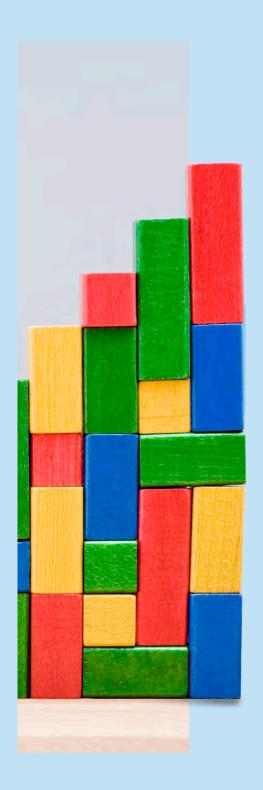
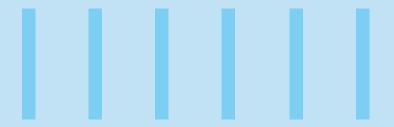
VIEWPOINT



MICRO AND NANO LEARNING PARADIGMS IN CORPORATES – BUSINESS IMPERATIVES



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An inherent challenge in the everevolving industry/business sectors is the persistent need to reskill and upskill employees into newer processes, technologies, and business domains. Across the industry sectors, there is noticeable churn in the talent function with growing attrition partly owing to the unwillingness - of both, the organization, and its workforceto reconcile to the changes forced upon by COVID-19 and the ensuing volatility in supply chains. In this context, organizations are embarking on rejigging their overall strategy response, talent management in particular as there is a perennial need for creative and innovative methods of talent sourcing, training, engagement, and deployment in this hybrid future. Learning and development teams (LnD) must lead from the front in this transformation of talent function. helping scale employees and thereby ensuring the timely availability of relevant business talent assets to production units.

COVID-19 has permanently changed our attitude towards life and to the idea of work and workspaces. Flexibility and personalization are expected everywhere-to be able to choose when and where work is delivered, ensure opportunities are available to scale-up into new roles, and build required competencies/skills in a seamless manner. Large

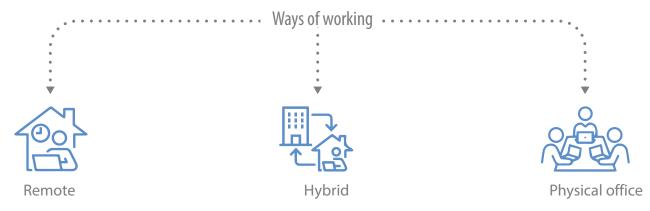
scale transformation and digitization of learning and development-LnD departments is underway and longheld beliefs around training – esp. Face-to-face interactions/linear scaling of training programs are being renewed with a view to adapting to new hybrid workspace and workforce scenario as these approaches in the current form and deployment are becoming unviable.

With the world moving towards new ways of working - hybrid/remote/ physical-only – as the job mix requires certain jobs to have humanto-human interaction apart from remote deployment, it is only getting more complicated when it comes to human resource development and in particular the learning/training strategies employed by organizations. The HR (Human Resources) organizations and all the functions of personnel development including training need to gear up with renewed processes for handling this hybrid mix of workforce. Existing tools and processes are not applicable in all scenarios. Starting from workspace design, how HR folks deal with the aspects of employee engagement and concerns using virtual/hybrid tools; policy framework governing payroll, claims, security infrastructure to design of learning department requires a transformation of sorts in the changed context.

Microlearning is one of the latest tools/ methodologies that LnD managers can leverage selectively in enablement programs to bring in more agility and improve learning effectiveness. Employees being reskilled and upskilled are provided 'micro contents'/short duration learning modules, which can be consumed at their own pace so that the resistance is minimized as the learner need not allocate large amount of time in one go or attend a long-duration training affecting his/her existing work/ personal schedules. This is one of the ways to transition them seamlessly and readily to the newer domains as experience shows that there always exists a friction to unlearn/learn and adapt to new ways of working. Refer Figure 1.

In this perspective, we will discuss microlearning as a part of the overall solution that is emerging to make the corporate learning programs more effective and learner friendly, which is the need of the hour in the context of constantly changing and evolving learning needs. As we speak, latest trends like Metaverse, Augmented Reality/Virtual Reality -AR/VR technologies are revolutionizing all industries and work/learning environments by enabling virtual engagements and evoking almost similar emotions of touch and feel like that of the real world/at-the-moment physical presence.

