

The background of the page features a dark blue silhouette of two people in profile, facing each other as if in conversation. The overall design is framed by a thin orange border.

Cohort-Based Learning at Scale

EIGHT PRINCIPLES FOR SUCCESS





Cohort-based learning: why now?

Today, work happens in teams. [Brian Uzzi](#), a Northwestern University management professor, sums it up this way: the era of the star individual has ended. From the individual contributor level through the highest ranks of management, work is now deeply collaborative. And no one can go it alone.

Now, Uzzi explains, understanding the “secret sauce” of high-functioning teams is essential for leaders looking to foster performance, get the most out of their people, and bolster their company’s competitive edge. Yet when it comes to helping employees actually develop these essential team-based skills, most digital training hasn’t kept up. Training continues to be highly individual, with courses that present concepts and scenarios but leave the difficult task of making these lessons relevant to today’s social working environment up to the learner.

Fortunately, change is coming. Over the last year or so, there’s been an explosion of interest in cohort-based learning from organizations, individuals, and other learning companies like [Maven](#), [Section4](#), and [On Deck](#). At Nomadic, we see this as a major step in the right direction, representing a collective recognition that legacy learning modes have simply not proven effective for topics within management, leadership, and other highly social skills fundamental to the way we work now.

So what is cohort-based learning? And why is it getting so much buzz?

Cohort-based learning happens when a set group of learners moves through a sequence of interactive content together, discussing their ideas and sharing knowledge along the way.

Cohorts are an immensely effective learning tool, especially in hard-to-teach domains like leadership and creativity—which is why it’s getting so much attention now. Yet you can’t simply organize learners into cohorts and call it a day. The design of a cohort-based experience determines whether it’s actually impactful—and whether it can impact more than just a few individuals at leadership’s highest echelons.

Over our decade of work in this space, we’ve seen several learning-design variables that can make or break the cohort experience. We’ve organized those observations into eight key principles for creating cohort-based learning that can transform minds, habits, and organizations at the scale modern business demands.



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EIGHT PRINCIPLES FOR SUCCESSFUL COHORT-BASED LEARNING AT SCALE

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PRINCIPLE 1

Social interactions must be carefully designed and built over sustained periods of time

After **Carl Wieman** won the Nobel Prize in Physics in 2001, he turned his attention to physics education. He noticed a trend: as soon as his students began their graduate studies, they became more active and critical thinkers. This was a marked and rapid shift from their thinking as undergraduates—one so large it couldn't be explained by time or experience alone. Wieman began reflecting on the **shortcomings** of the standard approach to teaching undergrad sciences, which was based on textbooks, lectures, and individual study. His hunch was that the largest factor in the grad students' transformation was the intense social engagement they experienced in the lab, discussing and debating physics problems with their peers.

Would this trend look different if the undergrads learned more like his grads and postdocs?

The answer, it turned out, was yes. When Wieman and his colleagues tried grad-style teaching methods with the undergrads, including "multiple brief small-group discussions" and frequent debate, the results were astoundingly positive.

A 2019 study featured similar findings, demonstrating that peer interactions were much more important than relationships with faculty advisors in determining students' retention of material and quality of skills. Many other studies have shown similar results.

These findings challenge some fundamental assumptions about adult learning. Digital learning companies often tout their star professors and

celebrity teachers, seemingly as a proxy for the quality of their instruction. Yet this research shows such a focus may be misplaced: **when it comes to learning effectiveness, peer interactions can be far more important than any instructor's skill.**

There's a caveat, though. To be effective, these peer interactions must also be carefully designed. This means including enough time for learners to complete a cycle of encountering new concepts, reflecting on those concepts, and finally, applying them to their own work and life. This element of time and continuity is also key for a cohort to form into a cohesive group, in which members feel comfortable exploring new ideas. In several studies of diversity, equity, and inclusion training, for example, researchers **cited** the seminars' short length as a reason for their common failure. A one-off training course simply doesn't provide enough time for a group to achieve the dynamics that will foster the quality of discussion that a nuanced topic like DEI demands. Nor does it offer the sustained engagement (with both the material and the group) that ultimately leads to long-term transformation.

