance

The innovative, online CSM Course builds High Performance competencies.

High Performance

- ▶ college-level quantitative reasoning and applied literacy, with deep understanding and fluency
- ▶ problem-solving strategies and mindset to confidently tackle problems as they arise
- ▶ active, independent learning for acquiring new skills and knowledge in education and work
- ▶ attention to detail and conscientiousness
- ▶ persistence and self-reliance to keep going even when frustrated or overwhelmed
- ▶ high personal expectations and a mastery mindset that drive "A-level" work
- ▶ self-efficacy: the knowledge, founded in experience, that you can succeed

High Performance looks the same for a surprising range of people. The same CSM Course has been taken by adult education students with 4th grade literacy... as well as corporate executives with postgraduate degrees(!): **different people need different skills, but the high performance competencies that enable them to thrive are remarkably similar.**

The joint College and Career Readiness Commission of the American Association of Community Colleges and The School Superintendents Association agree that the most important factors for student education, work, and life success are not advanced math and literacy skills, but rather problem solving, learning agility, attention to detail, persistence, and self-efficacy, and that schools do a poor job of teaching these (private survey, results available on request). The CSM course is unique in how it deals with these competencies.

The CSM Course

The CSM Course uses **next-generation adaptive learning technology** that simultaneously personalizes instruction in academic, learning-to-learn, and how-you-feel/how-you-act domains. The result is not just outstanding academic skills, but students who are **more effective and enthusiastic learners, with key High Performance competencies**.

CSM is extraordinarily efficient, using advanced adaptive learning technology to choose skills that at each moment are at a student's edge of knowledge where learning is most rapid, so no student's time is wasted trying to learn skills either out of their reach or that they already know.

The CSM experience is highly personalized, and instantly responds to specific errors made by the student to help them identify and then correct their mistakes. Students can also choose from multiple types of instruction to match their individual strengths, weaknesses, and learning styles.

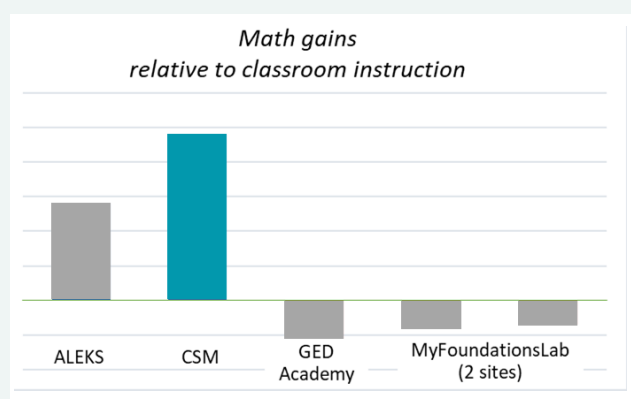
The CSM Course uses dozens of techniques from behavioral economics and social and educational psychology to build self-efficacy. For example, when students master a skill, CSM tells them the percentage of 4-year college graduates and all adults in the US who could do that skill (and CSM skills are hard! There are many skills that only 25% of college grads and 10% of all adults can do). Students realize that they're not struggling on CSM because they are dumb – it's because CSM skills are hard for everyone! Many students have never been able to favorably compare themselves to college grads, and it changes their self-identity and sense of what they can accomplish.



See **Appendix A** for more on CSM's next-generation learning techniques.

The Technologies in Adult Basic Literacies Evaluation (TABLE) study found CSM to have the **largest math and literacy gains and highest student engagement** compared to MyFoundationsLab (Pearson), ALEKS (McGraw-Hill), GED Academy (Essential Education), and Reading Horizons (Reading Horizons)

(Murphy et al. (2017) "Evaluating Digital Learning for Adult Basic Literacy and Numeracy"; Menlo Park, CA: SRI International. <https://www.tinyurl.com/TABLEstudy>)



CSM Certificate



On completion of the CSM Course, students earn the **CSM Certificate**, the first certificate of generalized High Performance. The CSM Certificate encompasses performance essentials that are both needed for college success and that employers value in all employees, across sectors and positions.

While conventional certificates relate primarily to skills (e.g. welding or coding), **the CSM Certificate is a new type of performance-based credential** that indicates that you will execute your skills with High Performance.

