Microlearning and Employee Training

Deejin Macaraeg

Rhonda Shields

University of Maryland - Baltimore County

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Dr. Zane Berge

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Abstract

Traditional aspects of training and development within organizations have often been limited in flexibility and availability for employees. Employees who desired to learn about new trends and modalities had to attend formal training sessions with regimented scheduled dates and times. Results for these formal types of traditional training activities can cost businesses losses in revenue and staff productivity. There is constant demand for business to stay paced with continual developments in technology and against competitors for its most sought-after asset: the knowledgeable and skilled employee. In consequence, for businesses to maintain its much-prized asset, businesses must become better equipped to handle both the large and small batches of quality training content and programs. Microlearning is one platform that could support and assist with small, effective batches of quality knowledge and training which can help sustain the larger batches of formal training content.

This paper is aimed to introduce microlearning as a valuable platform that is capable of supporting knowledge and information that can engage employees in the workplace. Discussion points will include its growing trend and popularity, benefits for organizations, effectiveness in achieving learning outcomes, impact on employees training and development, and advantages and challenges with implementation and shareholder buy-in. Global impacts with various industries will also be highlighted to emphasize its diverse application and use. Conclusion will consist of methodology, examples, and procedures of various modalities used by different industries globally.

Introduction

Without question, there are many definitions of learning. Knowles (2012) explains that learning involves acquiring and developing habits, gaining knowledge, and observing attitudes and skills. Burton (1963) defines learning as "change in the individual, due to the interaction of that individual, and its environment, which fills a need and makes him more capable of dealing adequately with his environment"(p.7), all of which emphasize the importance and contribution learning lends to society. It could be hard not to argue that society has become more knowledge and technology-based (Mavordozam and Ngulube, 2012). As society continues to learn and become more knowledgeable, for practitioners of training, it is more evident that businesses identify, construct, and expand the value of learning to its constant changing workforce.

There have always been trends in training and development that causes an organization to shift its approach to manage its knowledge and learning. The focus of learning for these organizations have typically involved traditional formal practices of training. Variations of guided and contextual training usually include formal scheduled lectures, creating manuals, on-the-job training, and mentoring, all of which affect an organization bottom line on cost and productivity. According to the Association for Talent Development's 2016 State of the Industry Report[1] the average cost and hours spent for an organization to train employees was about $1,252 and 33.5 hours. Furthermore, training may not be aligned with having an impact on organization objectives and drive the desired business outcomes. Most business environments,

[1] https://www.td.org/insights/atd-releases-2016-state-of-the-industry-report

especially high performing organizations, operate on accelerated pace and to remain competitive must constantly review and revise their training to not just staff being informed or knowing about a new process. For an organization to invest this amount of time and resources, a shift in learning culture and practices will need to emerge. Facilitator-led and e-learning techniques are still common practices and earnestly should not be removed entirely. The move toward including on-demand learning, as Sinha (2012) states, introduces additional training components that could meet the demands of knowledge seeking employees. Of the many platforms and trends introduced, perhaps the reinvented buzz-worthy modality that may optimize learning is microlearning.

Microlearning by definition literally means 'small learning', and offers small focused doses or 'bite-sized' content that can be comprehended in short periods of time (Jomah, Masoud, Kishore & Aurelia, 2016). The concept of microlearning is not brand new as we as a society have always been exposed to bite-sized information and learning. If we recall how we received our morning news information for example, in short-focused segments, we are receiving small chunks of information which allows learners to process and perhaps recall information at a later date. The practice of microlearning can function in alignment with traditional training methods and depending on the employee needs, can be woven into daily workday activities (Giurgiu, 2017). As Giurgiu (2017) substantiates, scientific studies indicate that learners that receive short content materials versus large bulk content may increase retention by 20% (p.18). It is possible that introducing content in this manner gives the learner memory capacity to

absorb and retain information more manageable and recalled when necessary. The goal would allow for giving the employee the information when needed to perform a task and delivered in the relevant context.