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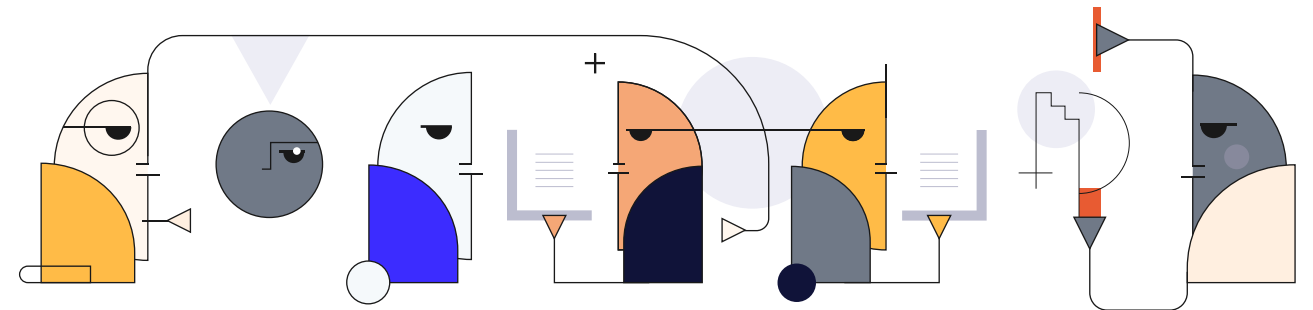
PRINCIPLE 2

Learners need to feel a sense of belonging

Humans are social creatures, so much so that social interactions **change the way our brain functions**. Social context impacts our attention, affects our motivation, and makes us learn and act on new information in different ways. Yet these effects are all dependent on our sense of belonging and psychological safety. In one example, a 1999 **study** by Amy Edmondson demonstrates that psychological safety within work teams—and the interpersonal risk-taking it facilitates—both lead to better learning outcomes.

Researchers have identified a number of factors that enhance the

"entitativity" or "groupiness" of cohorts, as well as cohort members' associated sense of psychological safety and belonging. At Nomadic, we've discovered that three aspects of cohort design are particularly important for fostering this.



Cohort size

Too many people in a cohort means that participants will be overwhelmed by a flood of comments, group identity will never coalesce, and individual voices will begin to feel unimportant. Too few cohort members, on the other hand, and discussions will become weaker, with little opportunity for interaction with a range of fellow learners. To design social and digital learning environments that mirror real working environments, cohort size should reflect the scale of typical extended working teams. Over the years, Nomadic has found that a cohort size of 50–100 learners is usually best.

Cohort diversity

When we first started delivering cohort-based learning experiences to clients, we assumed that relatively homogenous cohorts—in terms of job level, nationality, function, and so on—would perform best. We were wrong. Diverse cohorts, it turns out, generate more engagement and better learning outcomes. Within the IBM marketing organization, for example, we saw that randomly generated teams of marketers regularly outperformed intact working teams. Similarly, in our leadership academy's global edition, teams of learners from different organizations and countries regularly outperform teams whose members all come from one organization. These results align with **management research** demonstrating that though homogenous teams can feel more comfortable for members (especially at the time of team formation), in the long run, diverse teams demonstrate deeper learning and better performance.

Shared rituals

People respond to cues that make them feel like they're part of a larger group. These cues can take many forms; anthropologists have **studied** rituals structured by music and coordinated movement, while management scholars have shown that teams of business school students who **regularly share meals** generate higher profits in simulated negotiations. Similarly, researchers have also demonstrated that teams **function better** after they train together, committing fewer errors and working together more effectively. This dynamic holds true across a wide array of industries, with an enormous amount of interdisciplinary research showing that rituals increase **group cohesion and collaboration** overall.



How do you bring ritual to the online world? Subtle design choices can help.

