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Attracting young talents to manufacturing

A holistic approach

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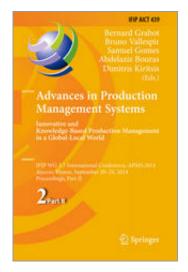
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Attracting Young Talents to Manufacturing: A Holistic Approach

Abstract

In the last years, despite the global economic crisis, manufacturing is facing a serious difficulty in the recruitment of the brightest high-skilled human resources. National and international institutions have provided important guidelines to combat this skills mismatch and several innovations have been made both in STEM and manufacturing education. However, there is still a lack of concrete strategies harmonizing together delivery mechanisms and pedagogical frameworks throughout the whole student lifecycle. In order to mitigate these urgent needs, ManuSkills innovative approach provides a strong integrated strategy towards attracting young talent to manufacturing, by raising the awareness and providing the acquisition of new manufacturing skills. The key-concepts and the strategy to achieve learning objectives are presented. Finally, ManuSkills Five Pillars, i.e. Interaction with the Experiments, Interaction with real companies, Social networks, Challenges and making real products, Career management and skills orientation, are explained in detail with the support of examples of application.



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References (16)

- 1. Deloitte U.S. & the Council on Competitiveness, Global Manufacturing Competitiveness Index (2013)
- 2. European Commission, Employment and Social Developments in Europe 2012 (2013)
- 3. World Economic Forum, The future of manufacturing Opportunities to drive economic growth (2012)
- 4. Economist Intelligence Unit, Plugging the skills gap Shortages among plenty (2012)
- 5. McKinsey & Company, Manufacturing the future: The next era of global growth and innovation (2012)
- 6. Manufacturing Institute, Roadmap to education reform for manufacturing (2010)
- 7. Society of Manufacturing Engineers, Workforce imperative: a manufacturing education strategy (2012)
- 8. Klein, H., Noe, R., Wang, C.: Motivation to learn and course outcomes: The impact of delivery mode, learning goal orientation, and perceived barriers and enablers. Personnel Pscyhology, 665–702 (2006)
- 9. Patterson, D.: Student Awareness and Career Motivation in the STEM Fields. Northwest Association for Biomedical Research (2011)
- 10. Fralick, B., Kearn, J., Thompson, S.: How Middle Schoolers Draw Engineers and Scientists. Journal of Science Education and Technology, 60–73 (2009)
- 11. Ziemian, C., Aument, J., Whaley, D.: Manufacturing Technology in Middle School Classrooms: A Collaborative Approach. In: International Conference on Engineering Education, ICEE, Coimbra, Portugal (2007)
- 12. Howard, M., Washington, N., Shurn, T., Brge, L., Warner, G.: The Tricked-Out Virtual Body Shop: Recruiting African-American High-School Students to STEM through Automotive Design (2011)
- 13. Prins, R., MacDonald, S., Leech, J., Brumfield, J., Ellis, M., Smith, L., Shaeffer, J.: Techfacturing: A Summer Day Camp Designed to Promote STEM Interest in Middle School Students through Exposure to Local Manufacturing Facilities. In: ASEE Southeast Section

Conference (2010)

- 14. Osborne, J., Dillon, J.: Science Education in Europe: Critical Reflections. King's College, London (2008)
- 15. Bloom, B.S., Engelhart, M.D., Furst, E.J., Hill, W.H., Krathwohl, D.R.: Taxonomy of educational objectives: The classification of educational goals. David McKay Company, New York (1956)
- 16. Anderson, L.W., Krathwohl, D.R., Airasian, P.W., Cruikshank, K.A., Mayer, R.E., Pintrich, P.R., Raths, J., Wittrock, M.C.: A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives. Allyn and Bacon (2000)

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