U.S. manufacturing faces a skills mismatch: studies forecast an increase in output and productivity, but also predict a shortage of individuals with the right skills to fill the jobs. To help solve this mismatch and keep up with changing skill needs, a clearer understanding of how credentials are used and valued by the manufacturing industry is essential.

In a first-of-its-kind research study, Workcred—an affiliate of the American National Standards Institute (ANSI)—partnered with the Hollings Manufacturing Extension Partnership (MEP), an operating unit of the National Institute of Standards and Technology (NIST),1 to examine the quality, market value, and effectiveness of manufacturing credentials, and the need for new or improved manufacturing credentials.

**KEY FINDINGS**

The study revealed that credentials have uneven use in the manufacturing industry and are not routinely required or used as a major factor in hiring or promotion decisions.

- Many manufacturers do not know what credentials are available or how they are relevant to their workplace.
- Facility size appears to influence credential use, with large manufacturing facilities (more than 500 employees) more likely to prefer credentials than smaller facilities.
- Many manufacturers do not view credentials as the most relevant tools to identify new skilled personnel or as incentives to improve the quality of their existing workforce.
- Manufacturers often feel they need to train new employees regardless of whether or not they held a credential, and could not quantify whether credentials added value in terms of reduced cost or reduced training time.
- Manufacturers believe that credentials could serve as a critical resource if they were better understood and made more in line with skills needed in their facilities.

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1 This research work was performed under the financial assistance award 70NANB16H239, from the U.S. Department of Commerce, National Institute of Standards and Technology.
RECOMMENDATIONS FOR EDUCATION AND TRAINING PROVIDERS

Credentials can be part of the solution to closing the skills mismatch and helping individuals demonstrate that they possess the right skills. But for this to occur, well-developed credentials must be aligned to current skill needs and updated so that they remain valid as skill requirements evolve.

To help U.S. manufacturing keep pace with changing skill needs, the report details recommendations for multiple stakeholders, including manufacturers, credentialing organizations, educators, accreditors, and policymakers. **Recommendations specific to education and training providers address the need to:**

- Support efforts to increase transparency about the purpose, use, and competencies of credentials
- Align competencies and create a continuous feedback process
- Develop more flexible learning opportunities
- Increase opportunities to demonstrate workplace behaviors
- Increase opportunities to earn credentials that also assess employability skills in secondary schools
- Develop credentials for growing and evolving roles
- Strengthen collaboration among credentialing organizations, education and training providers, and test developers

**Reasons Manufacturers Say Credentials Do Not Make a Difference**

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience is a better predictor for performance</td>
<td>66%</td>
</tr>
<tr>
<td>Individuals have to be retrained anyway</td>
<td>36%</td>
</tr>
<tr>
<td>More cost effective to create our own credentials</td>
<td>32%</td>
</tr>
<tr>
<td>No difference in performance</td>
<td>30%</td>
</tr>
<tr>
<td>Individuals don't have the knowledge and skills as claimed</td>
<td>23%</td>
</tr>
<tr>
<td>Increase in salary associated with credentials is not cost effective</td>
<td>19%</td>
</tr>
<tr>
<td>The individual has knowledge but can't perform</td>
<td>17%</td>
</tr>
<tr>
<td>Other</td>
<td>6%</td>
</tr>
</tbody>
</table>

The full research report, including recommendations for each stakeholder group, is available for free download at [www.workcred.org](http://www.workcred.org) and [www.nist.gov/mep](http://www.nist.gov/mep).

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