The Inequalities of Bandwidth

How Trainer, Culture & Technology Bottlenecks Impact Learning
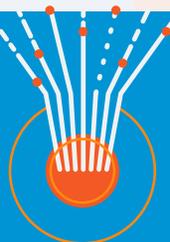
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When we think of bandwidth as it relates to training, we most often think about infrastructure: the internet access and capacity we need to deliver training to our audience. The biggest question or concern surrounding bandwidth usually comes down to whether the infrastructure supports the content we need to deliver, or will it cause sputtering, buffering or other annoyances and interruptions that impact the learner's experience.

Bandwidth is about more than just the capacity of things; it's also about the capacity of people—their time, resources and capabilities. Inequalities in this kind of bandwidth impact training on both sides of the equation. Trainers need sufficient bandwidth in the form of resources and knowledge to evolve their curriculum, training style and delivery methods to meet the ever-changing needs. And learners need adequate bandwidth to participate in training, absorb the material, actually learn from it and put what they've learned into action.

Unfortunately, not everyone—trainers nor trainees—has the same amount of bandwidth, often due to circumstances beyond their control. In *The Inequalities of Bandwidth: How Trainer, Culture & Technology Bottlenecks Impact Learning*, we'll investigate bandwidth beyond the literal translation to examine the broader training infrastructure. Specifically, we'll uncover how the trainer's level of training, utilization of learner analytics, and cultural differences can impact employee learning, development and workplace training programs. And, we'll suggest some strategies and tactics companies can use to help overcome the barriers created by inequalities in bandwidth to deliver timely, effective and meaningful training at its fullest capacity.

The Supply and Demand of Trainer Bandwidth

The U.S. eLearning market is projected to grow by $12.81 billion between 2020 and 2024[1], with the market for corporate eLearning forecasted to increase $38.09 billion in that time. While just 77% of U.S. corporations used online learning in 2017, 98% had implemented plans to incorporate eLearning programs by 2020. The market boom reflected their enthusiasm: corporate eLearning development surged 900% from 2001 to 2017.

By the time COVID-19 hit, most companies were offering—or at least considering—flexible training options which included on-demand learning, multiple platform accessibility, streaming video, and blended learning (a combination of face-to-face and online learning) options. As a result of this shift, corporations now say eLearning is the second most valuable training method, with IBM reportedly saving $200 million by making the switch to eLearning.

Of course, COVID is making eLearning an absolute must and driving massive growth. The mobile eLearning market alone is expected to reach $37.6 billion by the end of 2020. And, while face-to-face training may look very different now (in the Zoom together instead of in the room together), companies are left with essentially no other choice.

While this new way of learning may be cheaper—saving on travel, space and lost productivity costs—it also exposes significant bandwidth disparities that companies must address to avoid being left behind in the march toward remote learning.

[1] https://techjury.net/blog/elearning-statistics/#gref

Bandwidth Bottlenecks

Training the Trainer

New demands and expectations call for new knowledge. We expect trainers to evolve and develop their skills and expertise to keep pace with the latest innovations and opportunities, and we expect our training programs to reflect this state-of-the-art capacity. But that means trainers must actually have the bandwidth available for their *own* continuing education.

