

ACT WorkKeys® Assessments and the National Network of Business and Industry Associations' Common Employability Skills Framework

Introduction

In spring 2014, the National Network of Business and Industry Associations (NNBIA)¹ drafted a Common Employability Skills framework. The framework includes four key domains: Personal Skills, People Skills, Applied Knowledge, and Workplace Skills, with specific skills that comprise each domain. For example, the NNBIA Personal Skills domain includes Integrity, Initiative, Dependability and Stability, Adaptability, and Professionalism. Each skill is defined, with examples provided. For example, the Integrity trait is defined as “treating others with honesty, fairness, and respect” with such examples as “demonstrate respect for company’s time and property; and accept responsibility for one’s decisions and actions.”

With the Common Employability Skills framework, the NNBIA wants to define a common core of employability skills that can serve as the basis for industry- or occupation-specific skill competency models and credentials. The framework is part of NNBIA’s initiative to address the needs of employers and educators and to improve career outcomes for job seekers and students. NNBIA goals, as exemplified in the Common Employability Skills framework, are closely aligned to ACT’s mission and particularly aligned to the objectives of ACT WorkKeys, a suite of research-based measures of foundational work skills.

ACT WorkKeys was developed, in a similar spirit to the NNBIA Common Employability Skills framework, to address the need for standardized measures of career readiness.

The purpose of this paper is to explore the alignment between the NNBIA and ACT WorkKeys in more depth by evaluating the correspondence between the skills described in the Common Employability Skills framework and the skills measured by ACT WorkKeys assessments. The method employed in this alignment exercise is typical of alignments between competency models and assessment constructs. In this case, ACT WorkKeys subject matter experts created correspondence tables for each NNBIA domain based on the NNBIA’s skill descriptions and the skill constructs behind the ACT WorkKeys assessments. The results of this work are presented in the tables to follow, after a brief discussion of the alignment between ACT WorkKeys assessments and each of the four domains identified in the Common Employability Skills framework.

Overview of the ACT WorkKeys Assessments

ACT WorkKeys includes both cognitive and noncognitive measures. The cognitive assessments are criterion referenced to the skill requirements of the workplace, with assessment results expressed as Level Scores. The noncognitive assessments are norm-referenced measures of work-relevant personality traits, with assessment results expressed as percentiles. ACT WorkKeys assessments measure and document the foundational skills required for success across industries and occupations in the US economy.

¹ <http://actfdn.org/what-we-do/optimize-solutions/national-network-business-industry-associations/>

ACT WorkKeys Cognitive Assessments

- **Applied Mathematics** measures the ability to apply mathematic principles to math-related problems encountered in the workplace.
- **Applied Technology** measures the ability to apply principles of electricity, mechanics, fluid dynamics, and thermodynamics to workplace technical problems.
- **Business Writing** measures the ability to apply conventions of standard business English to written communication required in the workplace.
- **Listening for Understanding** measures the ability to understand oral communication typical of the workplace.
- **Locating Information** measures the ability to find, analyze, and apply information presented in workplace graphics.
- **Reading for Information** measures the ability to understand and apply written information presented in workplace documents.
- **Workplace Observation** measures the ability to understand and apply information acquired through observation.

ACT WorkKeys Applied Mathematics, Locating Information, and Reading for Information assessments form the basis of the ACT National Career Readiness Certificate™ (ACT NCRC®), a nationally portable credential that documents the skills most relevant across industries and occupations.

ACT WorkKeys Noncognitive Assessments

- **Fit** measures interests and values associated with particular career pathways.

- **Performance** measures tendencies toward unsafe or counterproductive work behaviors.
- **Talent** measures attitudes and behavioral tendencies most relevant to success in the workplace.

Alignment Between the Common Employability Skills Framework and ACT WorkKeys Assessments

The four tables that follow illustrate the substantial alignment between the Common Employability Skills identified by NNBIA and the skills measured by ACT WorkKeys assessments. Of the 20 skills described in the framework, only two areas—Technology and Business Fundamentals—lacked significant alignment. In every other case, complete or substantial alignment exists between the skills described in the framework and the skills measured by ACT WorkKeys assessments.

NNBIA Personal Skills Domain

The Personal Skills domain described in the Common Employability Skills framework includes Integrity, Initiative, Dependability and Reliability, Adaptability, and Professionalism. The ACT WorkKeys assessment most closely aligned to this domain is Talent, which measures 12 dimensions (“scales”) of personality. As illustrated in Table 1, the Talent assessment fully comprehends all Personal Skills described by NNBIA. The tendencies measured by the ACT WorkKeys Performance assessment are also aligned, in part, to the NNBIA Personal Skills domain. In the case of the NNBIA Personal Skills domain, ACT WorkKeys assessments provide measures for each of the five NNBIA Personal Skills. This represents 100% alignment for this domain.