Figure 1: New ways of working



Microlearning: A business imperative



Organizations are grappling with the need to design innovative approaches for driving quick and effective learning outcomes in the context of JIT – just in time project deployments, on the job support especially when the requirement is to enable on horizontal and delta skills, sharing the key best practices and outcomes from a certain client engagement etc. Which otherwise do not require long-duration enablement programs. As we argued above, talent restructuring is an ongoing activity and reskilling/upskilling is an important part of this process. It is not cost-effective to source a certain niche skill quickly from the market, especially by poaching from a competitor if the internal folks can be enabled with short and focused training. However, this requires careful classification and

development of a skill taxonomy/ matrix so that it is possible to identify employees for microlearning programs and subsequently get them ready to move into those high demand/ value project roles. Another case may not be of a niche skill, but of an ongoing additional skill/knowledge the workforce needs to acquire to perform in the evolving scenario. A few industry examples would substantiate how microlearning can be utilized and the business value of this approach. Refer Figure 2.

Financial services firms are subject to constant regulation and must focus on compliance lest they end up landing themselves in legal tangles. The risks are mitigated by proper upskilling of its front-line staff and micro-learning can be an effective solution. These firms must enable

Figure 2: Microlearning: A business imperative



- · Just in time project deployments
- On the job support especially when the requirement is to enable on horizontal and delta skills
- Sharing the key best practices and outcomes from a certain client engagement
- Develop an ongoing additional skill/knowledge the workforce needs to acquire to perform in the evolving scenario



their front-line sales staff with the knowledge of new insurance product features in an ongoing manner. A short microlearning module can be developed with the delta features using effective media components, which can be consumed by the staff while they are in their day-to-day jobs. Here, the team should learn the key differences between the existing offerings and the new ones, hence a good case for covering this knowledge by introducing short learning modules. The key to the success of any microlearning program is to factor the learner profile, the work environment, and the selection of multi-media content suitable for this workforce into the program design. The media component selection is a critical ingredient along with the instructional design in the creation of any microlearning program. For e.g., if the learning requires sharing cases and solution approaches, then the contents should be structured in such a way that a few short interviews from the key team members who worked on those projects can be recorded and shared. Key concepts can be provided in a graded manner again in the form of short capsules with good animation and scenario flow diagrams for capturing learners' limited attention spans.

Consider another scenario-an information technology services firm, with an ongoing skill enablement program for employees working in multiple client engagements. Quite often, talent movements happen across engagements, and this can be facilitated by short/microlearning/bitesized learning modules to equip them with the essentials to start working on the new assignment. Quizzes and one-question a day approaches are very effective if the learning requires continuity and requires revision of the topics. Learners would generally be excited to answer the guizzes if they are based on concepts that are recently learnt or adjacent to their current project skill profile.

While the above makes it amply clear that there is a straightforward business value in terms of operational efficiency and reduction in lead time in talent enabling function, we must also look for other compelling value drivers for microlearning that bring efficacy and make learning a joy.

One such case is the obvious overload of content on the corporate Learning Management Systems (LMS), vendor help portals and other educational MOOC platforms, which sometimes make the learners jaded for they miss

the forest for the trees if these courses focus on either breadth or depth of a particular skill area without providing the context of the problem/solution area. Microlearning brings in a breeze of freshness by hitting the nail on its head as its approach rests on how creatively the learner's attention can be captured and the essential knowledge/skill delivered in short bursts, one of its main advantages being to provide a summary or birdseye view apart from delving deep into a topic, one step/concept at a time.

From the generational shift viewpoint, millennials have a short attention span. The attention span of the illfamous gold fish is 9 seconds. Human attention span has dropped even below them to 8 sec as per a recent study by Microsoft. Millennials prefer to use digital tools for most of their tasks – personal and professional. This demands the training modules too, to be bite-sized, concise, and precise so that they can suitably embed learning into their lifestyle. It promotes anytime, anywhere learning, uses multiple media formats and is usually accessible on multiple devices suiting the learning habits of modern learners. The short, easily digestible/consumable chunks make it convenient to retain the knowledge longer. As per research

by Dresden University of Technology, Germany, there is 20% more information retention when learners are given "bite-sized" learning vis a vis long duration content.

Another visible advantage of microlearning is that instruction can be made crisp and thereby improve the efficacy and curiosity of learners for there is only one or two learning objectives to focus. It is possible through an innovative blend of media and instructor's informal knowledge sharing/experience to come up with interesting bite-sized learning capsules targeting both overview as well as depth of any topic. It also bursts the myth that this learning approach is suitable only for enabling on simple and independent/ disconnected concepts. However, necessary care should be taken to retain continuity and at the same

time keep them independent for a stand-alone learning consumption. The design of cloud-based and AI driven learning management systems (LMS) should deliver on promise of personalized tracking, suggestions on learning content and consistently nudging the learners to progress on their learning journeys esp. when the learner consumes the contents in small capsules. Here, the key design issue is how these systems are tailored for micro/nano learning approaches leveraging modern multimedia platforms in content design and delivery.

