



ALABAMA
Talent Playbook



Competency Ontology

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The Movement to Create Digital Wallets and Record Credentials is Significant.

However, only the Alabama Talent Triad has created a competency system designed to both describe the competencies gained by individual learners and verified by education providers to enable “recommendations” that link jobseekers with open roles based on their verified skills.

The Alabama Talent Triad Competency Ontology covers 365 in-demand occupations and provides a strong foundation that powers a robust, constantly evolving occupational vocabulary powered by EBSCOed that enables the Talent Triad to understand not only competency details, but relationships between competencies, in order to connect workforce, education, and employers.

Key Takeaways

Competency is defined as the capability to apply or use a set of knowledge, skills, and intellectual behaviors to thrive in a defined field or career setting. Competencies describe what a worker or learner knows, what they can do, and the context in which they can do it.

While skills are frequently noted in conversations about education and workforce alignment, and in practical application for the masses, skills are technically a component of competencies. A full competency statement will include:

- **Knowledge: What do I know?** Knowledge can be general but, in the context of competencies, tends to be specific to a person’s field. All accountants in the United States, for example, need some foundational knowledge about both the field of accounting and the applicable laws in this country.
- **Skills: What am I able to do?** Skills include both technical skills and human, or durable, skills. Technical skills, such as coding in Python or knowing how to operate machinery, tend to be specific to a person’s field of study, job, or industry. Human, or durable, skills—as the name implies—apply across a wide range of fields. These include things like communication, problem-solving, and creativity.
- **Behavior: What dispositions do I display?** Intellectual behaviors include things like integrity, drive, perseverance, empathy, and confidence in reasoning. Such behaviors are a critical component of how skills and knowledge ultimately get applied in a person’s career. A doctor, for example, may have tremendous skill and knowledge, but without empathy, he or she will fall short in terms of patient care.
- **Applied Context: In which environments am I working?** Contexts include both the materials with which one might be required to work, the conditions of the work itself, and the environment in which the work takes place. For example, welders will take specific steps to successfully work in a submerged rather than open-air environment.

Competency Ontology

After beginning work to identify and organize competencies in a taxonomy system, Alabama shifted in 2023 to an ontology with a robust set of tools to evolve the ontology over time and based on the contributions of its users. This shift has enhanced flexibility and opportunity for analysis and application.

Factor	Taxonomy	Ontology
Purpose	Defines hierarchical, one-dimensional relationships	Defines multi-dimensional relationships
Uses	Defines categories within a domain	Represents relationships across different domains
Dynamism	Static, changes only when inputs shift	Dynamic, changes frequently based on inputs, connections, machine learning, etc.
Language	Relies on strictly enforced rules, grammar, and spelling.	Inclusive language, adapting to spelling, grammar differences
Outputs	Describes information organization and hierarchical relationship	Describes intent, holistic relationships
Challenges	Limited utility for complex learning and employment record systems	Highly complex, requiring significant time and resources to develop

The Alabama Competency Ontology underpins the Talent Triad.

The Ontology uses competencies extracted from an analysis of 365 high-demand statewide and regional occupational job descriptions, which were developed by industry sectoral partnerships. Competencies form the “occupational DNA” for each occupation and career pathway in the state, describing the knowledge, skills, and behaviors required for each job, as well as the applied context of the competencies.

In 2023, Alabama shifted from its original approach, a taxonomy that formalized and prescribed hierarchical competency relationships, that described:

- Foundational competencies—personal, academic and workplace competencies that enable job performance.
- Industry-related competencies—industry sector and industry-wide technical competencies that support effective performance in a given industry.
- Occupation-related competencies—role-specific competencies that relate to the knowledge, technical ability, and role conditions needed to perform in a particular role, as well as management competencies.

Competency Ontology

While the taxonomy was an important first step, it was too rigid for the purposes of the Talent Triad. Talent Triad leaders found that the hierarchical system, where competency statements had to be classified in one unified way, did not lend itself to the desired approach, which is designed to continuously build and update based on inputs, edits, and feedback from users. Further, the taxonomy system did not support the many different uses and applications of competency data that the Talent Triad pursued.

The Alabama Competency Ontology both resolves some challenges encountered in implementing a taxonomy and enables much more adaptive and flexible approaches to aligning workforce, education, and employers. Under the taxonomy approach, the state found it difficult to map relationships between competencies, and to account for vast array of language and keywords used to describe competencies in Alabama job descriptions. Further, because of these challenges, the state needed additional data and technology support.

