

5 best practices for building **data science** skills academies



As we enter the era of **data literacy** and rapid digitization, organizations can no longer rely on ad-hoc training and one-time learning sessions to build the data literate workforce of the future.

Data science skills academies are meant to address the data literacy skill gap and centralize data upskilling and reskilling efforts within a broad learning ecosystem.

Why do you need a data science skills academy?

With rapid digitization and systemic data talent shortage, developing organization-wide data literacy is top of mind for many Chief Data and Learning Officers today. [According to Deloitte](#), the number of jobs posted for analysis skills has consistently surpassed the number of employees available for these roles. The need for these data science skills is also increasingly prevalent as organizations bring AI to scale. According to a [PwC survey](#) of more than 32,000 workers, 77% of employees are looking for opportunities to reskill on digital and data skills amidst higher concerns of automation, and the need to work with automated systems.

What is a data science skills academy?

Data science skills academies provide a centralized in-house upskilling and reskilling experience for employees where they can learn, collaborate, share, and gain new data skills at scale. Data science skills academies depend on C-Level sponsorship (e.g., usually Chief Data and/or Learning Officers)—and require cross-functional collaboration between learning and development teams, data experts, and business leaders. Data science skill academies confer advantages that are traditionally not found with traditional one-off training.

These advantages make data science skills academies a core element for many organizations looking to forge long-lasting change and galvanize a data culture. In his keynote speech at LinkedIn Talent Connect, Josh Bersin describes the shift toward in-house academies which he calls [Capability Academies](#).

He argues they differentiate themselves from other e-learning platforms by offering value through organization-specific upskilling which helps employees advance their careers. These advantages are why organizations like NatWest are launching academies to fuel business growth through data literacy.



“
Data culture is not just an option to succeed in data analytics initiatives, it is business-critical.”

Sudaman Thoppan Mohanchandralal

Regional Chief Data and Analytics
Officer at Allianz Benelux

How are data science skills academies different?

Building data literacy within an organization requires creating a deep-lasting data culture that enables a mindset and habit shift throughout the organization. By building a skills academy with support from data leaders, L&D leaders, and SMEs, the support for a cultural change is more prevalent.

In [this report](#), McKinsey identifies three benefits to creating an in-house data science academy:

- 1 A common organizational direction, technical vocabulary, and process
- 2 Customized content linked to a company's goals, starting point, and industry context
- 3 Active apprenticeships and mentorships where people can exchange ideas and skills

Academies allow leadership to develop a centralized avenue for data upskilling. By taking control of the learning process, leaders who understand the organizational direction can set up their organization's learning experience in a way that will translate directly to improved performance. Encouraging ad hoc training does not provide the same benefit. It is not developed with the organization's goals, business problems, and future roadmap in mind.

Data science skill academies are becoming increasingly popular among DataCamp for Business customers. For example, [Allianz is training thousands of employees](#) on a variety of data skills as part of their Global Data Analytics Academy.

Based on **DataCamp for Business** customer best practices, and our experiences supporting them, we've assembled five best practices for building an internal data science skills academy.

Our best practices

- 1 Tie learning to transformational outcomes
- 2 Focus on driving engagement
- 3 Work with different learning modalities
- 4 Create personalized learning paths
- 5 Measure the impact of your training and iterate



1

Tie learning to transformational outcomes



Tie learning to transformational outcomes

Align learning outcomes to business objectives

When developing a data science skills academy, it is critical to set goals based on transformational outcomes rather than skill-based goals. An example of a skill-based goal would be to have 1,000 people learn Python. Some examples of transformational outcomes are “reducing tickets sent to the data team by enabling people to do simple queries with Tableau dashboards or SQL”s or “reducing costs by improving supply chain forecasts with time series forecasting skills.”

By tying learning outcomes to transformational outcomes that impact a key performance indicator like costs or ticket request velocity, you’re able to better position learning data skills as a strategic lever to achieve business outcomes. Moreover, by organizing goals in this way, leaders can directly assess the impact of their academy and make adjustments when necessary.

Tying learning outcomes to learner growth

Tying learning outcomes to transformational outcomes also allows organizations to encourage learner career growth. These objectives are tied to actual career performance outcomes, not checking a one-off course of a to-do list. By participating in the program, learners are directly improving their data skills, becoming more competitive as employees, and improving their career growth outcomes.

2

Focus on driving engagement

Focus on driving engagement

A key pillar for a successful data science skills academy is driving enthusiasm around your program and reducing barriers to entry to learning data skills. Two ways to achieve this are through evangelizing your academy and investing in learning resources that improve engagement.