Microlearning has made strides worldwide with interest generated amongst practitioners and academicians- owing to the nature, use by various functions within/outside the organization. We have also seen over these years a new generation of employees with characteristics different from the previous, a market space which is more dynamic than ever before and a well-developed technology space making inroads in the current business environment. A change in the market and business dynamics have thrived new ways of engagement and learning.

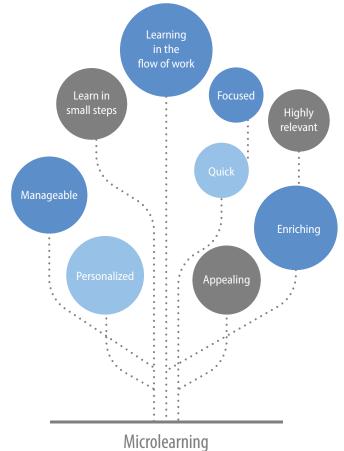
Microlearning has been around for some time now and it encapsulates, "learning in small steps". *Gutierrez* (2018) defines it as "a method that offers bite-sized learning units with just the bare bone structure information to help learners. This translates to "do more with less" which makes it focused, enriching, manageable, appealing, and quick."

Microlearning helps in retaining the key idea/concept learnt in a short duration viz. 3 – 5 min for it is easy to concentrate and focus. It helps reduce onscreen/mental fatigue (*Selko, 2019*) and is suitable for learners whose job involves multi-tasking requiring them to prioritize and compartmentalize their time to reduce wastages and at the same time continuously progress on their learning goals. **Refer Figure 3.**

The information is presented in small bite-sized segments, a design approach associated, which would have otherwise been a daunting task for learners if consumed all in one go. It takes off a certain amount of psychological perception of "overcoming a daunting task" using this central idea. (Jomah et al., 2016) With small bites of information, learners can retain more of the key concepts. (Gutierrez, 2018). Absorption of information is higher, and learning is less taxing with micro-learning. (Kamel, 2018)

Microlearning provides job specific knowledge that learners can put into practice right away. It helps to get them enabled in the flow of their job/tasks at hand. Employees today like to learn while on the commute to and from office (around 28%

Figure 3: Microlearning - Value levers



employees), waiting in the lounge of client office (wait-learning), tea/coffee break or in the flow of work (around 56%) (*Cai et al., 2017*) and helps with transferable insights.

In the context of refresher training, it supplies nuggets of highly relevant and personalized content at the time of need and in the flow of work that will help to respond to evolving business environments when a fullfledged course may not be suitable. The trend is slowing shifting towards squeezing in training into gaps in employee schedules rather than long scheduled training programs leading to extended blocks of study time. Freshers hired in organizations today, belong to Gen Z, with higher acceptability of learning using digital media, however the flipside being their finding it difficult to maintain focus for longer duration and consuming all of it sequentially in one go.

Traditional methods of learning are therefore becoming more inefficient in such cases, with most of them interested in 'learning by doing' or 'self-learning'. (*Leary et al., 2020*). Here, microlearning can be thought of as an innovative approach, where the instructors can provide key concepts and demos on important use cases in a short duration session. The participants are provided with assignments and study guides to work on as per the convenience and aligned to their project schedules.

Recollecting what has been learnt is a challenge. (Refer Figure 4: Ebbinghaus's Forgetting Curve). In corporate learning and development scenarios, where the outcome of the investments is crucial, it is essential that programs are designed with focus on practical orientation and reduce the cognitive overload. They should drive on better comprehension and on immediate value of learning in their day-to-day tasks. (Kamel, 2018; Kapp and Defelice, 2019; Biggs, 2012;).

Microlearning in a corporate setting is an action-oriented learning with a specific goal and can be used independently or be made a part of a larger program (*Kapp & Defelice, 2018*). Subjects that are inherently complex can be broken into smaller units. (*Shail, 2019*). Microlearning has been found to be beneficial in project-based organizations and can become a strong intermediary for knowledge transfers. (*Beste, 2021*).