The Ontology is a much less static system that enables additions, corrections, and alterations suggested by employers and educators. The Ontology also eliminates much of the hierarchical approach under the Taxonomy and instead provides a flexible menu of terms to describe knowledge, skills, behaviors, and applied contexts, as well as the relationships between them. The Ontology is dynamic and layered, just like competencies are in real life, and is a valuable, usable means of organizing competencies that are relevant in the state's economy.

Over time, the Alabama Governor's Office of Education and Workforce Transformation (GOEWT) and agency partners shepherded a process that has resulted in the most comprehensive statewide organization of competencies in the nation, working across institutions of higher education and workforce providers, as well as business and industry.

The Competency Ontology is constantly updated through interactions with educators, employers, and users. It intersects with other systems within the Talent Triad in a variety of ways.

- The Alabama Credential Registry is the state's central clearinghouse for making all credentials available in Alabama known and transparent through the Alabama Compendium of Valuable Credentials. The Credential Registry is also used to tag competencies to credentials and to tag credentials and the underlying competencies to in-demand occupations. Using the Ontology, education providers identify the competencies required for mastery within each credential, as well as the competencies gained through courses and other experiences. This important work by education providers enables an individualized verified account of credentials and the competencies for which those credentials signify mastery.
- The Skills-Based Job Description Generator enables employers to easily design and post skills-based job descriptions, identifying needed and desired competencies and work experiences. Leveraging the controlled vocabulary of the Competency Ontology, skills-based job descriptions generated through the platform align with competency outcomes identified by education providers, enabling "recommendations" between individuals with verified competencies and jobs for which they are qualified.
- Alabama's Digital Wallet/Learning and Employment Record (LER) may then be populated by workers, learners, and job seekers in the state. The Learning and Employment Record enables syncing of verified credentials and skills from education and training providers and employers, supporting the self-sovereign sharing of tailored resumes with employers. Job seekers can also receive job recommendations and recommendations for further learning.

Building a Talent Marketplace

The Alabama Talent Triad team invites you to learn with us.

The work on the Competency Ontology is continually advancing, and our experiences and insights can help your state avoid problems and hasten progress in building a comprehensive ontology of competencies.

Specifically, we are eager to partner with states that are interested in sharing competency infrastructure, enabling learners and job seekers to move across state lines and effectively compete in regional labor markets that often span borders.

We encourage states to undertake the effort to shift toward competency-based education, enabling learners to proceed at the speed of mastery, and enabling employers to understand both the credentials and the competencies that learners possess.

We will release multiple chapters through the Alabama State Playbook, designed specifically to share lessons learned and emerging best practices. The Playbook is specifically designed to support state policy and implementation teams as they address talent in their own states. Papers will be posted periodically at www.talentplaybook.org, as well as through social media and other venues.

Building a Talent Marketplace—A Playbook for States

Alabama's Talent Triad is a unique system, bringing together often disparate efforts to create value and impact for the state's workforce and economy. Driven by Alabama's employers and state agency partners, and Governor Kay Ivey's goal of adding 500,000 additional credentialed workers to the state's potential labor force and surpassing the national labor force participation rate by 2025, the Talent Triad represents a comprehensive skills-based talent marketplace that connects job-seekers, employers, and education providers. This reciprocal feedback loop connects the supply and demand sides of the talent marketplace to form a true talent marketplace that places skills as the unit of transaction.

Several states have taken steps to transform their economy to a currency of skills by implementing skills-based hiring approaches for state employees. This is a positive step toward alleviating government hiring and recruiting challenges. But we know this is not enough to result in economic mobility and prosperity across the state, and more action will be needed to create skills-based talent marketplaces that connect all workers, career opportunities, and learning experiences to power economic growth and the mobility of its citizens.

Alabama state leaders understood this problem deeply and used evidence to drive towards the creation of the Alabama Talent Triad, which is the first skills-based talent marketplace facilitated by a state in the US. To share about this important effort, partners have created The Alabama Talent Playbook, which provides details for how the state is building a skills-based economy and allows other state leaders to learn how Alabama's Talent Triad has emerged as the most promising transformational talent marketplace in the country.

Learn more at <https://www.alabamatalenttriad.com/>.

The logo features a stylized 'A' composed of overlapping geometric shapes in shades of red and white.

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