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## Assessment and Certification: A Vital Connection



**S**kill standards, while useful on their own, are just one part of a much larger equation. Skill standards establish the standard of competent performance, but they do not tell a person whether he or she has succeeded in meeting that standard.

For this reason, developing skill standards does not end with their publication. Washington State is also working to develop voluntary assessments and certifications which will make it possible for students, workers and any interested persons to determine their strengths and weaknesses based on the standards, and to earn certification showing that they can perform work competently as established by the skill standards.

In today's fast-moving technological economy, the necessity for assessments and certification is crucial. The demand for both technical and employability skills is escalating as work becomes more complex. The workforce is more mobile, with workers moving freely between jobs and industries. This job mobility requires that workers must be able to communicate their qualifications to potential employers. As technology changes, workers must keep up with technological change through continuous learning and worker retraining, and must be able to prove they have kept pace. All of these factors mean more training and education for individuals, and the ability to show evidence that this training translates to performance on the job.

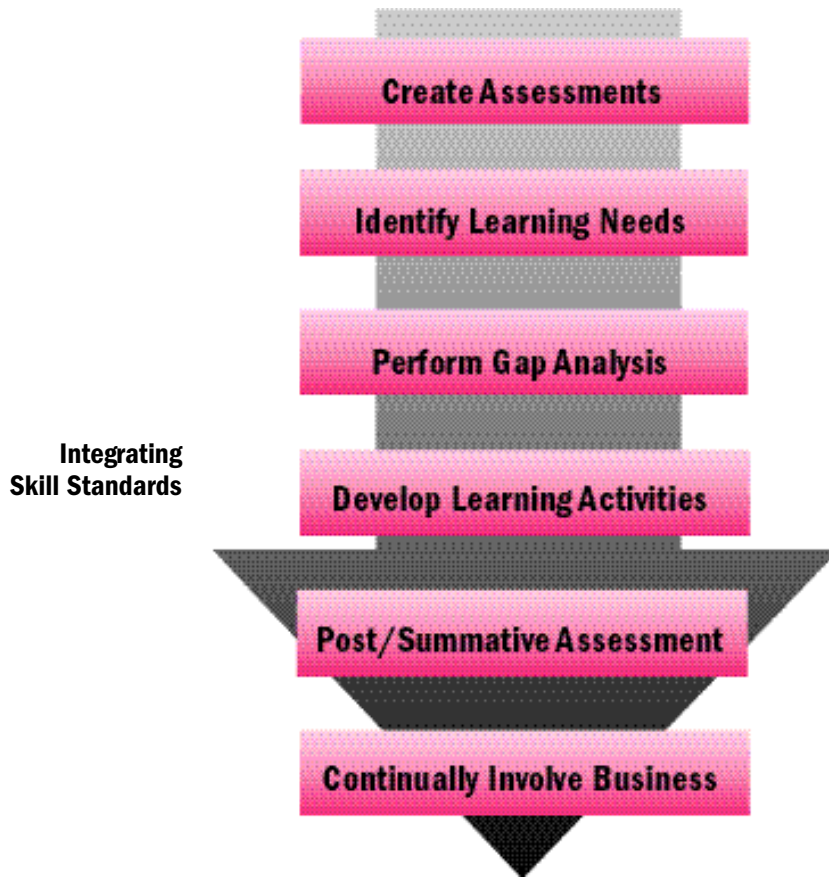
Voluntary assessments and certifications based on skill standards will help us address all these needs because of the guiding principles upon which skill standards are based, and because of the stakeholders—employers, educators, workers, students, and government—whose needs skill standards are designed to meet.

**Please Note:** To ensure that the use of standards and their related assessments and certifications do not contradict U.S. employment law, employers will need to conduct an internal validation of the standards before using the skill standards to make hiring and promotion decisions. The purpose of this validation is to ensure that the knowledge, skills, and performance described by the standards are needed for competent performance in an employer's organization. The need to validate the standards internally is a key requirement of U.S. employment law, which seeks to protect individuals from discrimination in hiring and promotion.

The first step toward a statewide system of assessments and certifications is the development of assessments which measure an individual's ability to perform work competently as defined by the skill standards. Once these assessments are developed, curriculum can be reviewed to determine that all necessary topics and

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practicums sufficiently cover the items in the assessment. Once any gaps are identified, learning activities and content adjustments can be made, and post/summative assessments can be administered. Finally, it is critical that industry be involved every step of the way, and that standards are continuously reviewed and updated. The diagram below provides a summary of this process.



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## Assessment Strategies

**UPON COMPLETION** of the development of skill standards, performance assessment can be created to assess the criteria identified. Sample assessments and standards may be distributed to instructors and curriculum developers who will be educated on the skill standards elements.