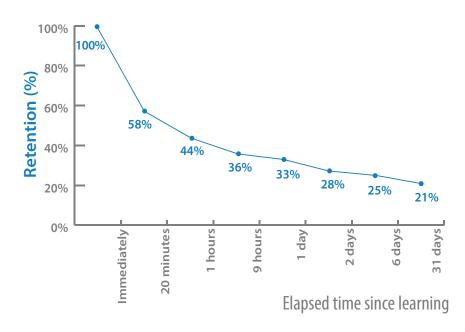
It is an approach to enable the learners with quick contextual and focused knowledge that fixes the gaps of understanding and brings them to speed and will have an impact on their overall work outcomes and bring efficiency, especially when problem solving involves multi-disciplinary focus. Microlearning provides the flexibility to learn, available across devices, for all types of audiences and with the possibility to choose what, how and the quantum of learning. (*Gautham AS*, 2018).

One thing to emphasize is that this approach of providing instruction at the right time and in right amount/ level is not completely novel as even a traditional teacher led learning in closed groups focused on the learner's

ability to assimilate and accordingly the content, timing and delivery were tailored. However, the issue arises when the number of skills/disciplines involved is broad based as well as scale and agility needed in current corporate/college set-up is significant, which drives us to innovate the micro/ bite learning concept further in new ways and by leveraging digital platforms. Having said, there is a need to strike a balance when it comes to using technology and interactivities (instructor-led) while adapting the microlearning in corporate learning programs.

It also has a set of disadvantages. One such case is microlearning does not help in deep learning owing to the limited amount of knowledge transferred in one go. Also creating microlearning content is not about reducing the content of courses already available as it leads to design related problems that impacts effectiveness. (*Kapp & Defelice, 2018*).

Figure 4: Ebbinghaus forgetting curve



Micro and nano learning – best practices and key success factors

We will discuss a few learning scenarios where some best practices and recommendations for microlearning are made based on our experience of delivering training programs for different audiences and business demands.

Key success factors

- Microcontent: Microcontent is the part that integrates into microlearning. It is fine-grained, well-defined, and inter-connected. Focusses on a single topic, idea, concept, has a single learning objective, accessible on handheld devices, emails, web browsers, available on microsites, etc. In other words, "single-focused", "modular", "single-activity" and "accessible".
- Social cohorts: Leveraging social cohorts/discussion forums to facilitate social interactions based on the content and sharing of varied perspectives on the content.
- Blending of formal, non-formal and informal learning: Microlearning can serve as a bridge.

- Hyper personalization: Employees can set goals, self-manage and self-monitor progress on their goals courtesy the learning platforms.
 They can decide when to learn, what to learn, how much to learn, etc.
- Student centric: Focus on the individual.
- Millennials—the digital natives:
 Millennials are taking the place of
 baby boomers and as digital natives
 they think differently.

Microlearning is helpful in cases of limited budgets in training and relatively inexpensive than full length training courses. They are also customizable to a great extent. (Scaglione, 2019).

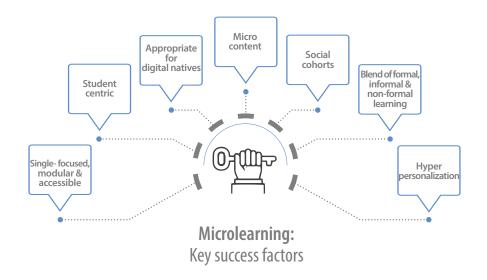
Microlearning is built on cognitive science. It uses spaced repetition (Ebbinghaus curve) and reinforcement of learning. Educate using bite-size information nuggets and repeat them with adequate spacing between lessons. **Refer Figure 5.**

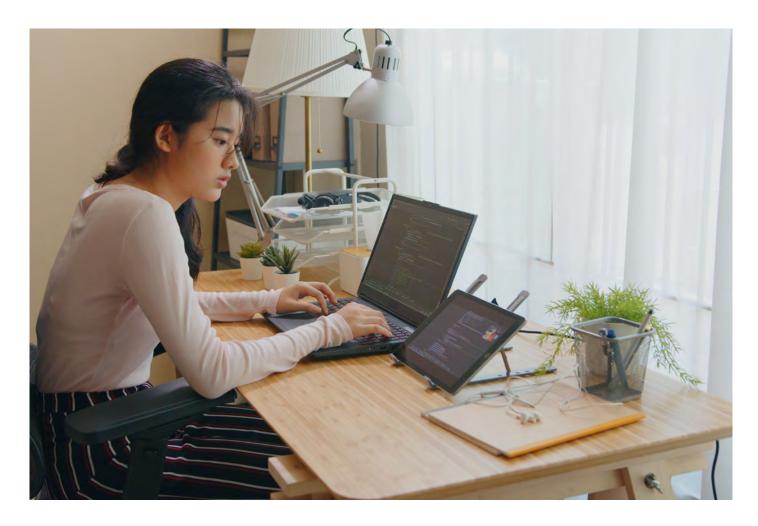
Learning approaches factoring in learner's and infrastructure preparedness

- Flip classroom: Make learners in charge of their learning. However, teachers and learning assistants are available for queries and doubt resolution.
- Videos with animation: For easy comprehension and retention.
- Infographics: A picture is worth a thousand words. Good infographic can communicate effectively and much more than pages and pages of text.
- Chatbots: to extend outreach, enhance customer service, amplify the experience during new employee onboarding, effective sales training, diversity training etc. Also, can be used for spaced repetition, sending reminders/ nudges.
- Power hour training: Concise and precise power hour training to develop skills quickly and effectively.

