

## ***Moodle, MOOCs and Mobile Applications: It's Your Turn to Discover the Power of Learning Online***

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Have you heard of [Coursera](#) or the [Khan Academy](#)? How about gamification or edutainment? If not, you soon will. With the push for behavioral health and primary care integration and the continuous development of new treatment protocols, the pressure on substance use disorder (SUD) treatment and recovery professionals to stay current on the knowledge and skills needed for career success is strong. Yet, due to diminishing training budgets, opportunities to take part in needed continuing education are limited. At the same time, advances in educational technology and pedagogy are exploding the field of online learning. Now more than ever, it is easier to find, access and take high-quality, relevant courses on a computer or mobile device. This convergence of training demand and the growth of online learning may be a “tipping point” for SUD treatment and recovery professionals, encouraging those once hesitant to enroll in an online course to finally give it a try. In this article, we will define and describe online learning, discuss its effectiveness, and explain the factors driving its popularity. We will also outline future trends in online education. Finally, we will highlight online learning resources available through the Addiction Technology Transfer Center (ATTC) Network.

### **What is online learning?**

The [Sloan Consortium](#) (Sloan-C), one of the premier global organizations contributing to the advancement of online education, distinguishes online learning from other types of learning. According to Sloan-C, **online learning** involves courses in which at least 80 percent of the content is delivered online. All other learning is classified as either **face-to-face instruction** (zero to 29 percent of content delivered online) or **blended learning** (30 to 80 percent of content delivered online). Online learning can further be described by the format in which it is offered. **Instructor-led online learning** describes an environment in which an instructor guides learners through the required content in a pre-determined sequence, engaging the learners in the same learning activities at specified times (Moore, Dickson-Deane & Galyen, 2011). There are two types of instructor-led online learning: (1) **synchronous** and (2) **asynchronous**. In synchronous courses, learners and instructors participate in at least some learning activities at the same time. Examples include teleconferencing, live webcasts, and Internet chats. In asynchronous courses, the simultaneous participation of all learners and instructors is not required. While asynchronous courses may still be time-limited, learners generally interact with course content, instructors, and each other according to their own schedules through technology such as e-mail and discussion boards ([California Distance Learning Project](#), Retrieved January 2013). **Self-paced online learning**, on the other hand, describes environments where learners study at their own pace, whenever and wherever it is most convenient for them (Moore, Dickson-Deane & Galyen, 2011). While the environment has been designed by someone else, learners in self-paced courses maintain significant control over their own learning experiences and do not generally interact with an instructor or other learners. For this reason, all self-paced online learning is described as asynchronous.

### **Is online learning as effective as “traditional” classroom learning?**

If you have participated in traditional classroom learning from kindergarten to graduate school, it may be difficult to imagine how learning online can be as effective. Nevertheless, research has repeatedly shown that online learning is at least as effective, if not more, than classroom learning. In a meta-analysis of 50 research studies, including 43 of which were drawn from older (beyond school age) learners, the [US Department of Education](#) found that “students in online conditions performed modestly better, on average, than those learning the same material through traditional face-to-face instruction.” Moreover, this meta-analysis showed that the effectiveness of online learning applied broadly across different types of learners and in a wide range of academic and professional studies. Similarly, in an October 2012 study, the [Colorado Department of Education](#) found that there is “no significant difference” between the outcomes for students who took biology, chemistry or physics courses online versus those taking the same coursework in person. Of course, just as the quality of traditional face-to-face classes can vary wildly, the quality of online learning experiences also varies. Therefore, while “good” online courses appear to be just as effective as “good” traditional courses, learners should be aware that low quality, ineffective online education exists. Just as a person might inquire about an instructor’s experience and expertise before attending a face-to-face training, he or she should also consider the source and developers of the online learning experience in which he or she is interested enrolling.

### **Why has online learning become so popular?**

According to Sloan-C, [over six million higher education students](#) were enrolled in at least one online class in 2010 and that number has steadily grown each year since the organization began tracking such statistics in 2002. The ATTC Network has also seen a steady increase in online course enrollments. In the first six months of 2012, there were 1,192 new course registrations in the ATTC Network’s online learning portal, [ATTCeLearn.org](#). That number increased significantly during the second six months of last year. From July through December, 2012, there were 2,172 new course registrations, an increase of nearly 1,000 more new learners from the previous time period.

So, why has online learning become so popular? The [US Department of Education](#) argues that the popularity of online learning is due to “its potential for providing more flexible access to content and instruction at any time, from any place.” While true, this does not explain the forces propelling online learning into the spotlight in the past year. The recent upsurge in the status of online learning has been driven by a number of converging influencers, including the current economic environment, technological and pedagogical innovations, and the growth of open educational resources.

#### *Economic Influences*

It is no secret that the country is facing significant economic challenges. Strategies that corporations and governments alike are using to address budget shortages include restricting employee travel and limiting funding for training. For example, in May 2012, the [Office of Management and Budget](#) ordered federal agencies to reduce travel and meeting expenses by 30 percent in fiscal year 2013. And while Bersin & Associates reported in their [2012 Corporate Learning Factbook](#) that corporate training budgets

had increased, this increase followed three years of steady decreases and was likely a result, according to [Principal and Founder Josh Bersin](#), that corporations had already “cut training to the bone.” In a world where paying for trainers is not feasible and workers are not allowed to travel, online learning is the solution to providing needed education and development. In fact, in September 2012, the [Inter-Organizational Task Force on Online Learning](#) included the potential economic impact of online learning in one of its key recommendations to policy makers about the future of the workforce. In order to build a workforce that “can serve as the foundation for long-term, broadly based economic prosperity,” the Task Force asserted that policy makers must understand and embrace the opportunity to provide greater access to a wide range of content through online learning.