NNBIA People Skills Domain

The People Skills domain described in the Common Employability Skills framework includes Teamwork, Communication, and Respect. As in the case of the NNBIA Personal Skills domain, the ACT WorkKeys assessment most closely aligned to this domain is Talent. As illustrated in Table 2, the Talent assessment comprehends all of the People Skills described in the NNBIA framework, with the exception of the speaking component of the Communication skill. In the case of the NNBIA People Skills domain, with the exception noted previously, ACT WorkKeys assessments provide measures for each of the three NNBIA People Skills; this represents near 100% alignment for this domain.

NNBIA Applied Knowledge Domain

The Applied Knowledge domain described in the Common Employability Skills framework includes Reading, Writing, Mathematics, Science, Technology, and Critical Thinking. The ACT WorkKeys assessments most aligned to this domain are the cognitive assessments Applied Mathematics, Applied Technology, Business Writing, Locating Information, and Reading for Information. As illustrated in Table 3, the Reading, Writing, Mathematics, and Critical Thinking skills described in the NNBIA framework are fully comprehended by the ACT WorkKeys Applied Mathematics, Business Writing, Locating Information, and Reading for Information assessments. Significant alignment exists between the Science skills described in the NNBIA framework and skills measured by the ACT WorkKeys Locating Information and Applied Technology assessments. There is currently no ACT WorkKeys assessment that corresponds to the Technology skills as defined in the NNBIA framework. In the case of the NNBIA Applied Knowledge domain, ACT WorkKeys

assessments provide measures for six of the seven NNBIA Applied Knowledge skills; this represents more than 85% alignment in this domain.

NNBIA Workplace Skills Domain

The Workplace Skills domain described in the Common Employability Skills framework includes Planning and Organizing, Problem Solving, Decision Making, Business Fundamentals, Customer Focus, and Working with Tools and Technology.

The ACT WorkKeys assessments most aligned to this domain include the noncognitive Performance and Talent assessments, as well as the cognitive Locating Information and Applied Technology assessments. As illustrated in Table 4, the Planning and Organizing, Problem Solving, Decision Making, and Customer Focus skills described by NNBIA are fully comprehended by the ACT WorkKeys Talent and Locating Information assessments. Substantial alignment exists between the

Tools and Technology skills described in the NNBIA framework and skills measured by ACT WorkKeys Performance and Applied Technology assessments. Partial alignment exists between the Business Fundamentals described in the NNBIA framework and skills measured by ACT WorkKeys Performance. In the case of the NNBIA Applied Knowledge domain, ACT WorkKeys assessments provide measures for five of the six NNBIA Workplace Skills; this represents more than 80% alignment in this domain.

Table 1 NNBIA Personal Skills

The Personal Skills domain described by NNBIA aligns with the ACT WorkKeys Talent assessment. The table below specifies the particular scales within the Talent assessment that most closely correspond to the individual Personal Skills description. The ACT WorkKeys Performance assessment also measures dimensions of the Personal Skills domain as described by NNBIA.

NNBIA Personal Skills	Description	ACT WorkKeys Assessments or Scales
Integrity	Treating others with honesty, fairness, and respect	Talent: Cooperation, Goodwill, and Sociability Scales
Initiative	Demonstrating a willingness to work and seek out new work challenges	Talent: Striving and Creativity Scales
Dependability and Reliability	Displaying responsible behaviors at work	Talent: Discipline and Order Scales Performance assessment
Adaptability	Displaying the capacity to adapt to new, different, or changing requirements	Talent: Optimism and Stability Scales
Professionalism	Maintaining a professional demeanor at work	Talent: Carefulness, Optimism, and Discipline Scales Performance assessment

Table 2 NNBIA People Skills

The People Skills domain described by NNBIA aligns with the ACT WorkKeys Talent assessment. The table below specifies the particular scales within the Talent assessment that most closely correspond to the individual Personal Skills description. Alignment is represented as complete except in the case of the Communication skill.

NNBIA People Skills	Description	ACT WorkKeys Assessments or Scales
Teamwork	Demonstrating the ability to work effectively with others	Talent: Cooperation, Influence, and Sociability Scales
Communication	Maintaining open lines of communication with others	Talent: Cooperation and Savvy Scales*
Respect	Working effectively with those who have diverse backgrounds	Talent: Cooperation and Goodwill Scales

* Substantial alignment exists between the Communication skill described by NNBIA and the ACT WorkKeys Talent assessment. There is currently no measure of speaking skills in the ACT WorkKeys suite of assessments.