Career Strategies

CSMlearn has also developed Career Strategies, which develops the **skill of lifelong career decision-making**. Career Strategies complements traditional career guidance that is short-term oriented (*college or workforce? what's your major/career?*), by placing education and work in a broader context of life, building an internal career coach. Topics include:

- ▶ credentials and job history may get you a job, but performance on the job is what gives promotions and a career trajectory
- ▶ a living wage income provides life satisfaction for most people
- ▶ it's not that a job gives you purpose, but that you give the job purpose
- ▶ most people don't follow straightforward career pathways, but follow a more circuitous journey (and it's OK for you, too!)



Implementation

CSM is **inexpensive and easy to implement**. CSM costs \$39/student (\$29 for educational institutions), can be provided in a blended-learning classroom or online, and is mobile friendly. Most people will benefit from a "coach" on CSM. Our High Performance Coaching course provides free professional development for coaches (high school teachers, peer tutors, HR reps, etc.). CSMlearn Expert Online Coaches are also available for \$99/student.

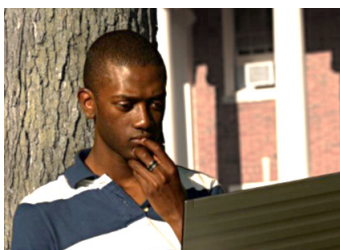
Because it is highly adaptive, users take vastly different amounts of time to complete CSM: college graduates typically take 12-30 hours; high school graduates take 20-50 hours; and high school students take 30-60 hours (roughly a semester course).

CSM Benefits

Postsecondary access and completion

For many people, the idea of going to college is overshadowed by fear of failure. Many students have had bad experiences in high school or prior college attempts, leading either to disinterest in further education or a belief that they can't be successful in education. When deciding whether to attend college, this fear of failure is compounded by enormous upfront commitments of time, money, effort, and ego – there is no “halfway matriculation” into college.

CSM allows those considering postsecondary education to test the waters with an extremely inexpensive course that improves their ability to learn and succeed at college and builds their confidence to take on the larger college commitment.



CASE STUDY: Cuyahoga Community College Adult Diploma Program

Cleveland's Cuyahoga Community College (Tri-C) incorporated the CSM Course into their Adult Diploma Program (ADP), comprised of older workers with poor computer skills and disengaged “opportunity youth”. Compared with other Ohio ADP programs, Tri-C saw higher math and literacy gains, and more advanced industry certifications. Surprisingly, most of this challenging student population completed CSM, and of those, **28%, without outside impetus, registered for associate degree programs at Tri-C** – which was not duplicated at other similar programs that did not incorporate CSM. Furthermore, of those attending college, **72% either completed their degree or have shown multi-semester persistence.**

CSM is also **increasingly accepted by colleges for credit** and **satisfies general education requirements in math** for many programs. The American Council on Education's College Credit Recommendation Service (ACE CREDIT®) has evaluated the CSM Certificate and recommends that colleges accept the CSM Certificate as **3 semester hours of college credit for quantitative reasoning at the baccalaureate category.**

CSMlearn has forged articulation agreements with colleges collectively representing more than 200,000 students (as of March, 2019), including SNHU, Western Governors University, CSU-Global, Thomas Edison State University and others (with many additional in progress).

CSM is the least expensive and most supportive way to start college careers with credit (often intimidating math credit) under their belt. According to the Council for



ACE is the major coordinating body for all the nation's higher education institutions (www.acenet.edu/credit).

Adult and Experiential Learning (CAEL), students with prior learning assessment credit like CSM are 2.5 times more likely to graduate college (*Fueling the Race to Postsecondary Success*, CAEL, 2010).

Brent Lumbra

Vermont Adult Literacy

Pre-CSM: 4th grade skills

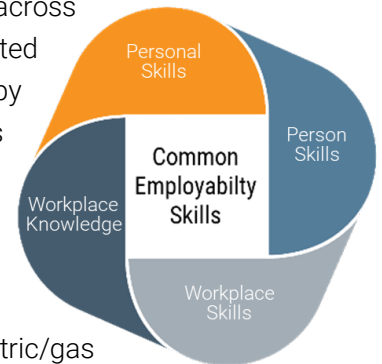
Post-CSM: 11th grade skills



I dropped out of high school at age 16 and have been in construction for 38 years, and I have been dreaming about a career change. My dream school is Maine Maritime Academy, I want to be a merchant marine operations officer. Doing the CSM course was so profound in my ability to learn. I am now signing up at Community College of Vermont! Thanks to CSM I have learned that I can do the work. It was so empowering to finish the CSM course. Thanks to CSM I am truly living my dream.