Growing Popularity

Hundreds of organizations are beginning to acknowledge and take advantage of the full range of benefits microlearning has to offer. "This bite-sized learning phenomenon" (Pandey, n.d., "Introduction", para. 1) is customizable in meeting individuals' unique training needs, facilitating instant learning and generating on-the-spot rapid gains in the workforce such as improved performance, customer service, product development, and compliance with policies. Its short bursts of information and customizability per individual learner both significantly contribute to its rapidly growing popularity as the preferred method of training delivery today since it accommodates the short attention span of many workers. According to Eades (2014), "the average attention span of the millennial generation is 90 seconds", and as more and more millennials enter the workforce, it is expected that they will make up majority of the workers by 2025 (Eades, 2014). Since microlearning is usually tailored for individual learners, it offers them the freedom to control where and when they learn, accommodating busy schedules and preferred learning conditions. Evidently, microlearning is ideal in simultaneously addressing the training needs at both the individual and organizational level (Axonify, 2018).

Microlearning is also gaining attention for its cost-effectiveness and ease in optimizing video quality and delivering training. It is more affordable than traditional learning due to its limited content; easier to edit and update the videos than traditional training; and is quick to deliver to learners. Since microlearning content is "typically designed in rich media formats" (Pandey, n.d., "What is Microlearning?", para. 2), it is also easily accessible via a multitude of electronic devices that are already at the learners' disposal at home or at work. Its highly-effective method of delivering easy-to-learn nuggets of information is critical in sticking the information to the learner, helping the learner to achieve specific learning outcomes (sometimes in the long-term) and speeding up the desired results of organizations (Pandey, n.d., "Benefits of Microlearning--Benefits for Business", para. 5). Moreover, microlearning can be used for both formal (with a curriculum) and informal (no curriculum) training requirements and can bring about immediate behavioral changes.

What ultimately makes microlearning invaluable to organizations, however, is its measurable, tangible results and big return on investment for such small bursts of information. Axonify has stated that 81% of organizations are already using microlearning to reinforce or supplement their formal training and that 92% of organizations anticipate increasing their use of microlearning in the next year (Axonify, 2018).

Microlearning Employees Effectiveness & Impact

Addressing the needs of the organization and the needs of the employee simultaneously could lead to overall positive impact and effectiveness on business processes. Microlearning uses in training can quickly enable employees in receiving on-demand knowledge that can be tailored to an employee's performance needs (Avery, 2016). In relation to rapidly changing business environments, microlearning grants employees access to current information whenever and wherever needed. This in turn allows for efficiency of employee performance and knowledge and minimizes the loss of productivity. Faster cognitive processing as smaller amounts of information permits the employee to apply the skill quickly (Carpenter, Forde, Stevens, Flango, & Babcock, 2016). Spaced repetition is encouraged with microlearning since the content is often distributed in intervals allowing for rest in between learning intervals (Cascio, 2017).

Microlearning in Different Industries

Microlearning has notably become a “full-blown trend” (Kapp, 2016) at the international level (i.e. Google Primer) and in multifarious industries such as “pharmaceutical, retail, and insurance” (Kapp, 2016) industries. It has even received support from neuroscience researchers for its method of delivering chunks of information in order to achieve quick learning outcomes. As a result of its trend and proven method, microlearning is now becoming a commonly integral component to modern business learning strategies (Axonify, 2018). Examples of industries using microlearning as a training delivery method include At Home (a home decor

superstore), Ethicon (a Johnson & Johnson-owned professional sales company), Merck (a manufacturing company), BT (a call center), and schools.

Implementation & Shareholder Influence

Transitioning learning from large, bulk content to the mindset and environment of highly targeted employees by using microlearning can be overwhelming and challenging for any organization (Fox, 2016). Organizations can utilize various modalities when implementing microlearning. When implementing microlearning in training, several considerations and principles should be considered. Avery points out when developing microlearning content suggested from the Association for Talent Development (pg.2):

- Timing-suggested maximum timing for video content between three to five minutes,
- Visually stimulating-focused pictures and direct infographics that speak to direct objectives and goals,
- Plan with high technological standards with purpose.

Additionally, to support shareholder buy-in, identifying clear business objectives and goals will be paramount in supporting any shift in learning. Cascio (2017) also affirms support to Avery claims on gaining shareholder buy-in with additional factors. Identifying the idea of employees are no longer tethered to a specified classroom lecture or conference for learning, and importantly providing supporting and actionable data on gaining and validating the desired learning activity and behavior.