- Create separate digital “spaces” where learners interact only with their fellow cohort members
- Encourage learners to fill out profiles and include photos
- Allow teams to choose creative names
- Emphasize the active sharing of real experiences, particularly stories of overcoming adversity
- Encourage healthy debate
- Provide completion certificates learners can share on social networks
- Highlight team connection and performance in emails and system notifications

FROM BACK-UP PLAN TO NORTH STAR

PepsiCo's cohort-based learning story

PepsiCo leadership quickly saw real business impact as multiple ideas that developed in learner discussions became pilot initiatives.

THE CHALLENGE

Homi Battiwalla, a career PepsiCo marketer, had just stepped into a new role leading global marketing capabilities. He had a big goal: accelerate learning for 3000+ global marketers to create a new generation of leaders across the iconic PepsiCo brands.

The only problem? The Covid-19 pandemic quickly blew that plan up.

No trips to Cancún or Shanghai for in-person capability workshops and business simulations. No live workshops to cascade the new end-to-end planning process through every global market.

THE PLAN

Homi tried to find a way to move these experiences online. He pitched his ideas—mostly featuring traditional e-learning and Zoom-based seminars—to PepsiCo's CMO. She listened for a while... and wasn't impressed.

Couldn't Homi do something more engaging? More impactful?

Enter cohort-based learning. Homi worked with Nomadic to deploy a flagship program focusing on the foundational elements of marketing leadership, with cohorts at the strategy's core.

THE RESULTS

It worked. **Engagement reached unprecedented levels. Completion rates rose to more than 80%.** Learners exchanged ideas across brand boundaries and worked through optional sections of the experience with unexpected enthusiasm. Even better, PepsiCo leadership quickly saw real business impact as multiple ideas that developed in learner discussions became pilot initiatives.

The CMO was thrilled with both the qualitative and quantitative data that emerged from the cohort-based programs. She also noted tangible shifts outside the platform as marketers began to collaborate as a single, unified function across the globe, employing new processes and standard briefs.

WHAT'S NEXT?

Now, in some locations, in-person learning is an option again. But given these results, PepsiCo has decided to continue to invest in digital cohort-based learning, adding five additional programs and expanding this model into new functions, too. Cohort-based learning is no longer the back-up plan within PepsiCo marketing; rather, Homi now describes it as the company's learning North Star.

3

PRINCIPLE 3

Social learning only works if real people engage with one another in authentic ways

This one is simple. **Contingent communication**—that is, communication in which a back-and-forth between at least two group members takes place—leads to more effective learning. With this in mind, cohort-based learning experiences must facilitate social engagements in which learners respond directly to one another. Prompts that generate predictable responses or straightforward fact recitations won't get the job done.

AI won't get the job done, either. Research has shown that AI chatbots and system-generated responses do not match the power of real human interaction to drive engagement, motivation, and impactful learning.

A fascinating study of online **poker players** showed that when people played with human partners, they activated the part of the brain responsible for “a theory of mind” (the part that considers the mental state of others), whereas players with an AI opponent did not. Studies have also demonstrated that the parts of the brain responsible for **planning, anticipation, and empathy** are more strongly activated in digital contexts when people interact with

humans versus computers. Likewise, brain regions responsible for feelings of **reward or accomplishment** show more activation when people win competitions featuring other human players. Considering these factors' importance in deeply social endeavors like leadership, adaptability, and creative thinking, cohort experiences should seek to promote these genuine peer-to-peer interactions.



4

PRINCIPLE 4

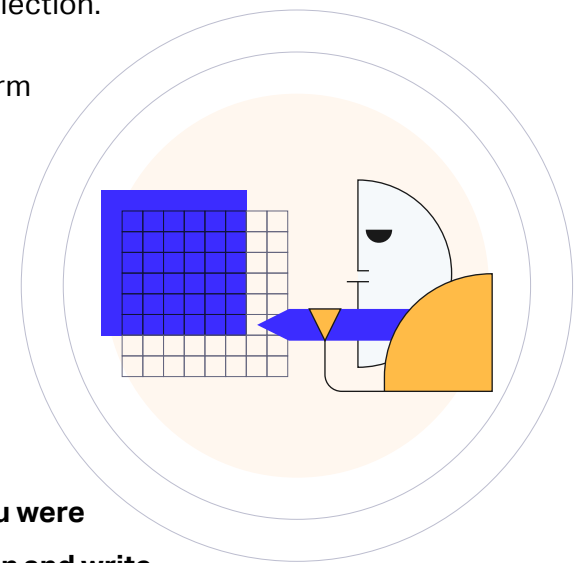
Embedded opportunities for individual reflection are a necessary supplement to social discussion