Employability skills development and industry credentialing

Employability skills are the transferable skills needed in all jobs, across sectors, business functions, and positions. The most widely adopted definition is the [Common Employability Skills](#) framework, developed by the Center for Energy Workforce Development (CEWD) for the Business Roundtable and the National Network of Business and Industry Associations, together representing 75% of job growth in the US.



CSM both trains and certifies key Common Employability Skills.

CSMlearn is partnering with CEWD to use CSM as the front-end for electric/gas utility training. Furthermore, because of its unique alignment with employability skills, CSMlearn is in advanced discussions with the primary industry certification programs in construction, restaurants, and lodging (representing over 15% of all jobs) for inclusion of CSM in their certifications.



Ann Randazzo

Executive Director, Center for Energy Workforce Development

I think anyone looking at the CSM Course would immediately see that these skills are the same ones the energy industry is looking for. We were excited to find so many of them included in one course and that results in a credential of value to our industry.

CSM Applications

Secondary schools

CSM is unique in the way that it addresses non-cognitive factors while delivering college credit, employability skills, career guidance, and more. It is easy to implement as a semester class in schools, and can act as a:

- ▶ bridge into high school program in 8th or 9th grade
- ▶ advanced math elective
- ▶ employability/CTE course
- ▶ college prep course
- ▶ alternative education foundational course
- ▶ high school academic intervention program
- ▶ dual/concurrent enrolment pre-requisite or placement course
- ▶ combined postsecondary and workforce development course, or more.

Adult education and workforce development

Adult education and workforce development serve a very diverse population in terms of level of academic skills, stages of life, work history, and goals, and includes disengage/disconnected youth, returning veterans, transitioning workers, older workers with minimal digital skills, and more.

What unites a large fraction of these populations is their lack of confidence in their academic skills, and their tentative career aspirations. CSM provides a “balanced diet” of key academic skills, learning skill development, and confidence boosting, along with the sophisticated career perspectives from Career Strategies.

Applications for CSM in these populations include:

- ▶ On entering a workforce development center, or a program for returning vets or other workers in transition, so that participants gain the most from the other programs and career navigation available
- ▶ For GED or other High School Equivalency program
- ▶ For corporate workforce development, with employees or in the community
- ▶ For TANF, SNAP E&T, WIOA and other federal programs

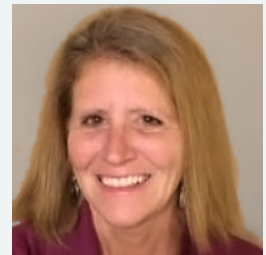
From the director of a YouthBuild (opportunity youth) program

One of our students, Jose A., is 17 years old, has been in and out of juvenile hall, has attended multiple high schools and has only completed a fifth of the credits needed for graduation... His confidence has soared using CSM and to date he has completed more than 50% of the program content. He is now helping other students when they get stuck on a question! How could you ask for a better outcome?

From our point of view as educators and administrators, the CSM program not only delivers excellent outcomes, it gives us the opportunity to have these ongoing small teachable moments with students to help strengthen their basis skills and reasoning abilities. The programs monitoring and feedback capabilities are quite stellar. Our students are improving their skills and feeling not only challenged but empowered in their learning.

Debbie Perkul

Senior Workforce Development Strategist
University Hospitals, Cleveland



I was introduced to CSM while several of our employees were doing their Adult Diploma program at Cuyahoga Community College. I was incredibly skeptical of the learning program but when I saw what our employees were doing and witnessed their success in not only the mastery of the skills of CSM, but then saw their completion of their High School Diploma, after multiple failures of the GED, I was hooked! Seriously, not to be too dramatic, but our employees have changed since doing this program.

Postsecondary

Applications in postsecondary include:

- ▶ **Dual/concurrent enrollment** – CSM can fit in dual and concurrent enrollment programs in many ways – as preparation, placement or a prerequisite, or as a credit class.
- ▶ **Postsecondary credit** – Once a student is accepted at college, using CSM in **academic success classes, freshman academies, bridge programs, or Guided Pathways 101 courses** delivers instruction in those performance competencies that lead to college completion.
- ▶ **Postsecondary non-credit** – CSM can be provided as a math or general skills course, as a general CTE/employability skills course, or as a High Performance distinction on certification programs.