Think like a marketer

Evangelizing your data skills academy involves creating a strong internal marketing campaign around the program. There are a variety of tactics you can adopt to evangelize your learning programs. Most importantly, executives, leaders, and middle managers should be engaged and asked to consistently celebrate and evangelize the importance of learning. Moreover, engaging learners and discussing their success stories is useful. Some successfully run data science academies have engaged learners upload

videos describing what they learned from their courses and projects, while others promote expert weekly or monthly tech talks as part of a data science skills academy program. Another key tactic is gamification. For example, [McKinsey](#) points to a success story where an organization gives digital trophies to engaged learners.

Tactics you can adopt

-  Link to your data science skills academy homepage in all your communications
-  Launch an internal podcast
-  Create learner testimony videos
-  Begin a learner of the month program
-  Launch a lunch and learn initiative

Frictionless learning environments are useful—especially for reskilling

Another key aspect of increasing engagement is making sure that whatever learning resources you're creating are inclusive to all skill levels and are easily accessible to reskillers. Depending on the breadth of your data science skills academy, it's important that complete beginners learning coding skills like Python don't get mired or demotivated by installing programming environments—and that they're able to see the usefulness of applying the skills as soon as their learning begins.



3

Work with different learning modalities

Work with different learning modalities

Traditionally, most training is either done through cumbersome self-led video-based learning, or through mandatory instructor-led training. Today, organizations require building a learning ecosystem that meets their learning needs regardless of preference. To succeed at creating a learning ecosystem, data science skill academies need to leverage a variety of engaging learning modalities, including but not limited to:

Online courses: The rise of MOOCs has completely revolutionized education and how people learn. However, for data upskilling, it's important to choose learning resources that prioritize application readiness and the ability to quickly apply what was learned, rather than getting mired by theory, installations, and learning outcomes that don't apply to the work itself.

Blended learning: Combining online self-led learning with instructor led-learning lets you scale the usefulness of your own internal learning resources.

Community of practice: Create a place where learners can share their learning outcomes and lessons in a social and encouraging environment. This could be a newsletter, slack channel, or even an internal podcast.

Hackathons, lunch and learns, expert talks: Some other great socially-driven learning modalities which focus on discussing data solutions to real-world problems and learning from experts in shorter, less formal, and more engaging sessions.

Multimodal learning: Leverage podcasts, webinars, white papers, and blog posts as part of the learning journey of your participants. This will help ground their newly acquired data skills as part of key industry trends.

Blended Learning Spotlight: Bloomberg

In their Data Analysis with Python upskilling program, the L&D team at Bloomberg leveraged a combination of DataCamp courses, classroom sessions, and a capstone project to increase Python usage by 561% among non-technical learners.

→ [Read more about it here.](#)

4

Create personalized learning paths

Create personalized learning paths

Data literacy is not a one-size-fits-all skill that can be checked off a yearly training initiative. Instead, it is a consistent mindset that needs to be sharpened and honed.

Moreover, depending on a learner's role, position, and desired learning paths, the combination of competencies and tools they need to learn can vary widely from another learner within the same team, department, or organization. This is why personalizing learning paths is important. For example, as part of its [Data Analytics Academy](#), Allianz uses DataCamp to create three distinct learning paths, one aimed at upskilling for data literacy, one aimed at upskilling for data analysts, and one aimed at upskilling for data scientists.

To scale your skill academy, consider who the learning personas are within your organization—and try to templatize learning paths for them. Moreover, use pre-learning assessments (more on assessments in the next section) to have a good understanding of who needs to be routed to which learning paths. Finally, don't forget to design a learning path that also extends to the different learning modalities covered in section 3.

Personalized Learning Path Spotlight

As part of their Global Data Analytics Academy, Allianz has used DataCamp's custom learning tracks to personalize learning paths for three types of personas: Data literacy experts in training, data analysts in training, and data scientists in training.

→ [Read more about it here](#)

