"Integrating Knowledge and Competencies through Applied Research: An Innovative Way to Educate and Train the Sustainable Development Practitioner in the Formal Education Setting"

Competent, highly skilled and environmentally literate practitioners are required for the ‘Age of Sustainable Development’. In this new ‘age’, the stresses on the global and local socio-ecological system will be once again placed under the microscope. Additionally, renewed effort will be marshaled under a set of sustainable development goals, with a view of addressing these stresses. In this context, highly educated and trained sustainability practitioners, who are excellent problem solvers, will be needed. But to educate and train such practitioners, the approaches to education and training in the formal education setting needs to be addressed. A look at what may be called the traditional approach to education and training, reveals that it focuses on classroom, promotes knowledge for its own sake, presents the teacher as the ‘sage on the stage’ and imposes rote examinations and test taking as standard evaluation activities. Seldom, one may find, that the education and training places emphasis on ‘skills, knowledge and attitude’ (SKA), integrated in such a manner that the learner can do or perform in any endeavor or enterprise. The competency based education and training (CBET) model is a promising alternative approach and is presented in this chapter as a pedagogical avenue of choice for training sustainable development practitioners in the twenty-first century.

This chapter presents a project in the CARICOM region, in which the CBET approach is used to develop and deliver an under-graduate program and curriculum in Environmental Sustainability Practices (ESP). This program also features an applied research component integrated into the program that allows for the assimilation of knowledge and competencies that students acquire during the program. The chapter then describes how Education for Sustainable Development (ESD) promotes the CBET approach to Technical and Vocational Education and Training (TVET) as the most promising way of achieving sustainability through education. The section also interrogates ESD, in the context of the United Nations Decade of ESD (DESD), and the role of ESD in the ‘Age of Sustainable Development’. The second section links sustainability and the CBET approach by focusing on CBET’s important contributions to educating and training the sustainability practitioner: providing students with demand-driven skills, knowledge and attitudes and allowing for the acquisition of specific and trans-boundary competencies. The third section presents the Environmental Sustainability Practices (ESP) program, the rationale behind the program and its development methodology that includes a labor market survey, a job analysis workshop and a curriculum development session. The fourth section focuses on the results. This section presents an overview of the program structure, explains the rationale for mixing both social and natural science competencies and the knowledge and skills to become a
sustainability entrepreneur (management science). The section also describes the curriculum’s applied research components and how they are used not only as an integration tool but also as a means to help solve community sustainability issues. The chapter concludes by describing how the program, which integrates competencies, knowledge and skills with applied research, is an innovative approach to educating and training the sustainable development practitioner in the ‘Age of Sustainable Development’.