To eliminate this bottleneck, companies must ensure their training departments have the time and resources to learn about new techniques and technologies, and to incorporate these into their curriculum. There is tremendous value in having trainers who are able to master various teaching styles and utilize eLearning technology such as on-demand streaming, learning management systems, and blended methodologies: it gives your learners the greatest opportunity for success. Your *trainers' continuing education* must be a priority and part of the corporate culture. At the same time, trainers themselves also have to be willing to grow, learn, be creative and embrace innovation. Setting this expectation and cultivating a continuous learning environment among employees is crucial.
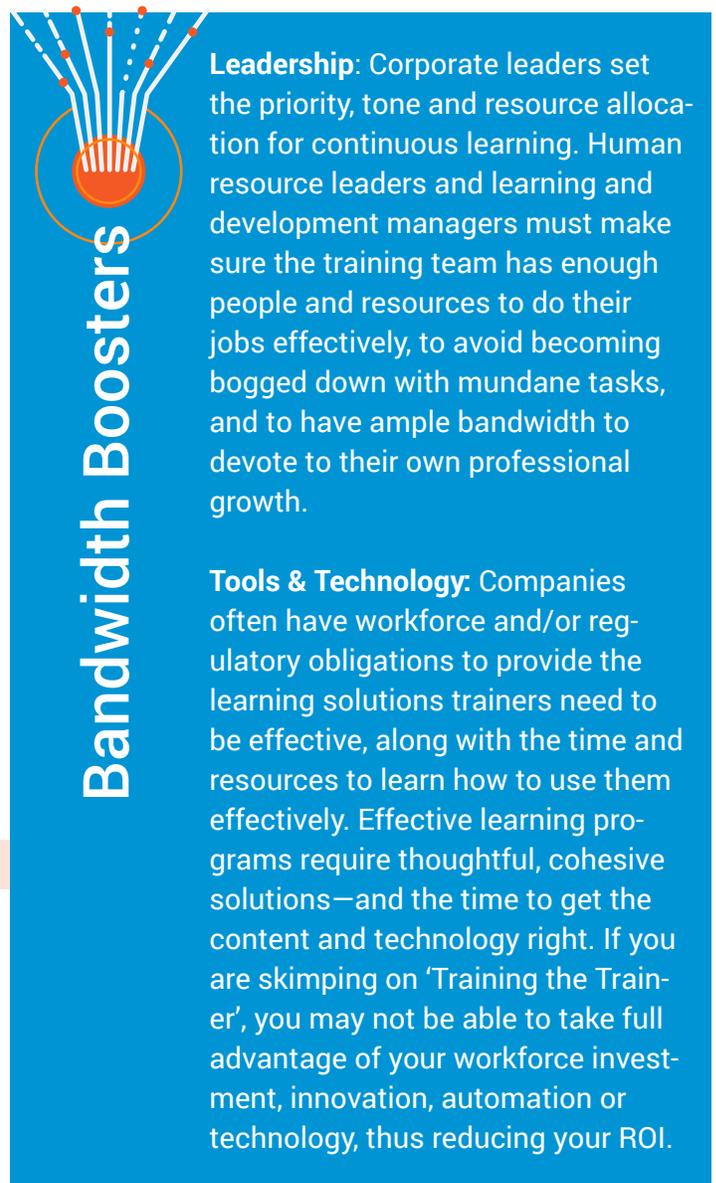
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Leadership: Corporate leaders set the priority, tone and resource allocation for continuous learning. Human resource leaders and learning and development managers must make sure the training team has enough people and resources to do their jobs effectively, to avoid becoming bogged down with mundane tasks, and to have ample bandwidth to devote to their own professional growth.

Tools & Technology: Companies often have workforce and/or regulatory obligations to provide the learning solutions trainers need to be effective, along with the time and resources to learn how to use them effectively. Effective learning programs require thoughtful, cohesive solutions—and the time to get the content and technology right. If you are skimping on 'Training the Trainer', you may not be able to take full advantage of your workforce investment, innovation, automation or technology, thus reducing your ROI.

Leveraging analytics

2

For maximum effectiveness, trainers need to implement actionable evaluation techniques. This will help gauge learners' understanding and proficiency with the material. Evaluation methods typically include:

- Mid-or-post training quizzes, test scores and certification,
- Influence on KPIs and/or desired employee behavior as a result,
- Overall business performance

Evaluating the course itself—the appropriateness of the content, pace and style, for example—is also important, as it can help trainers to optimize the learners' experience. The following can be useful in measuring course performance:

- Completion rates, time spent on specific topics or certain modules,
- Attempts needed to pass or achieve certification,
- Employee surveys about their experience

Using this insight, trainers can then optimize course content and delivery to maximize the learners' absorption of the material and overall | learning experience. This allows continuous improvement in the individual training modules or courses, as well as the entire training program overall.

Companies must make it a priority to analyze training metrics not only in terms of who's completed what module but also how well they've understood and absorbed the material, as this can have significant impact on overall business performance. The ability to read and understand these analytics is a critical skill that every trainer must have. Beyond just looking at the results, *trainers must have the skill it takes to interpret the data and understand how to adjust content and delivery for better outcomes*.

