Strategic Curriculum Optimization

How companies can manage their learning programs to address strategic business needs at lower costs
Curricula that make a difference are designed in response to strategic business needs and based on competencies. Accenture's advanced analytical and statistical toolkit can help executives reshape their organization's learning programs to meet business needs - even when budgets are tight.
Learning is essential to maintaining and expanding organizational capability

A highly skilled and well-trained workforce is the backbone of any successful organization. With labor representing a significant share of total costs, executives who seek to increase productivity must make learning a top priority. This responsibility ranges from creating basic training programs to conducting in-depth analyses of future training needs. To do that, leaders should understand current and future strategic personnel demands in view of the skills and abilities employees already have.

Given the high cost of learning programs, businesses and governments are keen to find new ways to develop the so-called “cognitive capital” of their workforce, while maintaining or reducing what they spend on learning programs overall.

At Accenture, we have broad experience in helping our clients identify and address their learning needs in different business situations by optimizing curricula at all levels.

For a large global resources company, for instance, we helped the organization realize immediate benefits by designing and implementing a transition from classroom-based training to “blended learning” across the company.

We also helped a national telecommunications provider in Europe by adapting its training curriculum for changes expected in the business in the medium-term.

In many cases, we observe that organizations have difficulties in identifying how much of which competency is required. This leads to uncertainty: are they investing in the right places right now? Furthermore, they lack a baseline understanding of the current competency levels of the workforce, making it difficult to design learning programs.

Accenture has developed a Strategic Curriculum Optimization toolkit to help organizations understand the competencies needed, based on business strategy, and to optimize existing training curricula. One client, the German Federal Armed Forces (Bundeswehr), used the toolkit to streamline its existing training programs, maximize qualification levels and lower the costs of training.

Strategic Curriculum Optimization helps companies offer training in line with business strategy

Strategic Curriculum Optimization demands a deep and structural analysis of two key questions:

Which competencies are required at what level to address strategic business needs?

How can we train people in multiple areas through single course offerings, so that there is more overlap and curricula are shorter? Likewise, how can individual competency profiles be broadened?

Accenture has developed a four-step analytical toolkit to help our clients answer these questions (see Figure 1).

First, a unified Competency Model serves as the underlying “language of analysis.” Second, Learning Needs are analyzed based on strategic and operational parameters that define the demand for competencies. Third, Synergies between curricula are identified to minimize the footprint of training operations and to reduce the cost of training per competency. Finally, Course Profiles are generated so that workforce competency levels, overall productivity and individual versatility are maximized.
Strategic priorities and operational needs define future demand for competencies

The demand for competencies is dependent on factors that influence an organization from the inside and the outside. For instance, strategic changes within a company – such as new areas of business, evolving technologies, improved processes or organizational reform – impact the type and amount of training needed.

Learning needs are also influenced by external forces, such as imbalances in markets, new technical standards or compliance requirements.

In the case of Germany’s Bundeswehr, its need for learning programs changed when personnel was reduced after major reforms of the armed forces. The Army’s technical maintenance and repair crews for land-based systems (such as tanks and other vehicles) were traditionally trained to work on one specific system. In the near future, however, individual mechanics will be required to handle several systems in parallel (which requires multiple qualifications).

Using the Strategic Curriculum Optimization Toolkit, Accenture and the German Armed Forces successfully redesigned the curriculum to match the expected learning demand, while enabling the organization to ready itself at a reasonable cost for training for multiple qualifications.

The competency model quantifies task and system-specific competency levels

Accenture’s competency model is based on a custom scale of competency levels that reflects the levels people can attain. On this basis, the competency profile required to perform a certain task can be described.

The model maps task-specific competency levels across all systems on (or within) which specific tasks are to be performed (see Figure 2). Systems are further subdivided into individual components to allow for an even more detailed analysis and fine-tuning of individual competency profiles.

To qualify employees to handle a specific system (such as a vehicle, a business process or a computer application), companies must compare individual competency profiles with the required competencies.

The competency model provides a way to coherently map competency profiles and to analyze the effects of changing parameters. The model helps analyze organizational and position-specific needs (demand for competencies), existing capabilities (supply of competencies) and the learning objectives of individual training courses or modules.

