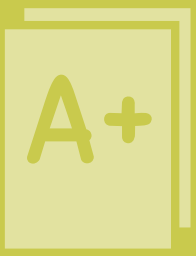
TOOLINGU | sme

5 REASONS YOU NEED TO MOVE TO COMPETENCY-BASED EDUCATION... NOW

toolingu.com



COMPETENCY-BASED EDUCATION GETS AN A+

With growing pressure to build and sustain a 21st century, real-time pipeline of qualified workers, the manufacturing industry and its education partners are reevaluating the traditional training model — and seeing positive results with a career-relevant approach: competency-based education (CBE).

For years, learning — whether in a community college, vocational school or workplace — has been based on classroom hours. Students attend class, pass tests, and move on to their next course of study. Missing from that time-based and "letter grade" learning model is validation that the necessary knowledge and skills have actually been transferred in a meaningful, actionable and measurable way.

For instance, on the job, did this training lead to improved productivity? Did quality increase? Did safety issues decrease? Did revenues climb? These are important questions that influence an organization's innovation and growth as well as the competitiveness of our entire country.

Today, schools, industry and government are working together to implement CBE, linking real knowledge and skills learning, credentials, certifications, and employment to build career-ready students and high-performance employees.

The CBE approach allows students as well as incumbent employees to advance based on their ability to learn, demonstrate and then master a skill or competency at their own pace, regardless of environment.

CBE can result in more efficient student outcomes, leading to good careers. For employers, this means access to a steady pipeline of skilled workers.

With more than 2 million manufacturing jobs in the next decade projected to be open but unfilled due to the skills gap[1], the CBE learning model is more critical than ever.

Has your company or school moved to competency-based education? If not, here are five reasons you should consider graduating to a more advanced learning system.

[1]"The Skills Gap in US Manufacturing: 2015 and Beyond," Deloitte and The Manufacturing Institute, 2015.

ACCELERATES COMPETENCY

1

With opportunity and revenue on the line, manufacturers can't afford to pass up new business and projects. Yet, many are doing just that because they don't have the skilled workers to handle increased business.

Once they do have the right employee in place, it is more important than ever to partner with training organizations and educators to build the right skills and knowledge through classes, short-term programs, certificates and degrees. This helps companies match their hiring criteria far better than in the past.

The flexibility of CBE can reduce time-to-competency and accelerate student-to employer readiness. CBE training for incumbent workers ensures consistency and cross-functionality across job roles. Bonus points: Based on true needs, training is accelerated, cutting costs.

Implementing a CBE training approach for incumbent workers has benefits as well. It ensures company-wide consistency, making a workforce more nimble and flexible. It can allow cross-functionality across job roles to address current and future needs.

Modern apprenticeship programs are also following this formal, competency-based education path, which can drastically reduce the time for an apprentice to reach the journey (mastery) level.

Because CBE allows more training on true needs, this approach streamlines and accelerates the training process and cuts costs by eliminating unnecessary, irrelevant, and redundant training.

This "accelerated" approach could ultimately offer significant cost savings for educators, students and companies. For instance, according to a study[2] of four institutions that implemented CBE, institutions projected that by the sixth year of operation, their CBE programs will be operating at half the cost of their traditional academic programs.

[2] Competency-based Education, A Study of Four New Models and Their Implications for Bending the Higher Education Cost Curve, rpk GROUP, Oct. 2016.

ENGAGES FUTURE AND CURRENT EMPLOYEES

Successful CBE programs are designed with industry involvement so learning is geared to real-world expectations and needs on the job. This training is tailored for each student, defining clear career pathways.

2

For incumbent employees, CBE defines and explains what average performers need to attain in order to become superior performers. This includes gaining credentials from organizations such as National Institute for Metalworking Skills (NIMS), Manufacturing Skill Standards Council (MSSC), American Welding Society (AWS) and SME.

When knowledge gaps are discovered, just-in-time learning through online education can provide much of the required knowledge that leads to enhanced employee contributions and confidence.

Another advantage for employees is that by eliminating guesswork through a formal CBE program, they can clearly see what they need to do to improve their skills. Fair and accurate assessments enhance employee satisfaction.

That's good news because nearly one in three people (29 percent) left their previous job due to lack of skills development, according to a Paychex survey.[3] Implementing a CBE program can help combat this turnover by providing a structured, objective approach to job training and progression.

[3]"Employee Retention: What Makes Employees Stay or Leave?," Paychex WORX, Aug. 2016.

BUILDS CAPACITY FOR EDUCATORS

3

When it comes to training, there is never enough time. With its flipped classroom, the CBE model, however, can help "buy back" some of that valuable commodity.

Theory, once taught via lecture by the instructor, is now assigned for homework using online education. This frees up educators to spend more time with students working on practical, hands-on skills during the lab portion of class.