Bandwidth deficiencies in this area can leave companies spinning their wheels, delivering training without realizing the desired results, not to mention potentially wasting their money.
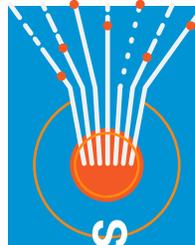
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Technology: To leverage analytics, you first have to have them. Invest in solutions that provide the rich data and insights needed to evaluate training effectiveness. Look for systems that include learner engagement metrics like time spent on courses, time required to complete the course, attempts to pass, etc. as well as granular data at the module, slide or segment level. This can help you spot specific issues that may be impacting overall course effectiveness.

Training: Having lots of data isn't helpful unless you know how to use it. Ensure trainers and training administrators have the knowledge to interpret the data and the authority to take action when problems surface.

Dynamic Approach: Training cannot be static; it requires constant adjustment to optimize learner outcomes and keep pace with evolving needs Strive for continuous improvement with a dynamic approach. Implement changes to move the needle.

Delivering training programs without measuring their impact is like shouting into the dark: there may be people out there who can hear you, but you don't know for sure.

Keeping Content Current

3

Keeping training content current is a huge challenge, especially as changing regulations and current events cause continuous shifts in workers' needs and companies' obligations. COVID-19 has exacerbated that problem, particularly with regard to safety training, policies and procedures around remote and essential work, and even appropriate work-from-home behavior.

With guidelines and recommendations that change seemingly on a monthly basis, it can be nearly impossible for your training team to keep up with the fast-changing requirements and update training content as quickly as needed. This lack of bandwidth to keep content current can leave your employees short-changed and your organization vulnerable to risk, including financial penalties for noncompliance.

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Stay in the Know: Make it a daily habit to consult regulatory authorities that govern your industry and broader guidelines such as those from the CDC, OSHA, etc. and update training content as appropriate. These organizations post updates to their websites regularly, and most have the option to subscribe to email alerts for new information, so you can stay on top of the latest details.

Choose a Partner: Consider partnering with a content provider whose primary mission is to keep up with changing needs, mandates and to update your training content. Leveraging the resources and scale of an outside firm can act as an extension of your team to rapidly deploy updates while taking the pressure off of your internal staff. This allows them to concentrate more efforts on delivery, deployment and overall effectiveness of training, rather than the minutiae of details in the content.

Cultural experience

With a diverse workforce, not everyone comes to training with the same background and perspective. Not only do individual learners have varying levels of education, different learning styles and various cultural and socioeconomic situations, but even their age and gender can shape their perspective on training content.

Each individual comes to training limited by their own cultural bandwidth—they know their own circumstances and experience well, but not so much beyond that. As a result, the training message could be easily lost on different groups due to different starting points.

Training materials may also be limited to the cultural experience of the curriculum developer, very often unintentionally. Known as implicit bias, the tendency to base your actions, recommendations and opinions on your own experience, while inadvertently excluding other experiences, can make training materials unrelatable to learners, making it difficult for them to absorb and act on the information.

For example, men may have a harder time creating, relating to or taking sexual harassment training seriously because they may not understand the perceived implications of their words or actions. Individuals of different ethnic backgrounds may not understand certain words, phrases, or situational examples used in training content, especially if localized slang or clichés are used.

Generational age and experience gaps can also be problematic: there could be significant differences in the language, perspective and points of view between Baby Boomers and Millennials or Gen Z learners, and training that is created by or aimed at only one of those groups may alienate the others. Even people with different styles can be the victims of a cultural bandwidth bottleneck: if someone is a visual or hands-on learner, they won't be engaged by a lecture, and that style of training may therefore prove ineffective.

4

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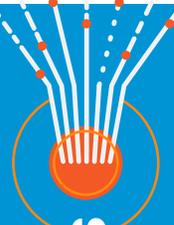
Acknowledge: Recognize that everyone's cultural bandwidth is limited to their own experience. This goes for both trainers and trainees. Simply acknowledging the issue can raise awareness and help you chart a course/content correction.

Design: Develop new training with an eye toward avoiding implicit bias. Use language, situational examples, role playing exercises and other material that has cross-cultural relevancy or provide adaptive content for targeted audiences.