Assessments based on the skill standards may include pre-and post-evaluations of the student to measure skill progression and to track the success rate of obtaining certification, where applicable.

Within a skill standards or competency-based system, assessment is the generation and collection of evidence of performance which can be matched to specified explicit standards that reflect expectations of performance in the workplace. **There are two main forms of evidence:**

- Evidence of actual performance
- Evidence of underpinning knowledge,skills and abilities

**The types of evidence may vary and will include:**

- Direct evidence (products and items produced by the performer)
- Indirect evidence (supporting evidence and information about the performer)

Evidence can be collected in a wide variety of educational or business settings. To a large extent, the range of opportunities available for demonstration will determine the most appropriate setting. Often it is difficult to actually perform the task in the authentic work setting. In this case, evidence generated during an educational course or an in-house training session can be collected by individuals and added to their overall portfolios.

By requesting that the student or trainee produce tangible results in the form of take-away products (videos,tapes, paper, and electronic products), the participant will have created real evidence which can be shown to human resource personnel, hiring managers,supervisors or assessors. When assessing these products, **the trained assessor will seek:**

- Validity
- Currency
- Authenticity
- Sufficiency

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Therefore, when designing a skill standards-based assessment for an educational course or training session, the assessment process and results will meet four criteria:

**Validity:** The assessment instrument/process clearly relates to the relevant standards.

**Currency:** The assessment instrument/process calls for a demonstration of the current standards in the industry.

**Authenticity:** The individual being assessed produces the assessment results; it is their own work. Team activities will be useful to demonstrate the skills and abilities to work effectively with others, not necessarily the total end results. The individual can, if possible, identify his or her part of the team project to demonstrate evidence of his or her own results.

**Sufficiency:** Enough evidence is collected to match the key task and the performance criteria included in the skill standards.

When designing/revising the curriculum for Biotechnology/Biomedical, students will be assisted in generating high-quality evidence of performance or of underpinning skills, knowledge and abilities which will help them to be successfully assessed as fully competent.

Adapted from the forthcoming *Skill Standards Volume 2: Assessment*, 1999, Washington State Board for Community and Technical Colleges, and *Designing Competency-Based Training*, Shirley Fletcher, 1991, Pfiffer & Company, p. 86-88.

# Assessment Design

TYPE OF AUTHENTIC ASSESSMENT	DESCRIPTION OF AUTHENTIC ASSESSMENT STRATEGIES
<b>Project</b>	<ul style="list-style-type: none"> <li>■ Hands-on demonstration of knowledge, skills, and attitudes that reveals a student's ability to plan, organize, and create a product or an event.</li> <li>■ Documentation of process of development from initial steps to final presentation.</li> </ul>
<b>Portfolio</b>	<ul style="list-style-type: none"> <li>■ Collection of pieces of evidence of a student's knowledge, skills, and attitudes.</li> <li>■ Showcase of best work, work-in-progress.</li> <li>■ Record of student's progress over time.</li> <li>■ Content selection by student in collaboration with the teacher.</li> <li>■ Centerpiece for parent conferences.</li> </ul>
<b>On-Demand Demonstrations</b>	<ul style="list-style-type: none"> <li>■ Hands-on performance by a student, which illustrates levels of knowledge, skills, and attitudes.</li> <li>■ Typically involve a "real life" problem or situation to solve.</li> <li>■ Focus on the application of knowledge and skills learned in one situation as it connects to a new and different one.</li> </ul>
<b>Case Studies</b>	<ul style="list-style-type: none"> <li>■ Analysis of events and individuals in light of established criteria.</li> <li>■ Synthesis of evidence to support generalizations based on individual cases.</li> </ul>
<b>Paper/Pencil Tests</b>	<ul style="list-style-type: none"> <li>■ Multiple-choice, essay, true-false questions that rely on extended responses to further clarify a student's understanding of the knowledge being assessed.</li> <li>■ Graphic representations that reveal a student's understanding of connections among ideas.</li> </ul>
<b>Structured Observation</b>	<ul style="list-style-type: none"> <li>■ Observation of events, groups, and individuals that focuses on the salient traits of the skill or attitude being observed.</li> </ul>
<b>Scenarios</b>	<ul style="list-style-type: none"> <li>■ A problematic or challenging situation presented in the context of a career-technical perspective.</li> <li>■ Study required to analyze or evaluate a situation.</li> <li>■ Apply relevant knowledge or skills.</li> <li>■ Prepare and justify a reasonable solution</li> </ul>
<b>Critical Incident</b>	<ul style="list-style-type: none"> <li>■ An interview where the assessee is asked to describe past experiences which demonstrate skill standards.</li> </ul>

From: Center for Occupational Research and Development, November 1996, and the forthcoming *Skill Standards Volume 2: Assessment*, 1999, Washington State Board for Community and Technical Colleges.