Employer Upskilling

Conventional employee upskilling focuses on required compliance/regulatory training (e.g. safety), “high potential” development, and job-specific training. CSM presents another training modality for general performance-related training that is limited in time, inexpensive, and can be flexibly implemented to accommodate a large range of time and scheduling constraints. CSM has many workforce applications, including:

- ▶ **Upgrading performance in addition to skills** – CSM teaches general transferable competencies that are important across job titles and levels
- ▶ **Creating a broader, more diverse high potential pipeline** – there are many employees who are nearly “high potentials” but miss some important characteristics. CSM builds the most critical skills for promotions and growth, enabling employers to increase their talent pipeline and make it more diverse. Among the more salient applications is in the advancement from frontline to supervisor or from supervisor to first line manager positions.
- ▶ **Improving access and success of tuition assistance and advanced training programs** – CSM teaches learning agility, provides college math credit, and builds confidence.
- ▶ **Boosting engagement** – CSM demonstrates employer investment holistic employee development
- ▶ **Transforming culture** – when used across the workforce, CSM can unite frontline to managers and executives in a shared High Performance mindsets.



Don Fox

CEO, Firehouse Subs (1100 stores)
Don and many of his VP's are CSM Certified

The restaurant industry welcomes people from every corner of our society, with diverse educational foundations. And many of the employees who join the industry are ill-equipped with some of the basic math, reading, and critical thinking skills it takes to achieve the next rung on the ladder.

CSMlearn provides a valuable tool for assessing and strengthening the proficiency of employees at all levels of the organization. As an employer, one can have absolute confidence that a team member who has successfully completed the CSM course will have a solid foundation upon which to build their job-specific knowledge and skills.

If allowed to permeate an organization, it has the potential to affect the team culture, and strengthen the foundation of the enterprise.

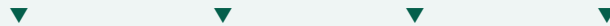
CASE STUDY: Corporate Training at a Health Insurer

Highlights from the participant survey	agree
I found parts of CSM challenging	100%
I found CSM motivating	100%
There are more tasks that I can handle	97%
I feel more prepared for further education	93%
I feel more excited about further education	100%

A major health insurer used CSM as a voluntary training program across its entire workforce, and it was

enthusiastically embraced by its

workforce across the entire spectrum of educational backgrounds. CSM is taken by employees ranging from frontline to managerial positions, including **25% with postgraduate degrees**, 25% with bachelor degrees, 20% with associate degrees, and 30% with high school diplomas. After taking CSM, **4% of students directly signed up through tuition assistance for bachelor's and master's degree programs.**



Roxolana T.

Manager of Compliance Audit, Healthcare Insurance

So what did those hours of [CSM] teach me? That I can overcome fear and anxiety, that I'm not a quitter when the going gets tough, that the skills presented and on which we are challenged involve both soft and concrete skills. I learned about math but I also learned about my own personality. I learned about logic, but I also learned about my own patience (or lack of at times). It's about utilizing our skills and trusting that we can slug our way through a tough spot.



High Performance Communities

High Performance Communities (HPCs) are equitable, community-based, community-wide initiatives that leverage the unprecedented characteristics of the CSM Course, while the CSM Certificate serves as a new market signal of High Performance. At its heart, HPCs provide a unique way for communities to collaborate through aligning interests, without requiring a large overhead framework.

The essence of an HPC is a supply-and-demand model in which **demand** comes from employers who recognize the importance of High Performance by providing hiring preferences for job candidates, and from colleges that recognize that CSM



builds strong college completion skills by providing credit and/or placement advantages. In return, this results in **supply** from education and workforce training providers who want their graduates to get jobs and get into college. There is no coercion here – CSM is naturally aligned with everyone’s interest.

The key to a HPC is that it involves not only students and frontline workers, but **everyone in the community, including community leaders**: elected officials, college administrators, corporate executives, nonprofit directors, religious leaders can take CSM to vet and establish the CSM Certificate as a valued credential and to frame that the effort is for people of all backgrounds: that is, it’s not just about “*them*”, but about “*us*” and what we do together.