There are two approaches to this learning in short bursts. One is analogous to the way Google is used where we search for a particular idea/concept and get information/ videos etc. to solve the issue/ problem at hand. However, in the second approach from corporate learning viewpoint, where sizeable and related learning objectives need to be achieved over a period, the key is to weave these short bursts of learning into a bigger/continuous learning journey and operationalize this through proper tracking and by pushing periodic and personalized short bursts of knowledge capsules to learner's dashboards for consumption. Refer Figure 6.

Figure 5: Key success factors

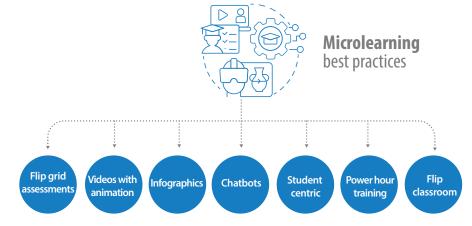




Learners must be geared up to maintain continuity of learning when the learning goal is more comprehensive than just learning/ clarifying the task or problem at hand. While microlearning is an obvious candidate in JIT setting or providing

summary or birds-eye view/single learning objective, it can also be used in long duration learning programs. Here the content structuring should be such that it is possible for learners to consume small duration modules.

Figure 6: Best practices



Source: Infosys

yet progress in the overall learning journey. This could be the maximum potential of microlearning approach, although needs be proven and is open for experimentation and innovation. There is a need for adjustments in the attitudes of learners, educators and for alignment of enabling micro/nano learning infrastructure to support comprehensive learning.

Learning infrastructure and educator flexibility are closely tied to the learner's perspective as discussed in the above. The educators should be well trained to handle the programs either delivered in one go or in small chunks. The related contents, assessments and media objects should be well tailored to meet both microenablement objective as well as a comprehensive learning goal. This flexibility goes a long way in bringing agility to the learning delivery in corporate environments.

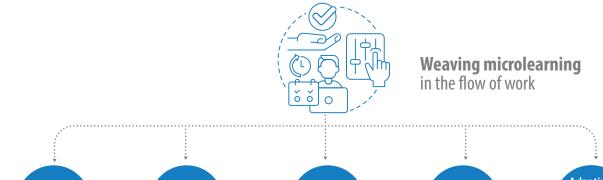
Multi-sensory/Multi-modality/Learning by doing microwork tasks in the job

With changing nature of work, dynamically evolving technologies,

today's workforce is hard-pressed for time. Here are a few ways we suggest

weaving microlearning into the flow of work. **Refer Figure 7.**

Figure 7: Weaving microlearning in the flow of work



Practice focused microlearning

Objective: Provide a nudge or a reminder to implement a suggestion/call for action Target audience: First time How: A series of emails over a period. The frequency to be decided based on requirement. Example: Send out short weekly tips/suggestions on topics such as "Planning and prioritizing", "effective time management", "effective listening", "acknowledging and appreciating", etc. These tips must be short, crisp, practiced focused and appropriately spaced. There should be suggestions that managers can use in one-on-one meetings or group meetings. These are nudges or reminders to try out what one already knows

Task based learning

Objective: Learn in the flow of work. Target audience: Mobile workers. E.g., Sales representatives. How: Micro-learning capsules focused on interactive walk-through's and learn by doing. Example: Short, crisp content accessible 24*7 with learning assistants to help with queries and focused on showing how something is done rather than plain theory. This could allow the mobile workforce to learn at their own pace and time without disrupting their

Just In Time training

Objective: Learn new skills quickly and effectively Target audience: Employees who need to quickly learn new skills as per project requirements without the need to wait for scheduled training sessions and practice labs each time they land a new project/assignment. How: Microlearning capsules with several exercises with a specific objective that can help employees develop the required expertise quickly and effectively. Example: Quick, focused and easily accessible content with numerous exercises (with each exercise answering a specific question). The employees can access this content at their own pace and not get overwhelmed with information rather develop specific skills quickly and efficiently.

