Framing a future for soil science education.

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The emerging concept of Global Soil Security highlights the need to have a renewed education framework that addresses the needs of those who want to; 1) know soil, 2) know of soil, and/or 3) be aware of soil. Those who know soil are soil science discipline experts and are concerned with soil as an object of study. With their discipline expertise focusing on what soil's are capable of they would be brokers of soil knowledge to those who know of soil. The connection with soil by the those in the second group focuses on the soil's utility and are responsible for managing the functionality and condition of the soil, the obvious example are farmers and agronomists. Reconnecting society with soil illustrates those who are members of the third group, i.e. those who are aware of soil. This is predicated on concepts of 'care' and is founded in the notion of beauty and utility. The utility is concerned with soil providing good Quality, clean food, or a source of pharmaceuticals. Soil also provides a place for recreation and those aware of soil know who this contributes to human health.

The teaching-research-industry-learning (TRIL) nexus has been used to develop a framework for the learning and teaching of soil science applicable to a range of recipients, particularly campus-based students and practicing farm advisors. Consultation with academics, industry and professionals, by means of online (Delphi Study) and face-to-face forums, developed a heavily content-rich core body of knowledge (CBoK) relevant to industry, satisfying those who; know, and know of soil. Integrating the multidisciplinary approach in soil science teaching is a future aspiration, and will enable the development of curriculum that incorporates those who 'care' for soil. In the interim the application of the TRIL model allows the development of a learning framework more suited to real word needs. The development of a learning framework able to meet industry needs includes authentic complex scenarios that will also benefit student learning.