Review: Form a diverse panel to review training materials and examine your existing curriculum for potential cultural bandwidth bottlenecks to weed out cultural bias or signs of limited cultural bandwidth.

Diversify: Offer a mix of learning modes, content and approaches to address different learning styles and cultural differences to ensure everyone has access to relevant content for their needs

Not everyone comes to training with the same background and perspective.

Learner's capacity

5

Employees are under a lot of added pressure during the pandemic. For many, working from home has taken them out of their comfort zone. Many are also juggling remote learning and homeschooling their children, all of which limit the learner's bandwidth before the first light flickers on their work screen.

With many workers struggling to remain productive in their work with these added challenges and distractions piled on, they may not have the time or the mental energy to spend hours in training while also meeting their work goals. Family/home situations may make participating over live video conferencing uncomfortable—working at the kitchen table with kids playing or running around can be distracting and topically awkward during some training sessions.

Companies and their training staff may need to rethink expectations and give employees some grace in order to avoid piling more stress and demands on top of their already overflowing plate.

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Acknowledge the issue: Recognizing that everyone's capacity for training may be limited can go a long way toward easing employees' stress levels. It sends a message that your company cares about their overall wellbeing. Being sensitive to the challenges and variables that each individual may be facing eases the pressure and makes for a less demanding and intense attitude toward training.

Be flexible: Make training available on a flexible, real-time, on-demand basis so trainees can participate when it makes sense for their situation. By offering on-demand modules, individuals can participate during lunch breaks or after hours — wherever they can devote dedicated time and attention.

Manage work expectations: It's unrealistic—and sometimes illegal—to expect employees to work an 8-hour shift and then do 2 hours of unpaid training after hours. Allow employees to build training time into their work hours without falling behind in their work.

Technology troubles

6

Of course, no discussion about bandwidth would be complete without addressing conventional tech-based bottlenecks that frequently create huge obstacles to training. Now that work-from-home and train-from-anywhere is the norm and expectation, this frequently introduces serious hurdles.

Varying access to—and the quality of—the internet is a major factor. According to the FCC, 19 million Americans lack access to broadband internet service at threshold speeds. The problem is even worse in rural areas where 14.5 million people don't have quality service[2].

Hardware and software variables compound the issue. With over one-fourth of Windows PCs still running Windows 7[3], many machines that trainees rely on are woefully outdated and can't support modern training software. Employees working from home may not have access to company-issued devices and software, which means there could be millions of technology variables that introduce roadblocks for access to and quality of training.

All of this creates tremendous complexity when it comes to deploying and delivering training, and trainers must be able to accommodate for and adapt to this dynamic, unpredictable environment.

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Build smart: Create training programs that can be accessible by the lowest common denominator—devices with limited performance capabilities and slow internet speed/capacity. Be mindful of heavy bandwidth content like HD video streaming, live video conference, etc. and make sure your trainees have the tools they need to participate. If not, offer alternatives.

Use tech-agnostic solutions: Rather than relying on training solutions that can only be accessed by certain devices, use cloud-based LMS solutions that work across any device or platform. Cloud-based systems offer the most flexibility and avoid software or platform dependency.

Provide technology: Where possible, provide your employees with the devices they need to participate in training. For example, company-issued laptops, tablets and mobile hotspot identifiers can overcome technology bandwidth bottlenecks to accommodate your delivery methods and the mobility of the learner.

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[2]https://www.fcc.gov/reports-research/reports/broadband-progress-reports/eighth-broadband-progress-report
[3]https://www.computerworld.com/article/3199373/windows-by-the-numbers-no-dog-days-for-windows-10.html

9

Bandwidth, in its many forms, is a finite resource

Boosting Bandwidth Drives Training Success

No matter how you look at it, bandwidth is a finite resource. Just like our devices and internet infrastructure, people also only have so much capacity. Trainers and trainees alike are pressed for time, juggling competing demands for their attention, doing the best they can under challenging circumstances.

By addressing the inequalities of bandwidth—in trainers, culture, and technology—you can reduce bottlenecks in training, create an innovative, effective growth-oriented culture, reduce legal liabilities, and improve your retention and recruitment efforts.

Contact us to learn more about
Blended Learning, Training Content & eLearning Technology

Potential starts here.

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