Today’s auditors must embrace new technology-driven skillsets, and accelerate the pace at which other “expected” skillsets are developed.

- Technology is affecting every industry, and the auditing profession is no different. As the business landscape changes, and technology plays an ever increasing role, leveraging technology to be able to capture and analyze larger amounts of data is becoming an increasingly integral auditing skillset.

- More and more, audit firms are centralizing the performance of certain routine audit activities. This provides core audit team members with additional time to focus on non-routine areas of the audit that often require more analysis and professional judgment.

- Certain skills—such as business acumen, critical thinking, and understanding market trends—have always been expected of more senior auditors. However, the marriage of technology and auditing, as well as the evolving structure of the audit team, makes developing these skills to a greater extent earlier in an auditor’s career more important.

- Individuals entering the audit profession should be preparing for the changing skillsets that will be expected of them. It will be important for certain of these skillsets to be integrated into college and graduate school curricula so that accounting graduates can hit the ground running in their new jobs. Likewise, the CPA exam will need to evolve to test for some of these skillsets—something that is already being contemplated.
Breadth and depth of data will drive changes in auditor skillsets

Auditors need a deep knowledge of accounting and auditing guidance, and this is not changing. But as companies evolve, so must the way they are audited.

Auditors have—and should continue to—tailor their procedures to be responsive to emerging risk areas or complex transactions that are specific to each company they audit. But today, auditors are rethinking the audit approach for a broad population of companies due to a more universal change in how companies operate.

The volume of data that companies create is astounding. This data is often in disparate systems, and the extent of the information captured may not be widely understood within the company. However, being able to effectively and efficiently capture and analyze this data is increasingly important to performing the audit, and being able to provide insight into operational effectiveness, business trends, and business and compliance risks. Leveraging technology to be able to identify, analyze, and interpret the data is therefore an increasingly important skillset for auditors.

**Auditor pre-requisite: Critical thinking**

Auditors need to efficiently navigate the reams of data available to assess its reliability, usability, and relevance. They need to be able to articulate what data they need—and after all, when asking for a large volume of information, it’s important to get the right data the first time. They also need to be able to analyze the information they receive, draw connections to other data points from inside and outside the company, and identify trends and risks.

These are tasks that most auditors become proficient at once they enter the workforce and gain real-life experience. But they also require auditors to be astute in designing customized audit approaches, since the availability, relevance, and accuracy of information at each company will vary—and what might be an insightful data relationship at one company may be less meaningful at another.

These tasks also increasingly require additional technical skills best taught in school, including those associated with:

- Information technology - to assess system interfaces, analyze data, and understand information security (critical to determining whether the data is reliable);
- Critical analysis - to identify relationships, identify anomalies, and perform benchmarking, where necessary; and
- Statistics - to perform relational and predictive analysis and set expectations for audit testing.

To tap into this skillset in a deeper way, 12% of our fiscal year 2015 campus hires possessed a degree in science, technology, engineering, or math.

**Focusing on analyzing data, not gathering it**

Under the longstanding apprenticeship model used in most audit firms, the less experienced staff spend much of their time performing routine audit tasks (e.g., confirming bank balances, testing cash receipts). Increasingly, audit firms are centralizing routine tasks, freeing up audit team members to work on other aspects of the audit. This change in approach will provide less tenured audit team members with more opportunities to focus on higher level tasks, including reviewing work performed by others, resolving questions with clients, and using available data to set expectations for their audit testing.

Another aspect of auditing that continues to evolve is auditors’ analysis of data. More and more, this analysis will cover full populations of data rather than just samples—something made possible by rapidly evolving audit software. This approach will likely yield broader insight than sampling has in the past.

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The ability to gather and analyze data in real time may become a requirement for doing business, rather than a competitive advantage.

--PwC Megatrends

Higher order skills—such as deep business acumen, critical thinking skills, and understanding market trends—have long been expected of more senior auditors. But increasingly, all auditors, including those with less experience, need to demonstrate them to a greater extent to succeed in their data-intensive work.

As a result, individuals who are naturally inclined toward business topics (in addition to accounting topics) are likely to be well suited for an auditing career. For example, understanding economics helps an auditor think about the impact of market trends or economic pressures on a company’s decisions. Likewise, understanding finance helps auditors establish expectations of the performance of a company’s business for purposes of their risk assessment process during audit planning and execution.
Preparing accounting graduates for auditing in a data-driven world

Our firm recruits and assesses performance consistent with our view of what skills and behaviors an audit professional will need to be successful. Our PwC Professional development framework focuses on technical capabilities as one aspect of an auditor’s job. It also emphasizes that demonstrating business and global acumen, exhibiting leadership skills, and possessing the ability to cultivate relationships are as important as being a strong technical accountant.

