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Proficiency Levels In Workforce Skills

For Developing & Managing Your Company's Employees

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The explicit identification, inventory and tracking of skills has become more important in the modern workplace.

Skills can be concrete functional technical capabilities, such as programming in JavaScript, building an Excel spreadsheet, or operating a forklift. They can also be “softer”, including teamwork, leadership, and communication skills.

Taxonomies (libraries or collections of skills) such as the U.S. Department of Labor’s O*Net, EMSI, and the Open Skills Network are an important step forward in managing large workforces and provide large collections of skills to address many to most workforce occupations. These are useful for recruiting, job seekers, and educational institutions. However, some taxonomies do not provide the proficiency levels necessary for most corporate use cases of developing, managing, and placing employees, which limits their usefulness.

An accurate inventory of skills is important to power many corporate scenarios. These include staffing projects, employee’s finding new opportunities internally and progressing their career, managers developing their people, executives preparing succession plans, and HR partners finding people for temporary assignments.

For all of these tasks it is insufficient to identify binary possession of a skill. As an example, since most employees work on projects, most corporate employees have “project management” skills at some level. These employees are able to identify objectives, phases, and deliverables. Yet, to manage a large, complex project, much more is required. For such a role, a higher

proficiency is needed, more specifically the employee must be able to also communicate reporting requirements, create monitoring methods, conduct project review, identify risks, and create contingency plans.

In this document we will discuss how taxonomies that lack levels can be used, as well as their inherent problems. We will then describe how taxonomies with proficiency levels can enable other uses and provide much more value to running a company and managing employees effectively. Finally, we will discuss best practices for managing proficiency level taxonomies.



Taxonomies Without Proficiency Levels

If skills do not have defined proficiency levels, we can describe them as “binary tags”. An employee either has the skill or does not have it. This can be useful for recruiting. By narrowing a list of candidates based on identified interests and career paths, you can give clues to interviewers about what questions can be asked. Typically, binary tagging does not give indication of suitability for a role except for the most entry level positions, where it is usually assumed that further development needs to occur.

Once an employee is part of the company the “skills as tags” approach begins to break down. For example, the skill of “project management” is one that most employees of a company have. Most employees work on projects. They understand the concept of phases, activities, tasks and deliverables or they could not function as productive team members.

The skills necessary to lead large complex projects are much broader and include identifying risks and creating contingency plans, conducting project reviews, performing estimations of cost, and scheduling of complex projects with many dependencies. Most people with a project management skill do not have this more advanced competency.

A solution to the problem above is seen in “binary skill tag taxonomies” and includes an attempt to explode a simpler skill tag into many different tags. This could be: “project management as team member”, “managing single team short term projects”, and “coordinating complex multiple team projects”. However, most skills have an increasingly more complex bundle of behaviors

as employees progress to higher levels. The combinatorial explosion of skills results in much more than multiplying tags by the four identified skill levels. The resulting taxonomies typically number in the tens of thousands, which creates a problem for employees identifying their skills and for maintainers of taxonomies to avoid duplication of skills in the collection. Also, due to the vast scope of the “tag libraries” they typically do not have explicit skill descriptions which leads to ambiguity as to their true meaning.

As a result, corporate “skill inventories” (collections of skills held by each employee) with binary skill tags usually result in little ability to understand who can do what job, what skills each job really entails, and, most critically, how employees can develop their skills to become better at their current job and progress their career further to other roles.

Recognizing this limitation, some skills-related software vendors who have skill taxonomies without levels have introduced levels without descriptions. One vendor has gone so far as to introduce eight (8!) proficiency levels, but with no description of the proficiencies. Of course, without descriptions there is no way to determine what level of proficiency an employee holds. This is the equivalent of a taxonomy with no proficiency levels; no one (including the employee) can determine objectively what level of proficiency they are. With the above descriptions you could perhaps identify whether you were a 1 or a 3 in project management. With no descriptions and an eight level scale, you would be challenged to answer what level of project management you are. Undescribed proficiency levels are equivalent to not having proficiency levels at all.