HPCs are in early stage development in a variety of communities, with partners including community foundations, chambers of commerce, economic development, colleges, large employers, and more. A typical goal is for approximately 10% of the adult population (roughly 65,000 in a population of a million) to earn CSM Certificates within 3-5 years, by which point the CSM Course and Certificate are established perpetually in the community.

HPCs address some of the most pressing issues in education and workforce, **in scale**, requiring **minimal new funding** to become self-sustaining by its low ongoing costs and its ability to run on existing education and workforce funding streams, needing **no new policy/legislation**, and providing the potential for **rapid results**. The key resources needed for the establishment of a HPC are social capital and the power of convening, which are widely shared by elected officials and community leaders.



The key to HPCs is that the CSM Certificate is both **universally attainable** and **universally useful** – characteristics that allow it to be shared across the community. CSM empowers individuals while bringing a wide diversity of people together in **shared purpose, commitment, effort, and accomplishment**. This is a community that we would all want to live in.

Final thoughts

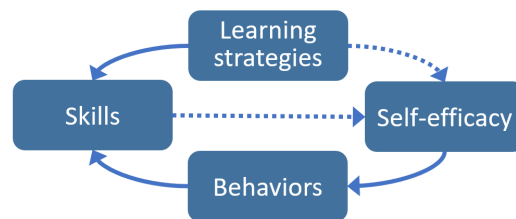
The worlds of education and workforce are active in a variety of different problem areas: high school completion, postsecondary access and success, lifelong learning, workforce and economic development, the future of work, poverty reduction, worker up-skilling, community uplift, and more. CSMlearn believes that a prerequisite to progress in all of these is the ability to develop foundational skills, to teach people how to learn, to boost their persistence, and to build their self-efficacy.

CSM is an inexpensive, scalable, small footprint, turnkey tool that works across a variety of education and workforce settings, and that is as much about personal transformation as it is about merely teaching academic or job-specific skills. Because of the universal applicability of CSM, it has the potential for novel community-wide implementation, simultaneously across schools, colleges, adult education, workforce development, and employers.



CSM introduces deep innovations in standards, curriculum, instruction, certification, and implementation, and we're still learning of new applications and ways that it can help individuals and organizations. For additional information, complimentary registrations, to set up a phone call or presentation, or to work with an implementation specialist, please contact us at info@csmlearn.com.

Appendix A – CSM’s next-generation adaptive learning



- ▶ CSM teaches quantitative reasoning, applied literacy, and problem solving that are truly useful in education and work, personalized with the Goldilocks Principle: students are directed to skills that are neither too difficult or simple, but “just right”, where they work hard, but can be successful.
- ▶ CSM teaches **learning strategies** and meta-cognition: deciding what lessons to read, when to read them, and how deeply to read them; accuracy in self-assessing of when you know the skill; planning and goal-setting; an exploration mindset; and more. For example, CSM provides multiple lessons (procedural, conceptual, multiple solutions, worked examples, etc.) for every skill, and monitors how students try to learn and their personal success in learning, and then responds appropriately.
- ▶ A student without good **learning behaviors** won’t consistently employ their learning strategies – such behaviors include attention to detail, conscientiousness, persistence, self-reliance, and more. One way that CSM addresses these is that when students are frustrated, they often hit the Submit key rapidly or enter junk answers, or alternatively escape to Facebook or other websites – CSM monitors these behaviors and guides students to more successful interactions.
- ▶ Student behaviors are related to personal high expectations, growth mindset, intrinsic motivation, and most importantly, **self-efficacy**: the belief that you can succeed. Without self-efficacy, when a student hits a roadblock, their suspicions of likely failure are affirmed, resulting in poor persistence and resilience. CSM addresses these issues with many methods taken from educational psychology and behavioral economics.
- ▶ There are many feedback mechanisms within the process. For example, when students are successful at acquiring skills, their self-efficacy and intrinsic motivation improve. Additionally, if a student has good learning strategies, they feel more in control and their self-efficacy improves.



Current state-of-the-art adaptive learning systems (Pearson, ALEKS, Cognitive Tutor, Knewton, etc.) personalize only the student’s path through the skills. CSM is the first adaptive learning system to personalizes all aspects of learning – skills, learning,

behaviors, affect – in order to develop the virtuous cycle of personal effectiveness and High Performance that results.