While these skills are exhibited differently by an entry-level auditor versus someone with much more experience, we assess all of our professionals using this framework.

Integrating new skills into college curriculum

The foundation for some of the skills auditors will need in a data-driven business environment will need to be developed in undergraduate or graduate school.

It will likely take some strategic design on the part of colleges and universities to offer a curriculum that meets the evolving needs of their accounting students without extending the length of time it takes to graduate with an accounting degree. We believe this can be accomplished by integrating analytical exercises into the existing curriculum to help students develop proficiency in data analytics in addition to their core accounting skills.

We also propose incorporating a series of case studies throughout the accounting coursework that require hands-on use of analytics and other tools students may encounter on the job (such as cloud computing). Integrated real-life scenarios would help students understand the application of theory to actual fact patterns, and develop a cross-section of skills, not just those related to the academic subject the class happens to fall under.

This is already happening on some campuses, and is also reflected in the AICPA’s recent proposal to incorporate testing of some of these skills in the CPA exam—namely, critical thinking, problem solving, analytical ability, and professional skepticism.

Conclusion

The impact of data on the business world is triggering a change in the skillsets auditors must possess to be successful. Preparing the next generation of auditors for this evolution will help them be successful in their audit careers, and provide them with a well-rounded professional skillset that will serve them well in any business capacity.

Experience outside the classroom

One upside of many of these skills is that they can be developed from experiences outside of classroom coursework. For example, study-abroad programs facilitate global acumen and relationship building. Typical college jobs—like being a campus tour guide or a waitress—or volunteering can help develop leadership skills and business acumen. And working in teams or being involved in extracurricular activities help enhance interpersonal skills—something that underpins all of our development framework.

It will be increasingly important for students to make time for these experiences, to recognize how these experiences help them develop, and to be able to apply what they’ve learned to business circumstances.
Questions and answers

Q: How soon will the impact of technology be evident in audits?
A: Some companies may have already started to see evidence of the audit changes. At PwC, we’ve been investing in leading-edge technology, significant process improvements, and leadership and performance development for our people, and will continue to do so. This is helping us to move toward different tactical ways of auditing that will help us to continue to deliver high quality audits in an efficient manner and provide unique insights to our clients.

For example, we recently rolled out software to our audit teams that helps them interrogate and analyze large volumes of transactional data. The built-in algorithms and visualization technology help our teams better understand their clients’ businesses and provide more meaningful insights.

Q: Will companies being audited realize any benefits from this change in auditor skillset?
A: We believe that there is certainly opportunity for companies to realize benefits from the changing auditor skillset. Leveraging technology is intended to make the audit more streamlined, benefiting everyone involved by simplifying routine tasks. But we also believe that the changing skillsets and technological tools will help auditors provide additional insight into companies’ businesses. For example, by analyzing full populations of journal entries, auditors may be able to identify processes that could be refined. Likewise, auditors may identify duplicate data when gathering information from different systems for analyzing trends. Bringing this to the company’s attention may provide opportunities for increased efficiency in the company’s operations. Finally, auditors’ data analysis may identify relationships or areas of operating risk that companies may not have previously considered, giving management the opportunity to anticipate potential problems.

Q: Are individuals entering the workforce today prepared for this evolution in skillsets or will audit firms need to supplement their education on the job?
A: Realistically, the answer is both. Although some colleges have enhanced curricula that address this evolving skillset to at least some degree, many are just getting started. Therefore, accounting firms will need to be prepared to teach some of these skills on the job and through enhanced learning and development. Many of these skills have been taught on the job for years, but the pace of training may need to be accelerated as compared to the instruction given to prior generations of auditors.

Conveniently, millennials—those entering the workforce now and over the next decade—tend to have goals and inherent strengths that align well with these new skillsets. For example, millennials have grown up using computers, mobile technology, and smart devices their entire lives, and therefore have a much more advanced baseline knowledge of digital information than the generations that preceded them. In addition, a PwC survey of millennials around the globe found that more than 50% indicated development opportunities as an important attribute of a workplace since they are eyeing rapid career progression. Both of these millennial characteristics interface well with the accelerated skillset development new auditors will need to succeed.