Research demonstrates that we almost always learn most effectively through organized consideration of our own experiences. Reflection is correlated to self-efficacy, or “the **belief in one's capabilities** to organize and execute the course of action required to manage prospective situations.” It's also related to cognitive gains that can only be triggered by this sort of reflection. Learners often acquire new knowledge tacitly, without conscious processing in the moment. This makes articulating and working through new knowledge essential for supporting **deeper individual understanding** long-term.

While the social aspects of cohort-based experiences are important, so too are elements that spur this individual reflection.

In a **study** within the Indian IT services firm Wipro, researchers analyzed the role of reflection in new employee onboarding regimens. One group of employees received a simple prompt to reflect on a daily basis: **Please take the next 15 minutes to reflect on the training day you just completed. Please write about the main key lessons you learned as you were completing your training. Please reflect on and write about at least two key lessons. Please be as specific as possible.**

The other group received no prompt. The group that was prompted to reflect earned a 23.2% higher score on exams and showed better performance at their customer service jobs over their first three months of employment.



But there's a caveat here, too. Without additional prompting, the relative performance gains disappeared after a few months. This suggests that regular opportunities to reflect distributed over time are necessary for these positive outcomes to last.

5

PRINCIPLE 5

Cohort-based learning should enable knowledge sharing and peer facilitation

Genuine knowledge sharing is deeply beneficial for both organizations and individual learners. The benefits when knowledge is shared across levels multi-directionally are particularly vast.

In one study, Johns Hopkins Professor Christopher Myers highlights that when individuals in consulting project teams “engage in this more reciprocal vicarious learning”—as opposed to experts sharing only with novices—they receive consistently higher client performance ratings.

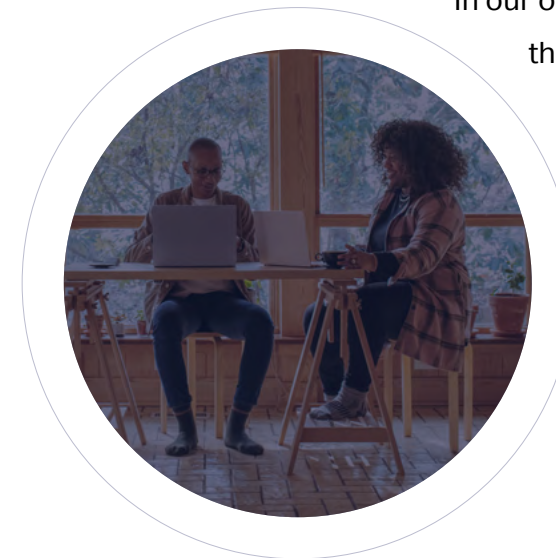
This suggests that more senior employees stand to benefit just as much from this reciprocal exchange of information as their junior colleagues do! Given the nature of work today, this finding makes sense. Often, more junior people are closer to the work itself. When knowledge flows in all directions, insights from these junior colleagues can help fill in gaps in senior leaders' understanding, even if those leaders may be more “expert.”

Despite reciprocal sharing's **benefits** to employees across levels, most knowledge management systems, enterprise social networks, and traditional e-learning platforms typically only offer conventional

top-down approaches to knowledge sharing (if they manage to capture or circulate knowledge at all). This may be because it's just plain difficult to achieve effective reciprocal sharing at scale. This difficulty is demonstrated by the fact that—in one analyst's estimate—Fortune 500 companies lose about **\$31.5 billion per year** as a result of employees “trying to recreate the wheel, repeating others' mistakes, or wasting time searching for specialized information or expertise” rather than accessing their colleagues' relevant knowledge.