Importantly, the purpose of education and training isn't simply to acquire skills, but to become a **better learner** (e.g. with solid learning strategies and meta-cognition) and a **better student** (with good behaviors and positive self-identity). That is, CSM attends to all aspects of learning, building high performing people who will be successful at school, college, work and life.

Brief description of aspects of CSM's next-generation approach

▶ CSM analyzes student answers to determine the thinking error

Even when the answer is fill-in-the-blank, CSM analyzes the student input in order to determine the student's specific thinking error, significantly speeding the learning process.

▶ CSM makes high-level interpretations about the student every 10 minutes

Every 10 minutes, CSM analyzes the last 2 hours of student work and creates a series of high-level interpretations of student strengths and concerns, which CSM conveys directly to the student through the computer interface, as well as communicating to CSM coaches.

▶ CSM gives frequent and meaningful positive feedback

In most learning systems, positive feedback to the student is rare and rote. In contrast, CSM constantly provides meaningful positive feedback. E.g., even if a student is stuck on learning a skill, CSM can compliment them on how they've tried to learn – on the lessons that they read, on their persistence, on their high degree of focus, on how they handle frustration, and more.

▶ CSM asks meta-cognitive questions to produce people who think about their learning

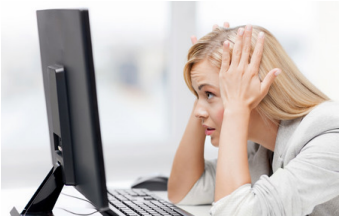
CSM teaches meta-cognition – i.e., thinking about learning. At key times, CSM asks students to reflect whether they know the skill that they're working on (e.g. "Do you now know how to do this skill?" "Do you understand what you did wrong?", etc.). CSM checks to see how accurate they are in answering these questions, and provides intervention for poor meta-cognition.

▶ CSM monitors and responds to issues in learning strategies and performance competencies

Most adaptive learning programs focus on cognition, while CSM recognizes that the key issues for most students are motivation, attitudes, behaviors and feelings. To provide personalized interventions, CSM continuously monitors student

behavior – putting “junk” into the system, rapidly hitting the submit key, looking at other windows (e.g. email or Facebook), giving up quickly, etc. CSM interprets student data every 10 minutes, and intervenes directly or through the coach.

► **CSM deals with frustration as a prerequisite to persistence**



In most classes, teachers intervene quickly when they see frustrated students. In CSM, however, persistence is a key goal, and there is no such thing as persistence without frustration, and teachers shouldn't short-circuit it. CSM monitors student frustration, but only intervenes (directly or through the coach) when frustration appears ready to “boil over”.

► **CSM requires an extremely high level of mastery/competency**

In education, “competency” usually means 60-70% on a multiple choice test. In CSM, most problems are fill-in-the-blank, and students need to get 100% right on a page before they proceed to the next skill, teaching students three things: what A-level work is; that they're personally capable of A-level work; and finally, the joy of mastery, allowing them to develop intrinsic motivation.

► **CSM ensures durable mastery**

Most learning systems place a checkmark for a skill as soon as the student shows initial competency. In CSM, a student earns a yellow belt (karate metaphor) when they first gain 100% mastery. They must then show mastery over weeks to then earn their red and later their black belt.



► **CSM deals with learned helplessness**

Many students experience “learned helplessness” -- when they get stuck, they just put their pencil down. They assume the issue is with themselves, thinking: *“I can't do this, and everyone else probably can – I'm really dumb. If I try, I still won't be able to do it and then I'll feel worse, so I won't even try.”* One of CSM's many interventions for this is that after a student learns a skill, CSM indicates it's difficulty – e.g. *“Only 20% of all adults and 40% of college graduates could do that problem”*. Now the student thinks: *“I can't do the problem not because I'm stupid, but because it's hard. If I spend 5 minutes on it, I can usually do it, and then I'll be doing things most people can't do.”* CSM protects students from learned helplessness, and gives them space to try hard things.

About CSMlearn



CSMlearn is a Public Benefit Corporation based in Boulder, Colorado, operating across the country in schools, colleges, adult education, workforce development and in the workplace. We have been selected as 2018 Best for the World, as one of the top 10% of B-Corps for customer social impact.



Our mission is to empower people to reach their full potential:
in their education,
in their careers,
and in their lives,
being particularly mindful of those who are underserved

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