5

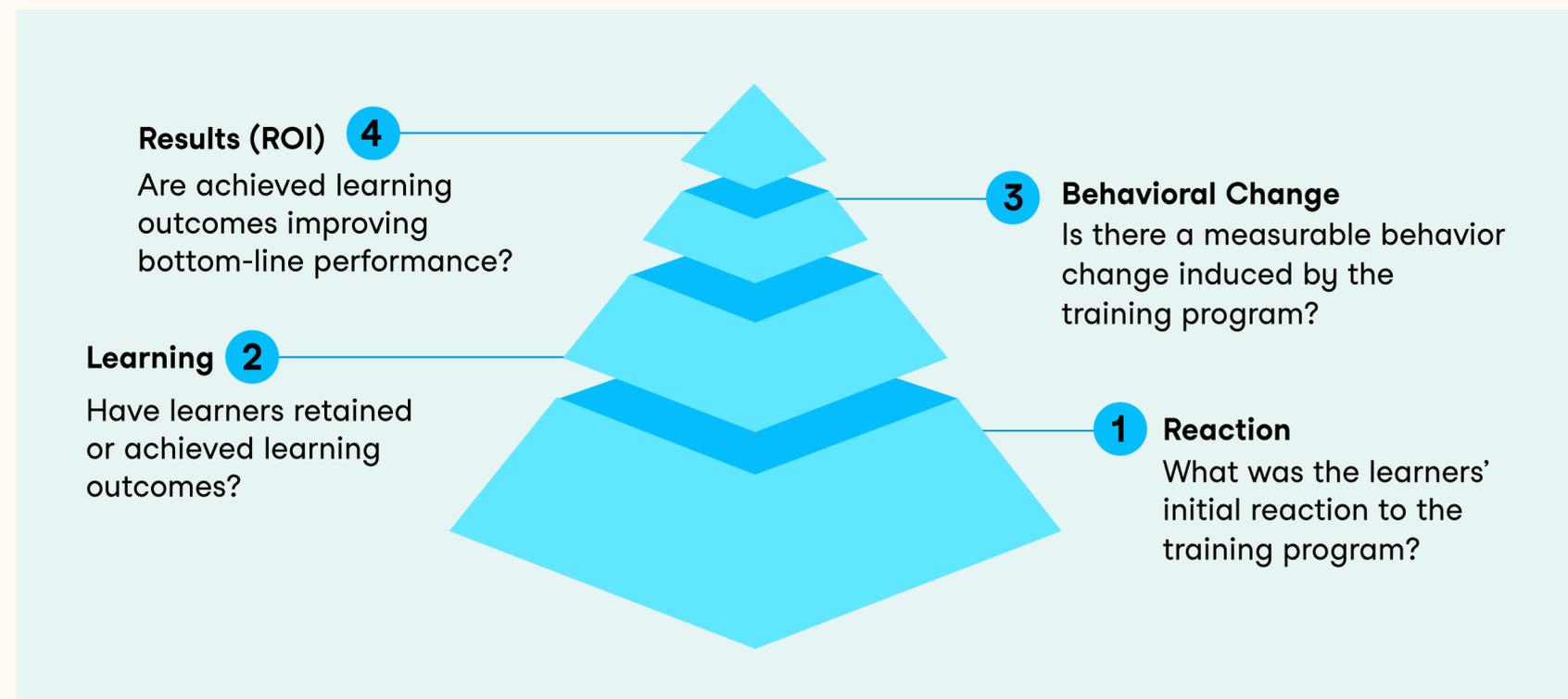
**Measure the
impact of your
training and iterate**

Measure the impact of your training and iterate

The importance of tracking learning return on investment

It is critical to measure how the data science skills academy is performing against the transformational outcomes you define. Critically assessing the program's performance and iterating to improve it will directly lead to engagement and bottom-line performance improvements across the board.

To measure the return on investment of training programs, consider using a framework like the Kirkpatrick model of evaluation by looking at proxy metrics related to reaction, learning, impact, and results.



The importance of assessments when measuring and iterating on upskilling

Assessments give organizations valuable information on how their employees' skills are progressing over time while also giving insight into potential skill gaps. Progression over time gives a clear indicator of the impact on upskilling the program is having. These skill gaps should inform improvements in the previously mentioned personalized learning paths. Other proxy metrics you can also look at to evaluate learning effectiveness are the following:

Learning engagement and reaction metrics

- ▶ Anonymous reaction surveys can be used to establish how learners feel about the usefulness of the learning program
- ▶ Participation, enrollment rates, and email engagement metrics can give you a solid sense of how learners are engaged with your program
- ▶ You can measure adoption, course enrollments, completion rates, XP earned from completing courses, and other engagement metrics on the DataCamp platform using Advanced Enterprise Reporting

Behavioral change and business impact

- ▶ If you have an internal data platform, you can work with your engineering teams to measure how learners are engaging with your company's data in real life
- ▶ If you're upskilling to reduce the workload of the data team on manual reports, you can measure the number of tickets submitted to the data team by learners versus non-learners
- ▶ The learning team can look at churn, billing, and retention for skill academy graduates versus non-graduates

The future workforce requires future-proof learning solutions

As data literacy becomes the de facto competency that separates leaders from laggards in the 21st century, data science skills academies are increasingly becoming a scalable learning model for the enterprise.

Data science skill academies enable organizations to go beyond ad-hoc training, and into forging a learning mindset that sets the ground for a vibrant data culture that enables the workforce of the future.

DataCamp's mission is to equip individuals and organizations to become data literate and build their future workforce by providing a single platform to bridge the massive data skill gap, find and hire the right data talent, and collaborate at scale. We do this by providing organizations the tools to benchmark their skills and identify skill gaps, upskill at scale with a learning platform that challenges the status quo of traditional online learning, understand organizational skill progression over time, verify existing skills, hire the right data talent, and reduce the time to insight.



Bridge your team's data
literacy gap and **become more
data-driven.**

[Explore DataCamp for Business](#)