Good learning design helps combat these losses by encouraging a structured and multi-directional knowledge flow. For the greatest pedagogical impact, this sharing should also be active. Research shows that when employees **actively share their knowledge** with others by “systematically going through the knowledge, examining it, understanding it, integrating it, and presenting it,” they also strengthen their own expertise, increase the depth and breadth of their knowledge, and enhance their job performance (as rated by managers).

In our own academies, Nomadic does this by offering learners the opportunity to facilitate conversations and informally teach their peers—thereby spreading their knowledge to others and deepening their own understanding of that same knowledge along the way.



"THE PROOF IS IN THE PUDDING"

AB InBev's cohort-based learning story

In late 2019, Ryan Verschoor, head of marketing capability at Anheuser-Busch InBev, faced a major business challenge. The marketing organization needed leaders at all levels to become more consumer-centric and agile for the company to achieve organic growth. There was a problem, though: the existing marketing academy wasn't up to the task. Unwieldy, expensive, and entirely live learning-based, it simply couldn't scale across the sprawling organization of 2,500 marketers operating in more than 150 countries.

THE SOLUTION

After experimenting with a few other options, Ryan began working with Nomadic to establish the AB InBev Marketing Excellence Academy. Results came quickly. The initiative is still in its early phases, but several key data points have him particularly excited already.

- A **95% correlation was observed between engagement** with the Marketing Academy and general measures of employee engagement. ("It's off the charts," Ryan said.)
- **89% of all target learners completed the initial Program**, including mandatory commenting, upvoting, and other requirements—a multiple of previous completion rates, which were for programs with much lower bars for completion.
- **2000 learners commented more than 17,000 times**, averaging twice the number required for completion.

MORE KEY RESULTS

Quiz scores demonstrated **large gains in the understanding** of key concepts relative to integrative assessment benchmarks.

There was a 30x increase in the number of people **attending voluntary real-time sessions** related to learning content.

Discussions showed **hundreds of examples of the application of new knowledge and insights to learning teams' work**, including process innovations, ideas for campaigns, and more.

There was a strong indication of behavioral changes vital for leadership within the marketing function, including the increased adoption of common goals, processes, briefs, and business language across brand and market silos.

"The proof has been in the pudding," Ryan said, "In seeing the amount of engagement, with people interacting with their peers, arguing, discussing, debating, provoking."



PRINCIPLE 6

It's not just about discussion. It's also about learning to argue together.

Sharing and reflection are essential for meaningful learning experiences within digital cohorts. **Arguing** (constructively!) is just as important. Social disagreement activates our critical faculties, making us more productive and creative. Human reason evolved within highly social contexts, and we're literally smarter when we **engage with other people**.

But this highly social wiring has its drawbacks, too. Cognitive scientists Hugo Mercier and Dan Sperber **call** human reason a "flawed superpower" capable of both incredible feats and the bias-fueled foibles described in Daniel Kahneman and Amos Tversky's **Nobel Prize-winning work**. In practice, we often behave less like idealized scientists carefully testing hypotheses and more like—in Kahneman's **words**—"machine[s] for jumping to conclusions."

Structured argument is a great tool for learning to avoid this impulse because it encourages us to reconsider our biases and see patterns and problems from novel perspectives. For leaders, this skill is especially crucial. A **wealth of evidence** shows that strong organizations are powered by the respectful exchange of different perspectives and opinions. In one example, Stanford business school professor Robert Sutton points to the intense "creative abrasion" between Pixar director Brad Bird and producer Robert Walker, highlighting how the colleagues' frequent disagreements became an engine of the organization's success.

Time and again, we've seen it's not just about what you learn—it's also about how you learn to argue. University of Minnesota psychologist David Johnson and his colleagues **describe** these opportunities for productive arguing as "well-structured controversies."

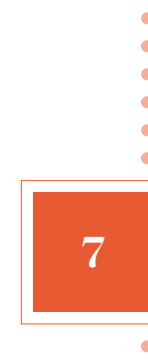
“In well-structured controversies, participants make an initial judgment, present their conclusions to other group members, are challenged with opposing views, grow uncertain about the correctness of their views, actively search for new information, incorporate others’ perspectives and reasoning into their thinking, and reach a new set of conclusions. This process significantly increases the quality of decision making and problem solving, relationships, and psychological health.”