Retention based learning

Objective: Help learners revise just before taking an assessment/ Certification examination. Target audience: Learners required to qualify in an assessment/certification. How: Often, learners find themselves surrounded by a deluge of information and find it tedious to revise of read the content owing to the vastness of the learning material. There is a great likelihood of forgetting significant chunks of what they have learned. Refer Figure 4. Crisp and bite-sized learning content each focused on a single concept can serve as a quick refresher of all the important topics. The content preferably in video format should be short enough to retain the learner's attention. interest and focus and long enough to cover all the important points related to a concept. Example: Learners after they have completed their learning and, in the gap, before they take the comprehensive assessment/certification etc. Can use the bite-size

microlearning capsules to revise and refresh.

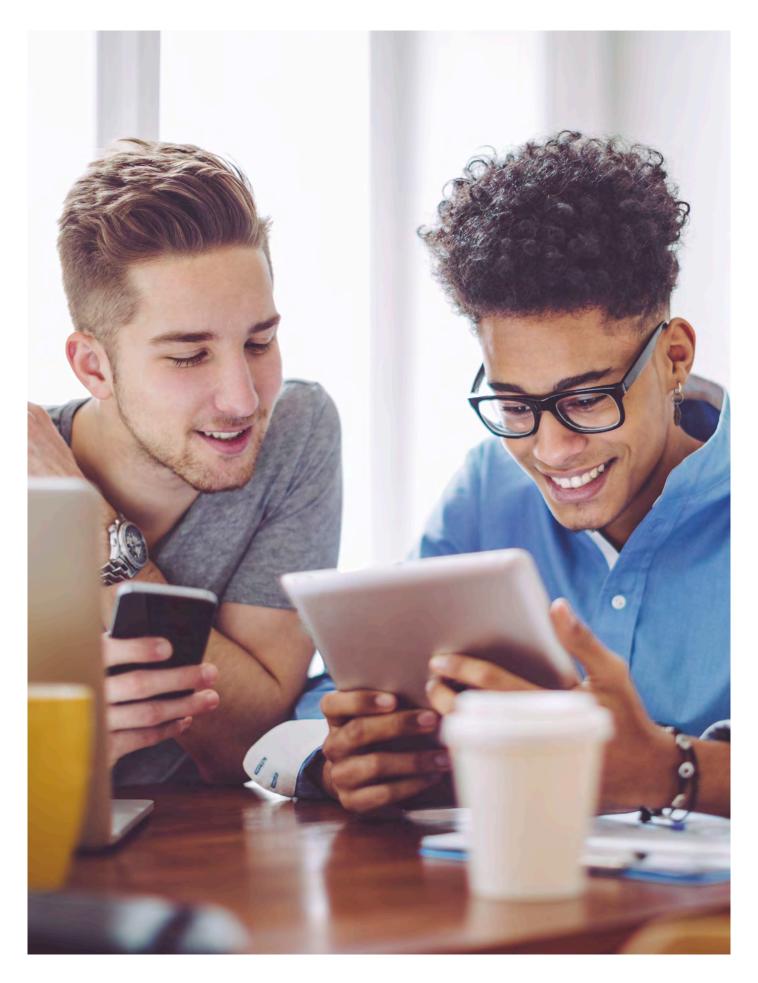
Adaptive, Snackable & Personalized learning

Objective: Establish a

make learning your own.

sense of ownership -

Target Audience: Employees of an organization cutting across roles/areas of responsibilities How: Personalized content in short bursts, simplified to help employees learn with Example: Not all employees learn at the same pace. Not all employees have the same learning style. Not all have the same competency or prerequisite skills. The learning content should be adaptable to the profile of the employee, more human and personalized, more approachable, and not in the least daunting, should be personalized basis the interests and skill requirements of the emplovee.



Complement! Not replace comprehensive learning

When we critically examine the applicability of microlearning in the context of corporates; for example, if it works in Information Technology industry, then it would easily be adaptable for any other industry sector/people enablement environments. The reason is that Information Technology industry is characterized by multiple challenges – high skill turnover; multi-dimensional skill requirements like – industry domain, functional, process, soft skills, and TECHNOLOGY areas; high resource turnover, where the employees get multiple opportunities to switch jobs.

In fact, in these environments it is exceedingly difficult to have a long-term learning focus on one area, instead what is advocated rightly so is learnability – ability to learn, unlearn and adapt in one's career of learning. However, when we examine the ways to reduce talent exhaustion because of these very dynamic learning needs, micro and nano learning approaches are very promising in nature.

