

Bite-Sized Learning for Physicians

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Abstract

Bite-sized learning (BSL) is quick and efficient, because the lessons can be completed within the daily flow of work in 5 minutes. It's perfect for busy physicians – all they have to do is take out their smart phone or other device, read the lesson, and return to what they were doing.

LaRae Quay grew up on a remote cattle ranch in Wyoming and was an undercover and counter-espionage FBI agent for twenty-four years. She learned to thrive in rough and intense environments where real-life choices had to be made in the moment. With no time for theoretical debates when confronted with hard decisions that required courage and confidence, LaRae developed a mindset that enabled her to move forward in difficult and challenging situations. She created the Secrets of a Strong Mind (SSM) online training course to help others deal with adversity, including physicians.

Context

BSL is the acquisition of knowledge or skills utilizing brief, focused learning units. This approach is endorsed by health profession educators because of the given demands on learner time and cognitive load.¹ The goal of this paper is to assess the impact of this approach on knowledge retention in medical education learners.

The need to acquire a large amount of knowledge is a key stressor for learners in medical training.² Learners must contend with multiple competing demands on their time; they also require a vast mental bandwidth. BSL has particular relevance to the medical profession, because much of the learning requires the simultaneous integration of multiple and varied sets of knowledge, skill, and behaviors.³

Methods

BSL comprises self-contained nuggets of information, or modules, that typically last between 5-7 minutes each instead of delivering content that spans 45-60 minutes in a traditional lecture. BSL is not just about shorter modules; it's also about providing a single learning objective (for example, the benefits of resilience). This is in contrast to traditional training, where multiple objectives are crammed into a single learning module.

Using BSL, complex content is broken down and distilled into manageable units. Rather than reviewing all content relevant to the topic, BSL is focused on one main learning objective per session. The goal of BSL is not to condense one hour of material into 5 minutes, but rather to provide content using educational technologies and online modules that is most essential to the learner.⁴

Although the 60-minute lecture remains popular because it is efficient and inexpensive, studies have demonstrated that smaller slices of content help learners retain information and perform better.⁵

Cognitive Load Theory (CLT) is one of many theories that suggest working memory can only process a limited amount of information at any given time. This creates a bottleneck for learning. The potential advantages of BSL in educating health professionals includes its ability to contend with large cognitive loads.⁶

Validation of Bite-Sized Learning Approach

While shorter attention spans have focused on Millennials and Gen Z, researchers in Canada found that the average human attention span for all ages has shrunk over the years.⁷ This is, in part, due to instant gratification and easy access to information, both the result of the Internet.

Microsoft published the Canadian study, which found that the average attention span is 8 seconds, down from 12 seconds in 2000. However, other experts argue that the problem is not our brain's inability to focus; it is our unwillingness to do so because the Internet is constant, immediate, and limitless.⁸

Gen Z are digital natives who have been brought up with a persistent thought in the back of their mind: isn't there something better to do than what I'm doing?

This squares with other research, which suggests that Gen Z feels as though time is scarce, so information must be both germane and succinct.⁹ The same study showed that Gen Z wants to learn on their own terms and prefers bite-sized learning.

This is important for medical schools and hospitals to understand, as the next generation of physicians will be Gen Z. To address the shift in learning paradigms for both Gen Z and other generations, BSL is being deployed by several prestigious medical schools around the world.¹⁰

The American Neurological Association (ANA) is offering members a BSL program that has been accredited by the AMA for 1 CME credit.¹¹ The ANA's program is presented by Dr. Deanna Taylor, Assistant Professor Neurology at Johns Hopkins University School of Medicine.¹²

Emory University School of Medicine is using residents as teachers who offer BSL to students. Surveys indicate that learners appreciate the brevity and creativity of BSL lectures and their shorter format.¹³

Duke University, Center for Healthcare Safety and Quality offers a variety of BSL classes and resources to physicians and other healthcare workers.¹⁴ The topics include resilience training and tools, meditation techniques, happiness strategies, coping tips, and well-being resources.

Winchester Medical Center, Critical Care Unit implemented BSL as a cutting-edge solution to both staff support and patient care.¹⁵ The program has been very successful, and uses post-completion analytics to identify knowledge gaps and optimize content.

Ohio Academy of Family Physicians (OAFP), a member of the American Academy of Family Physicians, is utilizing BSL in a variety of specialties.¹⁶ Their focus is family medicine and educating their patients by using BSL in a variety of formats to engage both physicians and patients of all ages.

Concept

As a former counter-intelligence agent, LaRae Quay's job was recruiting foreign spies to work for the U.S. Government. To learn the craft of her profession, LaRae delved into neuroscience, social psychology, and behavioral science to

understand the mindset of the foreign spies that she was tasked to recruit. She quickly learned that the way people think influences emotions, behavior, and outcome.

She created both the Mental Toughness Assessment and the Secrets of a Strong Mind (SSM) online training program, which uses science to create practical applications and lessons for physicians to enable them to cope with adversity and roadblocks.

SSM offers concrete and concise real-life applications and is illustrated by entertaining stories from LaRae's cattle ranch and FBI background. SSM is a credentialed, on-demand program (17 CPE units) that uses an in-depth and research-based approach to mental toughness rather than a general overview.

Each module is presented in small, digestible, and relatable nuggets that will show physicians how to change the way they look at obstacles. Change the mindset. Change the behavior. Change the outcome.

SSM online training modules are evidence-based and supported by research in neuroscience and social psychology. Scientific citations are included in the eleven-page reference section.

The Mental Toughness Assessment (MTA) is a vital tool to help physicians recognize areas in which they excel and those in which they need additional work. It has been validated by Vanesa Perez, M.A., Department of Clinical Psychology, Arizona State University. Over 50,000 professionals have taken the MTA and used the results to better understand their own reactions to adversity.

Physicians who enroll in the SSM training program can compare their MTA results both before and after the online training course. This provides physicians with a quantifiable measure of their progress.

The SSM team will work with you to select the types, qualifications, and locations of organizations to be included in a published study of 1,000 physicians with diverse specialties, backgrounds, and regions.

Conclusion

According to the findings in publications, research, and studies, BSL is an emerging trend that is poised to develop into a critical mainstream form of learning that complements traditional methods of education and training. BSL can help physicians gain new knowledge in a fast-changing world. Since physicians are constantly busy and have only limited time to learn new information, smaller nuggets are easier to digest and put into practice.

The SSM online training modules are at the forefront of how to make e-learning more effective for physicians with limited time due to the pressures of their job. It is a program that can be quantified by pre and post-mental toughness assessment scores. While it uses substantiated research to help reduce stress and anxiety in the work environment, LaRae Quy uses her own real-life examples of how resilience can be developed when faced with life-threatening situations.

Notes

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14. Duke University, Center for Healthcare Safety and Quality, "Bite Size Learning."

15. Winchester Medical Center, Critical Care Unit, "Bite Size Learning For Critical Care Staff."

16. Ohio Academy of Family Physicians, "Focus on Family medicine and Educating Their Patients by Using BSL in a Variety of Formats to Engage Both Physicians and Patients of All Ages."