The benefits are clear. Yet few scalable digital learning experiences create space for emerging leaders to practice debating ideas. When our clients tell us how difficult it is to develop leadership talent internally, this is one of the most important barriers they cite.

It’s a huge missed opportunity, given that learning platforms are the ideal low-risk environment for emerging leaders to hone the skills that will help them guide productive disagreements throughout their careers.

To create this space, learning designers should focus on sequencing “trigger events,” or cues that create the right level of “**inner discomfort and complexity**” without negatively impacting learners’ sense of psychological safety. These events must also give learners the opportunity to productively work through the resulting tension alongside other group members. In practice, this could look like first asking a cohort to debate a situation where a team didn’t consider a new perspective, then subsequently providing an opportunity for learners to workshop solutions.

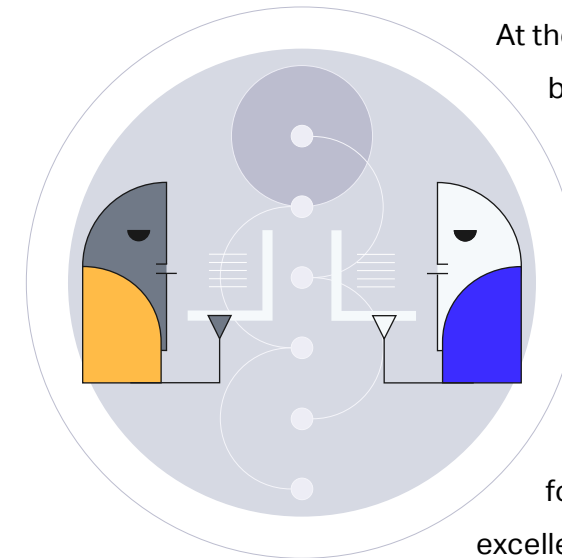
As an additional pedagogical bonus, well-formulated and well-positioned prompts also result in strong evidence of what psychologists call the “**accountability effect**.” This is the tendency of learners to present more carefully prepared ideas when they’ve anticipated group members’ critiques. The former CLO of Ketchum, a global PR firm, put it this way: “You can’t hide or coast by if you know you’ll be held accountable for your ideas within a cohort.”



In short: our ideas become better when we know we’ll need to defend them. At Nomadic, our goal is to make it impossible for learners to succeed by simply clicking through. The “accountability effect” is a powerful motivator to this end.

PRINCIPLE 7

To effectively scale a cohort-based learning experience, put learners, not instructors, at the center of everything



At the moment, the majority of new entries into the cohort-based learning space actually look a lot like traditional classroom-based instruction, just transferred online. Notably, they retain the instructor or facilitator at the learning experience’s core.

These instructor-led programs certainly have their place: facilitator-centric experiences can be particularly effective for small-group learning, for example. And we’ve all experienced the impact an excellent teacher can have.

Yet a reliance on instructors ultimately limits a solution’s ability to scale across thousands (or even tens of thousands) of learners. Today’s global teams have an especially pressing need for leadership-capability building, given the distributed nature of their work. Managers in these organizations often serve as experts in their region, making strategic business decisions based on deep local knowledge that no centralized C-suite can feasibly aspire to master themselves. Furthermore, these global teams also need solutions that can be implemented quickly. The **World Economic Forum**

ranked the turnover in management and leadership skills as two to three years, just behind software engineering.