Let us have a look at the example case below:

Professional services firms require their consultants to upgrade their knowledge and experience through a case study-based approach. Here, the need is to disseminate finer points of a certain case/project execution to a larger audience, which may not require a long duration training program. It may require a short discussion-based knowledge sharing among a closed group of learners or an online seminar that is broadcast to the target audience.

However, when the need is to hold the learner's attention for a sufficient enough duration to take him/her through the learning journey involving multiple interventions – self-learning, experiential sharing by experts, practice scenarios, assessments – to acquire reasonable depth in a certain skill area, microlearning as a stand-alone approach will not suffice for it has to be supplemented with

proper sequencing of events/mile stones supported by tools to nudge and notify the learner to ensure completeness.

Microlearning vs nano learning

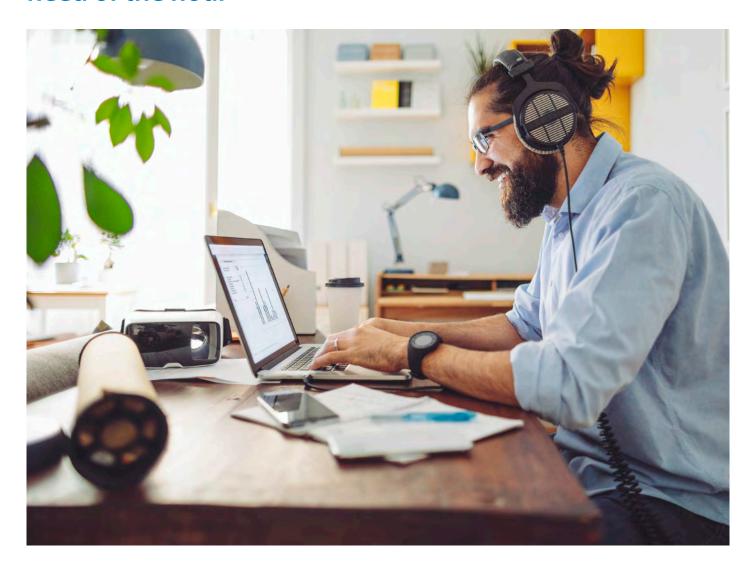
Nano learning can be thought of as an extremely short training module that teaches learners exactly what they need to know at their moment-of-need. E.g., if microlearning teaches how to create a business report using a business app, nano learning could be as simple as teaching learners how to log into the business app. Nano learning are delectable snackable powerful content that is less than 2 minutes.

Nano learning is not suitable for first time learners, but it can be used as part of refresher training.

Refer Table 1 for "microlearning vs. nano learning".

Table 1: Microlearning vs. nano learning

Digital paradigms that make or break – Creativity is the need of the hour



Microlearning modules must be designed after considering learner background; media approach – audio/video; text only with good info graphics; whether there will be series of bites; desired learning outcome vs base/minimum level of learning.

Creativity in content design, careful sequencing of learning modules and customization to learner's needs – time/flow of work/duration leaves a need for sizeable design changes to existing LEARNING/CONTENT MANAGEMENT SYSTEMS.

AR/VR technologies, Metaverse shows a lot of promise of immersive and hands-on learning opportunities across a set of domains, which were unthinkable owing to risks and cost involved in setting up of a dedicated learning environment – examples include - pilot training, high-end and complex surgical training, in hazardous tasks in chemical/hi-tech industries etc. Microlearning helps here as it is possible to devise trainings for certain customized tasks so that the new personnel can be trained quickly and deployed, since resource turnover would be high. Secondly, complex task-based training can be broken down in short sized and consumable hands-on learning modules, which

learners can repeat till they gain expertise and confidence to perform in real work environments.

Corporate learning departments need to invest in building cross-functional teams of creative instructional designers, microlearning experts and SMES and should identify high incidence courses in their inventory and start experimentation to convert them into hybrid – micro/nano learning enabled offerings. They can collect the ground level data on the effectiveness and implement subsequent changes if required to bring this approach into mainstream.

Conclusion and next steps



11

Great teachers engineer learning experiences that put students in the drivers' seats and then get out of the way.