Table 3 NNBIA Applied Knowledge

The Applied Knowledge domain described by NNBIA aligns to these ACT WorkKeys cognitive assessments: Applied Mathematics, Applied Technology, Business Writing, Locating Information, and Reading for Information. Alignment is represented as complete except in the cases of the Science and Technology skills.

NNBIA Applied Knowledge Skills	Description	ACT WorkKeys Assessments or Scales
Reading	Understanding written sentences and paragraphs in work-related documents	Reading for Information
Writing	Using standard English to clearly communicate thoughts, ideas, and information in written form	Business Writing
Mathematics	Using mathematics to solve problems	Applied Mathematics
Science	Knowing and applying scientific principles and methods to solve problems	Applied Technology Locating Information*
Technology	Using information technology and related applications to convey and retrieve information	--
Critical Thinking	Using logical thought processes to analyze and draw conclusions	Locating Information

* Substantial alignment exists between the applied science knowledge domain described by NNBIA and the ACT WorkKeys assessments Applied Technology and Locating Information. Applied Technology measures applied knowledge about science and technology. ACT WorkKeys Locating Information also includes items that measure the ability to apply scientific reasoning in the workplace.

Table 4 NNBIA Workplace Skills

The Workplace Skills domain as described by NNBIA aligns with components of ACT WorkKeys cognitive assessments named in Table 3 as well as components of the ACT WorkKeys Talent assessment named in Tables 1 and 2. Alignment is represented as complete, except in the cases of Business Fundamentals and Working with Tools and Technology.

NNBIA Workplace Skill	Description	ACT WorkKeys Assessments or Scales
Planning and Organizing	Planning and prioritizing work to manage time effectively and accomplish assigned tasks	Talent: Order Scale
Problem Solving	Demonstrate the ability to apply critical-thinking skills to solve problems by generating, evaluating, and implementing solutions	Talent: Creativity Scale Locating Information assessment
Decision Making	Applying critical thinking skills to solve problems encountered in the workplace	Talent: Savvy Locating Information assessment
Business Fundamentals	Has knowledge of business and management principles	Performance assessment*
Customer Focus	Actively look for ways to identify market demands and meet customer or client needs	Talent: Cooperation, Optimism, and Savvy Scales
Working with Tools and Technology	Select, use, and maintain tools and technology to facilitate work activity	Performance Assessment Applied Technology assessment**

* Partial alignment exists between the Business Fundamentals domain described by NNBIA and the ACT WorkKeys Performance assessment, which measures traits related to safety and compliance.

** Substantial alignment exists between the Working with Tools and Technology domain described by NNBIA and the ACT WorkKeys Performance assessment, which measures traits related to safety and compliance. The ACT WorkKeys Applied Technology Assessment is also relevant as a measure of applied knowledge of science and technology.

Conclusion

The results of this alignment study demonstrate a high level of correspondence between the skills described in the NNBIA Common Employability Skills framework and the skills measured by ACT WorkKeys assessments. Each of the key domains identified by NNBIA—Personal Skills, People Skills, Applied Knowledge, and Workplace Skills—are significantly comprehended by ACT WorkKeys cognitive and noncognitive assessments. As illustrated in Tables 1–4, ACT WorkKeys noncognitive assessments Talent and Personality align most closely to the NNBIA Personal Skills, People Skills, and Workplace Skills domains. ACT WorkKeys cognitive assessments Applied Mathematics, Applied Technology, Business Writing,

Locating Information, and Reading for Information align most closely to the NNBIA Applied Knowledge domain. As presented in this report, ACT WorkKeys assessments align to 18 of the 20 skills that comprise the NNBIA framework; this represents 90% alignment overall between the skills measured by ACT WorkKeys assessments and the NNBIA Common Employability Skills framework.

The National Network of Business and Industry Associations and ACT share a common objective: to identify the common core of skills needed for success across industries and occupations in the US economy. This alignment of objectives and measures between NNBIA and ACT is represented in the Common Employability

Skills framework, as described in NNBIA's spring 2014 draft. ACT welcomes the opportunity to explore this alignment in even more detail and to work with the NNBIA to address the needs of US employers and educators and improve the career outcomes of job seekers and students. In particular, ACT believes that the widely respected and adopted ACT WorkKeys assessments and the assessment-based ACT NCRC credential will have an important role to play in the realization of this goal. ACT also offers to explore with NNBIA the potential relevance of the other ACT WorkKeys assessments not represented in this alignment study to the Common Employability Skills framework initiative. ■