Taxonomies With Proficiency Levels

A taxonomy that is useful for understanding employee capabilities needs to recognize that virtually all skills used in productive work have a continuous progression. Typically, level 1 of that progression indicates basic familiarity with the concepts and terms of the skill, level 2 then allows productive work with the skill, level 3 indicates advanced proficiency with the skill and the ability to mentor others in it, level 4 is usually rare and indicates being a subject matter expert in the skill. To ensure proper identification of the level (especially level 2 versus level 3) descriptions of behaviors of proficiencies are critical.

Maintaining such descriptions is a significant task, especially for technical and functional skills that change over time. Nevertheless, the result is far more useful for common corporate scenarios: staffing projects, developing and promoting staff, assessing job performance, building high-performing teams, identifying new team members, and performing succession planning.

The value of skill taxonomies with proficiency levels is much higher for the company and the employee. Yet, companies face challenges in building, tailoring, and keeping these taxonomies current and accurate.

In Empath's mission of building corporate skills inventories for companies, we have seen several strategies to make this challenge manageable.

Leverage Existing Content

While undoubtedly your company has skills that are unique to your business, the majority of skills will be present in other companies, and certainly in companies in your industry. There is no need to build your library of skills from scratch. There is an entire industry, from major consulting firms to boutique skills specialists, who can provide a starting taxonomy of skills and typically represent decades of distilled knowledge of critical behaviors for each proficiency level. Prominent skill taxonomy products including IBM's Talent Framework, and consultancies such as EY start with base corporate skill taxonomies and customize them to your needs. Some skills-focused software providers provide a skills taxonomy as part of their offering. Empath is one of the aforementioned software providers. Our Empath Proficiency Library provides clients a core of a few hundred skills and behavioral descriptions of proficiency levels.

Conduct Regular Reviews

Skills level descriptions change over time, especially in technical and functional skills. Your employees and managers have this knowledge. A regular cadence of skills reviews, distributed to subject matter experts within your organization can keep them current. The review process should include a second validator for each description and a final review by a skills generalist (typically from Human Resources) to ensure consistency of length, tone, and terminology across skills.

Solicit Ongoing Feedback from Employees

Your employees care about their skills and proficiency levels. They will have opinions about what behavior exemplifies each level. Have a process to gather their feedback outside of the context of interim reviews of the taxonomy. This feedback can be fed into the review process.

Tie to the Job Architecture

The biggest value of the skills taxonomy is identifying which jobs require which skills at which proficiency level. The benefits and challenges of building such a job architecture are beyond the scope of this document, but your skills taxonomy should be validated against that job architecture. Are you tracking skills no longer needed by your identified job roles? Consider phasing them out. Do your skill level descriptions make sense with respect to the jobs that use them? For example, there are many behaviors associated with being "level 3-Advanced" in Python. As a practical matter, your job roles will likely not require many of them. It may be worth editing those descriptions down.

Analyze Your Skills Inventory

Perhaps the most powerful, yet least used, technique for optimizing your skills taxonomy is to quantitatively monitor the inventory on an ongoing basis. For example, if a skill is possessed by only a handful of employees, and its need is not expected to grow, it may not be useful to track or offer learning opportunities for it. Finally, the use of skills in job skills architecture should be examined. If some skills are not used often in your job skills architecture they can be removed.

Skill taxonomies can be enormously valuable in managing and developing your company's employees. While taxonomies with no proficiency levels can have value, especially for new hires, that value is limited for ongoing employee development and most corporate uses of skill inventories. Taxonomies with proficiency levels have much more utility in most corporate scenarios of skills usage, while also presenting manageable challenges in construction and maintenance.



PROFICIENCY LEVELS IN WORKFORCE SKILLS

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