Effective methods and tools for training engineers and technologists: regional trends

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ABSTRACT: The important thing in any training is to offer knowledge in a motivating way – and to ensure long-term retention. Learning engineering concepts should be unified by doing and an interactive learning system with a whole new dimension of functionality is preferred. Trainees should discover technology and the functions of real components through practical exercises. The practical training is to shape skills and cement experience. An engineering training method should analyse and correct or supply approaches to finding the correct solution. New technologies have played a big role towards the achievement of this new engineering training concept. In developed nations, the roles of a lecturer and new technologies in training engineers are complementary, whereas in developing countries, the scheme followed is still overly dependent on the lecturer. This article presents a discussion on the latest methods and tools available and currently used worldwide to solve issues related to the training of engineers and technologists. A comparison of engineering training in developed and developing countries is also presented. It is concluded that, in order to produce technology innovators, developing countries should adopt suitable policies and use effective methods and tools to train engineers.