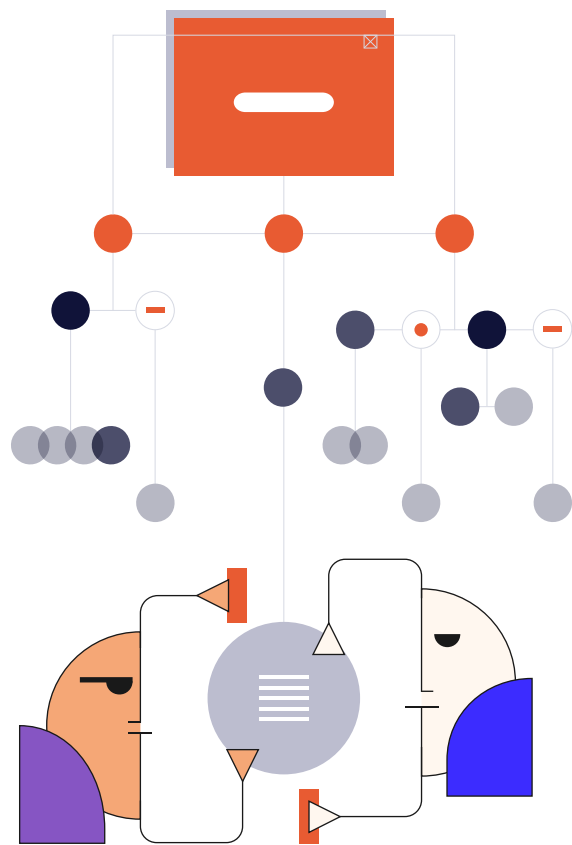
In this landscape, regardless of its quality or effectiveness for smaller teams, any solution that cannot be implemented both at scale and quickly just won't do the job. This is why at Nomadic, we opt for an instructorless

model. Learners across time zones don't need to wait for an instructor to log in, and companies don't need to wait for additional facilitators to be trained to scale the solution across new teams. Instead, in our content-based model, an unlimited number of learners can absorb and interact with our programs at the same time. This scale doesn't dilute the learning experience, as it might in a classroom. Rather, more learners simply means more voices and perspectives in cohort discussions—and more data and insights for organizations to explore.

Beyond the scale, we've seen that this model has other benefits, too. An instructor-led model centers the facilitator's voice, while at Nomadic, we're able to feature a wide variety of experts and practitioners on each topic we address. This

diverse range of voices is just good practice, but it also ensures that learner interactions take center stage as cohorts come together to debate and discuss how these different perspectives might apply to their own work, without one authoritative "correct" figure in the room.

Finally, we've found that, in all our design decisions, it's important to remember a simple truth: managers today are very busy. In an economy predicated on attention scarcity, crafting beautiful content with a high production value and a healthy dose of personality goes a long way in keeping learners engaged. In our case, it's led to a completion rate of around 86%, unprecedented for a digital learning experience. Given the



immense demands on managers' time, perhaps it's no surprise that content created by documentary filmmakers—and curated by experts to hone in on the most important skills now—keeps their attention more than hours of Zoom instruction. Even if that Zoom instruction comes from the most renowned of professors.

8

PRINCIPLE 8

Human stories, expertly told, are the fuel that powers cohort-based learning

Stories are **special**. They're easy to **understand and remember**, and people find material presented in story format **more interesting**, regardless of the topic. It's no surprise we've been using them to teach and learn for centuries.

But where learning is concerned, not all stories are equal. The most successful stories are neither too easy nor too difficult to understand. They don't confuse the learner, but don't offer obvious lessons, either. Sung-il Kim's **research** shows that people are most interested in stories when they have to make "medium-level" inferences to piece together the logic behind the plot's

advancement. In seeking these causal connections, the audience becomes an active participant in the story's creation.

This healthy dose of nuance becomes even more important when the stories are about topics like leadership and management. Leaders operate within environments that are particularly complex, with high levels of uncertainty and conditions that can change quickly. These leaders rarely have access to perfect information, and decisions often lack the sort of black-and-white clarity a heavy-handed teaching story might



portray. To be pedagogically useful—and, let’s face it, believable—teaching cases about leadership must also model this real-world complexity.

In a facilitator-led model, these real-world stories might be shared by the instructor as one element of a larger lesson. At Nomadic, they’re our content’s cornerstone. We build each module around a curated story with a structure that ensures learners both actively engage with the story and begin the process of applying what they’ve learned. This structure includes the introduction of **threshold concepts**, or concepts that, once understood, will help push learners to conceive of and discuss the story in new ways. It also includes asking learners to actively extract insights from the story and work together with their teammates to find opportunities to apply them.

