IDENTIFYING SKILLS THAT INDUSTRY NEEDS

Skills mapping is a two-part process that involves identifying the skills employers require, and then mapping those skills to the curriculum. This process helps ensure that students successfully garner in-demand jobs.

When IBM began the skills identification process, the company found that it had literally thousands of entry-level skills that needed to be boiled down to a set that made sense to high school and college faculty, who would map the skills to the curriculum. Brian Piper, Senior Client Services Representative & Researcher, IBM Human Resources, provides some insight into how IBM successfully completed the first part of the skills mapping process for P-TECH Brooklyn.

School: Pathways in Technology Early College High School (P-TECH) in Brooklyn, NY
Partners: New York City Department of Education, The City University of New York, New York City College of Technology and IBM Corporation
Launch: September 2011, the first P-TECH 9-14 Model School
Degrees Offered: Computer Information Systems and Electromechanical Engineering Technology

IBM has thousands and thousands of entry-level skills. How did you net them down to a manageable set that high school and college faculty could use to map to the curriculum for P-TECH Brooklyn?

BP: We started by doing two things. We reviewed the list of entry-level jobs a second time, but looked at them based upon availability and demand. We weeded out some that were not common or were not in-demand hiring areas. We then consolidated the skills. We might have one skill about writing proposals and another about writing for clients, but both are essentially just about writing well in the business context, so we put them together.

We also organized the skills. We categorized skills as technical or professional. We then looked for common themes that ran through skills. We found, for example, that communication and negotiation were skills that cut across all jobs, so they became foundational to all jobs.

How did you avoid having a set of skills that would prepare students only for jobs at IBM?

BP: Basically, we made IBM skills more generic. We would take IBM technical skills and identify the open-source version of what all students need to know. For example, we removed Websphere and replaced it with Apache. If you know Apache, you are well on the road to knowing Websphere. In some cases we knew the alternative, but in some cases we didn't. When we did not, we would reach out to the IBM subject matter expert, and asked them what the alternative would be.

We came up with a list of skills that would make students good candidates for a job at IBM or anywhere else. With the skills that we identified, students can fill jobs for our clients with IT needs – banks, airlines and more.

Do you have any suggestions for how companies can begin to identify entry-level skills if they don't have a system in place to do so?

BP: Ask your staff to write want ads. For example, if a company needs an entry-level employee to work in a call center, have them write down the skills that the successful candidate will have. You can then extract the skills and provide further description.

Here's another trick: Identify the role that a company wants to build. Then do a search on that role on a career website, and see what skills another employer has identified. Using the combination of a want ad plus this research, it's possible to build a comprehensive description of the skills that a particular job requires.

How have skills changed from when you did this exercise in 2011 to now?

BP: The pace of change has been great. When we first did this, "cloud" was just beginning to be on our radar. Now it's integral to our work. Our first skills map gave us a good start, but now we have to maintain it.

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For more information about the focus on careers in the P-TECH 9-14 model, please visit ptech.org