For instance, to gain this real-world experience, many schools are creating simulated workplaces, which run like businesses during class by soliciting work, preparing estimates and completing projects.

When it comes to the online learning portion, the trend is standardization of high-quality content and a framework built on competencies. A high-quality, industry-vetted online curriculum ensures consistent skills and knowledge are being transferred.

In addition, implementing competency-based online learning helps save time by providing instructors with a Learning Management System (LMS) that automatically tracks employee education and results. This streamlined and accurate recordkeeping allows instructors and educators the ability to focus more time on critical hands-on skills development activities.

ENSURES VALIDATION

Today, it is important to validate that knowledge has been transferred, not just that a class has been completed. Fortunately, CBE programs include a validation process that not only tests a new skill but also continues to build on it. New skill sets will be validated through assessments, testing and certifications.

4

At the employer level, there is no more checking a box to indicate learning has been completed, such as there was years ago. Now, there are significantly more rules, regulations and documentation (i.e., more stringent ISO certification guidelines and industry-wide certifications).

Validation is also important for those obtaining U.S. Department of Labor ApprenticeshipUSA grants and National Science Foundation Advanced Technological Education (NSF-ATE) grants. To meet the criteria for funding, programs must include competency-based assessments and education courses to ensure students are prepared to enter the workforce.

Some manufacturers are implementing systems such as Tooling U-SME's Competency Framework, which provides a trackable model. It's a comprehensive series of competency models in manufacturing functional areas, outlining knowledge and skills objectives for job roles in the production, technician, lead technician/technologist and engineering levels. A specially designed LMS allows for seamless validation and recordkeeping, making sure competencies tie back to an employer's business goals.

ADDRESSES THE SKILLS GAP

5

The "silver tsunami" is here: Baby boomers are retiring at a pace that outruns hiring. Case in point: 14 percent of respondents to Tooling U-SME's Workforce 2021 Assessment[4], said they will lose a full quarter (25 percent) or more of their workforce to retirements in the next five years.

Add to that other pipeline challenges such as fewer students pursuing science, technology, engineering and math (STEM) education, more manufacturing jobs returning to U.S. shores, the fast pace of technological advancements, and the gaping skills gap.

In fact, nearly nine out of 10 (88 percent) respondents to the Workforce 2021 Assessment say that their company is having problems finding skilled workers in manufacturing[5].

With millions of manufacturing jobs available — and not enough skilled workers to fill them — CBE provides current and future employees with the skills, knowledge and abilities to be competent in the 21st century. CBE supports "new collar" careers which require employees to have technical skills along with employability (soft) skills such as critical thinking and team building.

Tied to business goals, CBE becomes the foundation for performance management, talent acquisition and leadership development. This formal system which outlines knowledge and skills required for specific job roles with an aligned curriculum — is critical for combatting the current and growing talent shortage, and for building a high-performance team.

[4] "Mission Critical: Workforce 2021," Tooling U-SME, 2016.

[5] Ibid.

LINKING LEARNING, CREDENTIALS, CERTIFICATIONS & EMPLOYMENT

> ***Competency-Based Education (CBE)*** *refers to "systems of instruction, assessment, grading, and academic reporting that are based on students demonstrating that they have learned the knowledge and skills they are expected to learn as they progress through their education."*[6]

After decades of time-based learning, the competency-based education (CBE) model is becoming more widely accepted as the standard approach for students to build career readiness in the manufacturing industry. Integrating hands-on and online education, this structured approach develops and validates the needed knowledge, skills, and abilities for specific jobs. Addressing the growing skills gap, a structured CBE is essential for building a strong pipeline of skilled workers and enabling them to achieve business goals leading to increased productivity, quality, innovation, safety and profitability.

CONTACT

For more information, please call 866.706.8665 or email info@toolingu.com.

ABOUT TOOLING U-SME

Tooling U-SME delivers versatile, competency-based learning and development solutions to the manufacturing community, working with more than half of all Fortune 500® manufacturing companies, as well as 600 educational institutions across the country. Tooling U-SME partners with customers to build high performers who help their companies drive quality, profitability, productivity, innovation and employee satisfaction. Working directly with hundreds of high schools, community and technical colleges, and universities, Tooling U-SME is able to help prepare the next-generation workforce by providing industry-driven curriculum. A division of SME, a nonprofit that connects all those who are passionate about making things that improve our world, Tooling U-SME can be found at toolingu.com or on Facebook (facebook.com/toolingu) and Twitter (twitter.com/toolingu).

TOOLINGU | SME

[6] Competency-based Learning (2014, May 14). S.Abbott (Ed.), The Glossary of Education Reform. Retrieved from http://edglossary.org/competency-based-learning