When considering which stories to include, we’ve discovered some helpful principles for identifying and curating stories that will facilitate cohort engagement. Stories should be:

- Short (three-to-four minute videos/podcasts or 500-word written passages)
- Relatively open-ended
- Conducive to discussion or debate
- Driven by an identifiable human individual or group protagonist
- Based on actual people and events rather than simulations

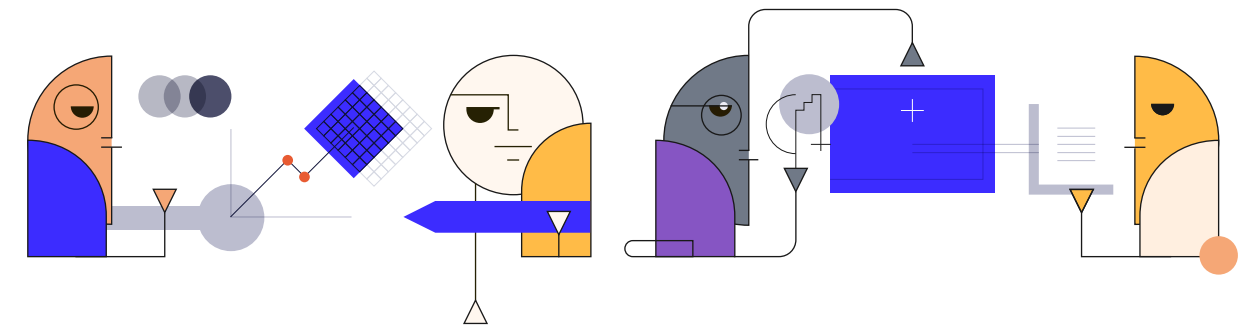
Finally, we’ve also observed that stories work best when they’re inspired by the underlying capabilities and concepts we seek to teach, rather than the immediate subject matter. For example: just because we’re teaching people how to organize teams effectively doesn’t mean we’re limited to straightforward stories about collaboration at the office. Instead we could (and did!) discuss this topic much more effectively with a delightful animation about **honeybees**.

In closing

Addressing learning needs today

The term “middle management” means something very different than what it once did. Our (perhaps less-than-positive) vision of the stereotypical middle manager comes from an outdated concept of a paper pusher in a manufacturing-based economy.

If that stereotype was ever accurate, it certainly doesn’t hold today.



In today’s team-centric, fast-paced, and highly uncertain work environments, managers are no longer supervising rote tasks or simply ensuring production volume. Now, our economy competes on innovation, knowledge, and problem-solving, and managers are at the center of all of this. Work happens in teams because there’s simply no other way to carry out these deeply collaborative tasks. And the people at the helm of these teams have become strategic leaders in their companies, with a nuanced and complex role that accounts for a full **22% of revenue**—a greater share than senior leadership, marketing, strategy, or any other part of the business.

There is a huge need for learning that meets these new needs. Any solution that’s going to address them must:

- 1 Effectively teach strategic, highly social skills
- 2 Compete for learners’ attention in an economy predicated on attention scarcity
- 3 Scale across the business, both logistically and in price point

Digital cohort-based learning is getting so much buzz today because it's the only available solution that has the potential to do all three. In-person leadership offsites and more traditional online education both have their benefits, and they're great solutions for some learning needs. But for organizations looking to help their managers gain difficult-to-teach mindset skills, keep these employees engaged in their learning, and scale this premium leadership development across globally distributed teams, there's a reason—as Wes Kao of Maven proclaimed—“cohorts are king.”

At Nomadic, we've seen firsthand the impact this learning can have. Completion rates soar when learners are enrolled in cohort-based programs. Managers collaborate to apply new concepts to their everyday problems as they learn in the flow of their work. And the academy itself becomes what one executive called an “insights machine,” generating a mass of quantitative and qualitative data leaders can use to drive real business transformation.

Bottom line: when designed with these eight principles in mind, cohort-based learning is transformative, impactful, and has the power to put L&D at the strategic center of business.

Which, in today's fast-paced and uncertain landscape, is exactly where it should be.