– Ben Johnson

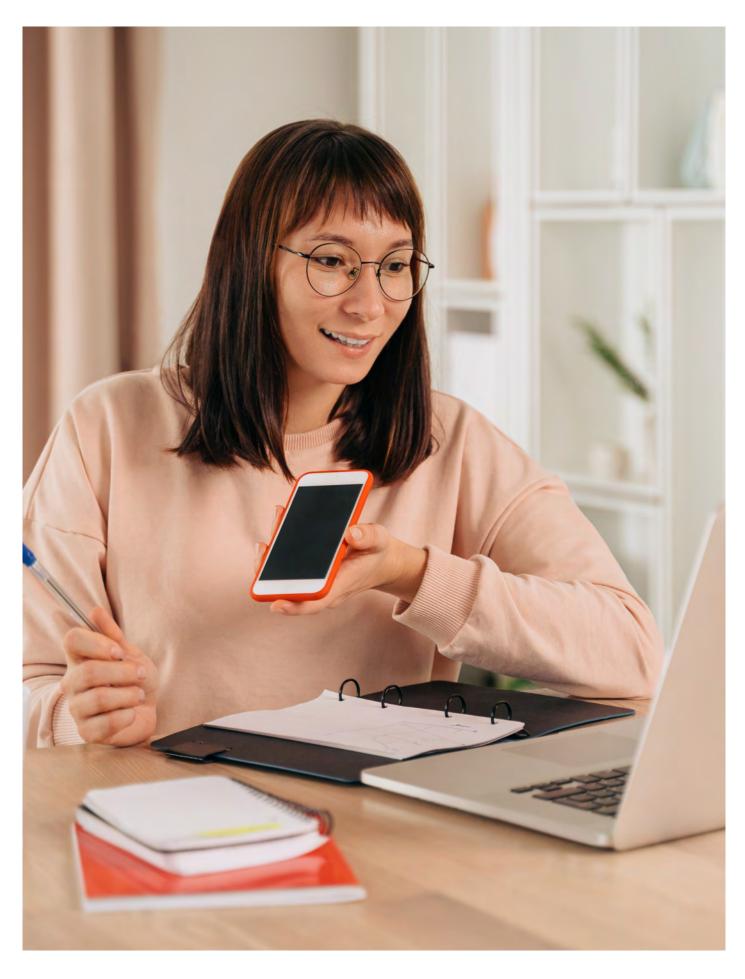
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The future of learning is micro and nano. These are swift and easy ways to disperse information. It allows focused learning and spaced repetition. It most often follows the Pareto principles. A 2-minute video at the moment of need in real time can prove to be costeffective and immensely beneficial. This does not in any way connotes that long duration course is passe, it is just that short duration content serves the modern and time bound purpose. Corporates need their workforce to be equipped with dynamic knowledge and skills and capable of playing multiple roles, should there be a demand.

The flipside to micro/nano learning especially in the context described above is that by giving a bite-sized summary of a large project that cuts across multiple skill dimensions, the moot point is how many folks really get the gist (leave the key project team members). This also drives the point that bite-sized learning may not be effective if it is not targeted to right audience with the ability to relate the key ideas from a broad spectrum of project/work area.

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Satheesha has been working with Infosys for 29+ years. In this long stint he worked on Software Development and Client engagement areas in the first half of his career. He played various roles such as Software Developer, Project Manager, Client Engagement Manager and Delivery Manager in India and USA. In the latter part of his career, he is working in Corporate Education field. He played a significant role is setting up Global Education Center, Mysore and successfully running it over

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Seema Acharya

Seema Acharya is a Senior Business Manager with the Education, Training and Assessment department of Infosys Limited. She is a technology evangelist, learning strategist and a passionate tech author with over 20 years of experience in conceptualizing, designing, and implementing competency development/enhancement programs in alignment with business strategy to cater to short term as well as long term organizational goals. She has authored 6 books with leading publishing houses such as Wiley, McGraw Hill, Apress, etc.

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She is passionate about exploring new paradigms of learning and dabbles into creating e-learning content to facilitate learning anytime and anywhere.

Venkat Subramanyam T.L

Venkat Subramanyam T.L is working as a Principal in Education & Training department. He has 20+ years of experience in ERP product development, Consulting, and Implementations. Currently, he is an SAP trainer delivering programs in the areas of S/4 Logistics. He is interested in the study of business technologies and their impact in delivering value and simplification of Operations in business enterprises.

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Dr. Hory Sankar Mukerjee, is Principal-Education, Training and Assessment at Infosys limited. He currently handles the global enablement programs for consultants at Infosys. Apart from this he is responsible for managing the learning, upskilling, and reskilling initiatives of the organization. With more than 18+ years of experience, he has been instrumental in the foundation, learning and operations of the consulting academy since the beginning. Apart from this, he manages the learning and certification needs of 14,000+ SAP consultants. He has an expertise in providing trainings in technology and business across cultures. He is a passionate researcher and has authored three books with leading publishers like SAGE and Oxford University Press. Apart from his work, he is a columnist with leading dailies, panelists in global conferences and advises universities on their academic curriculum and industry interfacing.



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