Using educational tools and methods to bridge the gaps between theory and application

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The need for epidemiological skills has never been higher. There is an ongoing need for capacity development and training in epidemiology, at individual, institutional and national levels. This is particularly acute in developing areas of the world. The present day’s increasingly widespread access to the internet gives us unparalleled opportunities to collaborate remotely and provide tools, training and support, as well as share information and data. This is facilitated by the establishment of increasingly functional technologies and user-friendly software, which enhance ease of use while reducing development time. The challenge is to make the best use of such opportunities. The EpiCentre has historically had a strong focus on software development. Here, we showcase a number of innovative training and support tools that are currently being used. Since 2010, Massey University has offered a ‘One Health’ Masters programme which has a focus on epidemiology and is predominantly distance-taught. The online learning environment incorporates innovative features including applied scenario-based learning, tutored small-group activities and use of specific software tools. There is a strong emphasis on communication and collaboration, which has enabled activities such as the synchronous development of cognitive maps, risk assessments and a facilitated expert elicitation workshop. We have also developed a suite of epidemiological calculators for use on iPhone and Android platforms, for individual use. In a decision-making context, we have developed a real-time decision support system to facilitate the entry and analysis of animal health data in Vietnam.