

EDITORIAL

In the ongoing search for institutional excellence, SENA continuously evaluates and implements different strategies, including those related to applied research. Hence, in 2013 SENA launched the Research, Technological Development, and Innovation System (SENNOVA, its Spanish acronym), which seeks to build up the standards of quality and relevance of the professional formation it offers in the areas of research, technological development, and innovation. This endeavor has contributed to the positive evolution and impact of the journal *Informador Técnico*, in alignment with institutional mandates.

In this number of the journal, we are pleased to present a series of articles that highlight not only the importance of sustainable development as a way to achieve a better balance between environment, economic development, and social development, but also the important role that SENA plays in promoting innovation in professional formation and in successfully linking technological formation and university-level professional formation.

Regarding sustainable development, one of the articles addresses the use of geopolymers systems that incorporate materials such as silica fume and rice husk ash. These systems present a better thermo-mechanical performance under certain conditions, and alternative sources to silica reduce the environmental impact of their exploitation. Another article gathers the results of a study on the efficiency of improved wood-burning cookstoves that seek to potentially decrease firewood consumption in rural households. Another article addresses the use of design methodologies for the periphery and eco-design to promote design processes in line with site-specific needs and interests, while proposing the incorporation of elements inspired by nature and innovating drawing from biomimicry, blue economy, and cradle-to-cradle design. In this regard, the importance of ethics and accountability in achieving I+D+E+i+e (research, development, education, innovation and entrepreneurship) is highlighted.

SENA is currently engaged in qualified registration and self-assessment processes to obtain high quality accreditation. Therefore it is increasingly important for the institution to incorporate activities related to applied research, innovation, and technological

development within its capacity-building programs, as well as to design study plans that can be linked with other levels of higher education, complying with national and international standards, to improve the quality of professional formation it offers. According to the Development and Technological Innovation in Manufacturing Industries (EDIT VI) survey for Colombia, two aspects should be emphasized: (1) In 2011–2012, nationwide, SENA was the entity that most supported the business sector by conducting different scientific, technological, and innovation activities, and (2) 26.1% of the personnel involved in performing the aforementioned activities had obtained a degree of technologist, technician, or integrated professional formation at SENA. This demonstrates the importance of the applied research conducted by the entity, which seeks to promote innovation in educational programs, as well as homologation processes by aligning propaedeutic cycles between technological and professional formation.

Finally, a prospective study of Colombia's custom software sector identifies, based on the results of a prospective strategic workshop and a Delphi survey, the main variables associated with the valuation of products developed by micro, small and medium software development companies.

The members of both the Scientific and Editorial Committees trust that the articles published in this number of the journal contain high-quality, novel scientific and technical information of interest to an increasingly broader audience of professionals, technologists, and technicians, not only in Colombia but worldwide. We plan to continue indexing the journal *Informador Técnico* in a growing number of international databases and, by publishing the journal in English in the near future, further enhance its visibility and accessibility to the English-speaking research and development community.

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