When people hear the term microlearning, the large assumption of modality is video. The modality of microlearning can be flexible and delivered in various forms. The majority of the context is usually digital but, the method can be adapted into the appropriate format that would most benefit the learner as Avery suggests (pg. 2). Modern examples include Technology, Entertainment and Design (TED talks), and YouTube that instructional designers can immediately access and share with employees. Cascio (2017) highlights several examples of microlearning applications that are readily available to organizations and employees instantly. Udemy Inc., Grovo, Lynda.com and Duolingo are but a few microlearning application that can be used in corporate environments (pg.7). These applications provide a mixture of focused content along with interactive content to engage employees on updated skill content.

Methodology

At Home. In an effort to quickly reduce safety incidents and increase compliance with store policies, At Home introduced the microlearning experience to over 3,000 associates in more than 100 of its locations through breakroom kiosks (Axonify, 2018). The microlearning experience took two minutes to complete every day and covered how associates can improve their work performance by growing their knowledge on how to prevent safety incidents and maintain a safe, working environment. At first, it was a daily requirement for the associates to complete; however, once they saw value in it, it became routine for them. Ninety-four percent of associates were willingly completing the microlearning on a daily basis because it provided them with just-in-time knowledge of how to do their jobs better. As a result, At Home saw a 36% reduction in safety

incidents , a 78% increase in compliance, and even a 90% reduction in onboarding time (Axonify, 2018).

BT. BT introduced 2,500 call center employees to microlearning to improve their customer service in a short amount of time. BT's time crunch was due to the need to consistently cover the phone lines. The employees watched shorts videos that covered a different topic every day and answered a couple questions after each video to reinforce what they learned. The daily microlearning led to a 2.3% reduction in repeat customer calls, 14-second reduction in call-handling time, 24% (or 4- to 5-day) reduction in training time, and 5% improvement in customer value (Axonify, 2018). The impact that the microlearning made to BT was also noted by a BT customer who worked as a transition center manager. The BT customer claimed "When I speak to the new advisors, compared to previously, I would say they're much more knowledgeable. They're much more confident when talking about the products and services BT provides," (Axonify, 2018).

Merck. Merck leveraged microlearning in 52 international locations to drive a proactive culture of safety (Axonify, 2018). Merck did this by having microlearning kiosks placed at the access points of these locations and requiring employees to complete a couple minutes of microlearning every day. Like thousands of At Home's associates, Merk's employees also saw the value of microlearning. More than 80% of employees voluntarily continued the microlearning on a daily basis. This resulted in a

14% increase in knowledge of safety topics, a decrease in reported incidents, and a decrease in lost time due to injuries, (Axonify, 2018).

Ethicon. Ethicon implemented microlearning to boost its professional sales representatives' confidence and to maximize sales of medical devices by helping the representatives to remember critical and substantial information about the medical devices. The representatives' method for microlearning was to simply pull up short-term information for a "quick refresher" during their free time in between meeting with doctors or before traveling to a hospital to help them recall information about the medical devices they are selling, prepare for complex questions doctors may ask them, and gain confidence to be able to "influence the doctors" (Axonify, 2018). One executive sales representative made a testimony in support of this microlearning method: "[It] helps me feel comfortable when I'm speaking with surgeons. I can remember information about the anatomy, so I can ask intelligent questions when I'm in surgeries. It just breeds confidence." Other representatives saw value in the microlearning too; more than 80% voluntarily completed the microlearning. Accumulatively, the representatives increased their knowledge by 40% increased in knowledge and their confidence by 50% (Axonify, 2018).

Schools. Schools are also starting to launch microlearning in their classes due to its effectiveness in encouraging students to "become more responsible for their education" (Sweet, 2014). Microlearning in schools came in the form of recorded audiovisuals that were made accessible to students via a "Learning Management System (LMS), institutional iTunesU account, or a public video sharing site, such as

TeacherTube, YouTube, or Vimeo" (Sweet, 2014). The teachers would create the microlearning audiovisuals using cameras, computers, laptops, and smart devices and use editing programs such as Windows MovieMaker.

EI Design. EI Design suggested numerous ways to implement microlearning: scenario-based learning, gamified activities, "high impact, contextual imagery" (Pandey, n.d., "5 Killer Examples--Example 2", para. 1), whiteboard animation, text-based animation, videos, interactive videos, mobile apps, and storytorials (Pandey, n.d., "Adopt Microlearning", para. 1). EI Design specified that with the scenario-based learning, the microlearning goes straight into likely scenarios where the learner may come across challenges related to his/her profession, immediately teaching the learner what approaches to take in those scenarios. For gamified activities, reinforcement of the learning is made when the learner receives feedback after identifying and assessing challenges and providing a response for action.