### *Technological Innovations*

Online learning is becoming increasingly more sophisticated. While some courses continue to include basic narrated slide sets or written text followed by multiple choice quizzes, [others integrate dynamic learning interactions](#), customized content, video game quality graphics, and the kind of social networking you might be more likely to expect from social media platforms like Facebook. Furthermore, the proliferation of mobile devices is transforming online learning. [According to the Pew Internet and American Life Project](#), 88% of American adults have a cell phone, 57% have a laptop, 19% own an e-book reader, and 19% have a tablet computer. About six in ten adults (63%) go online wirelessly with one of those devices. [Learning applications \(“apps”\) viewed on mobile devices](#) take the idea of learning at anytime from anywhere to a new level. Training content is literally at learners’ fingertips when they really need it. Furthermore, new technology, such as the programming language [HTML 5](#), allows animated or video-based content to be accessed through any device, no matter the brand or operating system.

### *Pedagogical Innovations*

The theories and methods behind how best to deliver content online are continually evolving. The latest trend in this arena is [gamification](#), or the application of game design to just about anything that would not usually be considered a game. Gamification is making online learning more popular because it incentivizes the achievement of learning objectives by tapping into our inherent competitiveness and interest in having fun. Gamified online learning comes in many shapes and sizes, from [simple word puzzles](#) to complex, scenario-based games used by the [US military to teach senior leadership](#).

### *Open Educational Resources*

Finally, the growth of open educational resources (OERs) is also influencing the rise in popularity of online learning. OERs are free learning materials available to anyone over the web. Many internet users are familiar with Wikipedia, the free, web-based encyclopedia authored by the public. Wikipedia is one example of an OER. As the [OER movement](#) has grown, however, traditional “bricks and mortar” [educational institutions](#) have latched onto the idea. Enter the [world of MOOCs](#) (Massively Open Online Courses). According to [EDUCAUSE](#), a MOOC is a “model for delivering learning content online to virtually anyone-with no limit on attendance-who wants to take the course.” For further explanation, Dave Cormier, one of the original and leading thinkers of the MOOC idea has put together an excellent [informational video](#). Perhaps the most popular MOOC site today is [Coursera](#), which houses courses from

colleges and universities such as Duke, Johns Hopkins and Stanford on topics ranging from [nutrition](#) to [songwriting](#) to [quantum physics](#). Courses related to SUDs on Coursera include “[Generation Rx: The Science Behind Prescription Drug Abuse](#)” from The Ohio State University and “[Drugs and the Brain](#)” from the California Institute of Technology.

### **What are the future trends in online learning?**

Where does it all go from here? Technological advances, such as [augmented reality](#), will continue to ensure that what we know as online learning today will look clunky and hackneyed in just a few short years. New models of education, supported by the ability of individuals to learn online, will also continue to take shape. For example, competency-based degree programs shift the focus from the number of credit hours required to earn a degree to the competencies a student must master in order to graduate. Such programs accelerate learning by allowing students to test their skills and prove their competency so that they do not have to spend time (and money) on courses covering content with which they are already familiar. [Southern New Hampshire University](#) is one of the institutions at the forefront of competency-based learning. Their [Pathways Project](#), which just entered the pilot stage, will allow students to earn an Associate’s degree for less than \$3,000 per year by capitalizing on OERs and peer-to-peer support through social media.

The ATTC Network will also continue to cultivate online learning opportunities for the substance use disorders and recovery services field. Currently, [ATTCeLearn.org](#), which utilizes the open-source online learning platform Moodle, houses nine self-pace courses. All ATTC courses are available for free for a certificate of completion and for just \$5 an hour for continuing education credit. Courses include: *Essential Substance Abuse Skills: Foundations for Working with Addictions*; *Substance Use in Older Adults: Screening and Treatment Interventions*; *Medication-Assisted Treatment with Special Populations* (two courses – one for counselors and one for medical professionals); *Foundations of SBIRT*; *Introduction to Women and SUDs*; *Motivational Incentives: Positive Reinforcers to Enhance Successful Treatment Outcomes*; *SUDs in Minority Men who have Sex with Men*; and *Clinical Supervision Foundations*. Two new courses will be added to this library in the near future – *Primary Care for Substance Abuse Professionals* and *Addiction Recovery and Intimate Violence* – with several more in early development. Furthermore, the ATTC Network has a number of on-demand webinars available for viewing. These webinars, recorded as part of the Network’s [Third Thursday iTraining series](#), cover topics such as health information technology, behavioral health and primary care integration, and adolescent care.

Online learning brings content to learners across the globe in both instructor-led and self-paced formats. While limited training budgets and travel restrictions have presented barriers to continuing education, technological and pedagogical innovations as well as open educational resources have increased the popularity of online learning. A wealth of high-quality, engaging, affordable courses are available to anyone interested in lifelong learning, including professionals in the substance use disorder and recovery services field. The ATTC Network is committed to leveraging the power of online learning to promote the adoption and implementation of evidence-based and promising addiction treatment

practices in order to enhance treatment outcomes and transform lives. Now it's your turn to discover what learning online can do for you.