This versatility - e.g. the ability to analyze the impact of changing parameters - is the foundation of Accenture’s Strategic Curriculum Optimization approach.

Learning Needs Analysis: Expected demand for skills and current skill levels

The required course capacity can be calculated using the quantitative learning needs analysis tool. Based on the competency model, it calculates the types and volumes of training required, taking into account both strategic objectives and operational needs.

Strategic parameters summarize the expected future scope and scale of operations for all systems in question. For an automobile manufacturer seeking to optimize course curricula for factory workers, this could be based on the medium-term production plan for each factory and the expected degree of volatility. Meanwhile, operational parameters make specific course requirements clear.

This example links expected factory output to the required number of trained workers, taking into account regular operations, repair and maintenance schedules and contingency capacities to accommodate spikes in demand.

The analysis gives companies a projection of how much of which competency profiles will be needed. This number is then compared to current staff levels as outlined in the current human resources strategy, allowing managers to clearly see insufficiencies and excesses. By balancing the needs and planned personnel levels in a step-by-step process, an organization’s curricula offered eventually matches what it needs, reaching equilibrium.
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Accenture Research 2014.
Synergy Analysis: Identifying similarities across tasks, systems and components to streamline curricula

When a company identifies synergies across its training processes, it has the chance to increase efficiency, lower costs and shorten implementation times, while increasing the impact of training operations.

Usually, organizations can find synergies in training curricula by identifying similarities in the systems that employees are taught to handle. The key to a successful analysis, however, is to identify not only similar components, but also similar tasks across different systems in use.

If groups of systems are made up of similar components, comparable competencies are required to handle these components. If the tasks that are performed on/with each system’s components can further be generalized, the required competency levels for each combination of task and component should be similar across all systems within that specific group.

Accenture’s Strategic Curriculum Optimization quantifies these synergies. Statistical analysis of the degree of similarity among the components of all systems being reviewed can be the basis of optimized course design. For example, common components of a family of similar systems can now be taught in only one type of course, instead of multiple courses.

The Bundeswehr uses a broad range of different vehicles in its missions. Currently, maintenance and repair crews are qualified to work on only one of these systems. However, systems often consist of similar components and their maintenance/repair require very similar tasks.

Accenture helped the Army reduce individual training times by as much as 25 percent by identifying several families of systems with highly similar components. The effort for training a soldier to handle one system remains unchanged, but by adding another system from the same family – as strategically required – the soldier can learn more in less time.

Course Profile Generator: Matching optimized curricula and training needs results in new course profiles

In a final step, the synergies across a family of systems can become the basis for a coherent array of training modules, such as general training for the entire family of systems and system-specific modules. These modules can then be arranged across the relevant time frame to provide the required competency levels as quickly as needed, and as efficiently and effectively as possible.

This process is based on existing training programs for the systems in question. These must be analyzed and compared in order to identify and solve any incompatibilities or to highlight further synergies. Once the relevant modules are defined, they can be grouped into a streamlined curriculum that trains employees in the required general modules first and subsequently adds system-specific competencies.

Once the new curricula are established, they can be mapped onto the requirements as identified by the Training Needs Analysis model – complemented by additional factors such as fluctuations over time, availability of resources (locations, equipment, instructors, time off from work, etc.) and operational requirements.

The result is an optimized annual training schedule enabling executives to equip their workforces with broader competency profiles that fulfill strategic business requirements at a lower cost.

Four assets for optimizing a broad variety of competency-based curricula

To help companies improve their training efforts – reducing costs and training more effectively – Accenture has developed quantitative tools that help organizations automate and accelerate the process of optimizing the curriculum. Each tool can be applied in different scenarios to meet specific client needs and help clients strategically manage their training programs – in line with business needs.
About Accenture

Accenture is a global management consulting, technology services and outsourcing company, with more than 305,000 people serving clients in more than 120 countries. Combining unparalleled experience, comprehensive capabilities across all industries and business functions, and extensive research on the world’s most successful companies, Accenture collaborates with clients to help them become high-performance businesses and governments. The company generated net revenues of US$30.0 billion for the fiscal year ended Aug. 31, 2014. Its home page is www.accenture.com.

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