Grovo. Grovo is a website that supports microlearning with short videos that last between 1 to 1.5 minutes. The topics of the videos vary from "market strategies online or methods for the management of a project, [to] . . . topics of interest such as social networks dynamic" (Giurgiu, 2017) and are managed and recorded by companies that want to enrich their employees' project knowledge. Grovo allows companies to track their employees' progress through graphs, making Grovo a preferred source for microlearning.

Health Quiz mApp. Simons, Foerster, Bruck, Motiwalla, and Jonker (2015) conducted research to determine how effective microlearning would be for educating the aging workforce (n=86) at three work locations on health awareness and health readiness. The microlearning experience was presented in the form of a health mobile app called the Health Quiz mApp, which had seven health courses, quizzes, and 20 microlearning cards per module that asked questions and provided useful feedback after the user selected an answer. The mobile app allowed the participants to monitor their progress for each course they attempted and gave them the ability to take whatever course they wanted in any order "to support just-in-time learning based on their needs" (Simon et al., 2015). This freedom to "quickly browse [through the content] in a moment of need and return later for more in-depth [information]" (Fox, 2016) also gave the participants control of how to quickly find solutions they seek.

The study found that the 86 participants increased their use of the mobile app over time because it delivered new health information with each use, influencing their perceptions, lifestyles, health behaviors, mental health, decisions, goals, coping strategies, and motivation (Simons et al., 2015). Their competence in health self-management increased, and they retained their gained knowledge and motivation to stay healthy almost a year after using the mobile app. The increased use of the mobile app was also made easy to the participants because it was accessible from their personal devices, readily available any time, any place, low effort, and "efficient, useful, [and] fun" (Simons et al., 2015). "These findings were confirmed in the feedback during the 1-month workshops," (Simons et al., 2015).

Other Methods

Videos. Out of all the delivery methods that exist for microlearning, videos and interactive videos are the most utilized since they are effective, convenient, easy to build, ready to watch across numerous devices in any environment at any time, and contain audiovisuals that are appealing to learners' sensory-based learning preferences, increasing their retention rate (Goel, 2017).

Blogs. Blogs are good alternatives to videos as they can be more concise in content, yet just as interactive when they facilitate learning through open discussions. Blogs allow learners to immediately find the most important topics through simple scrolling or the control+find function that videos do not offer. They also allow learners to stay informed of the latest updates (Goel, 2017).

Podcasts. Podcasts make for great microlearning audio tools and are a great source for microlearning because they "feature industry experts, organizational leaders, and other specialists" (Goel, 2017) who keep up with the latest industry trends. The podcasts are also shareable on MP3 files via cloud services and can help college students "reduce budget costs with remedial learning" (Semingson, 2017). For these reasons, podcasts are sometimes seen as the best source for microlearning.

Job aids. Job aids have versatile ways of helping learners improve their work performance. They can be presented as diagrams, checklists, and flowcharts (Goel,

2017) and are useful to all learners at any stage of their careers. They are also ideal for catching up learners on last-minute updates or changes made at work.

Social media. Social media is undoubtedly a favorite for microlearning, as social media often depicts "snippets of information that are readily available and require less time to review" (Goel, 2017). Social media is extremely effective in maximizing learners' attention span and engagement because they allow the learners to engage with subject matter experts and other people on a global scale in real-time, via live videos or text discussions. It is also very easy to find needed information with the use of hashtags, or tagged keywords. Out of all the social media platforms, Yammer and LinkedIn may be the most appropriate ones to use for microlearning since they are used more for professional purposes.

Conclusion

It is clear why microlearning has become a trend in the training and development community. At the pace the technological world is moving, microlearning allows learners to expeditiously develop or refine their knowledge on a set of topics with just-in-time, succinct bursts of information, helping them to keep pace with a constantly changing working environment. This method of learning is also efficacious in sticking the learning to memory and works favorably for those with short attention spans, ensuring that all learners--from school age students to the aging workforce--are successfully achieving learning outcomes. Furthermore, not only is it already being implemented in multifarious industries worldwide, it is also supported by neuroscience

researchers for its effectiveness. Last but not least, microlearning has been proven to produce big returns on investment and measurable results, making microlearning invaluable to organizations.

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