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Building Capacity Through a Social Network for African Researchers: Piloting two eLearning Courses on Evidence Based Medicine and Research within the AFRICA BUILD Project

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Background and Purpose: Practicing Evidence-Based Medicine (EBM) means integrating the best available external clinical evidence from research into clinical care and new research. Certain skills, often involving Information Technology, such as searching scientific literature databases, appraising or grading evidence, are essential to apply the latest evidence for a health care intervention or to identify gaps in clinical research. The target population for learning these skills, health care workers willing to do clinical research or deciding on policies, often lack time to enrol in full time face-to-face training in EBM and clinical research. Therefore part-time, flexible and modular distance-learning courses have a larger potential to learn EBM and research techniques.

As part of the AFRICA BUILD project, a Coordination Action to improve capacity in health research and education through ICT, we designed a pilot course on EBM and clinical research, which was offered through an on-line educational platform, embedding several features similar to a social network, to African researchers. The objective of this pilot course was to identify factors contributing to success and/or failure of an on-line education programme through such social network.

Methods: Different lecturers from partner institutions in Mali, Cameroon and Belgium recorded short presentations using DUDAL software (developed by the RAFT Network, University of Geneva) on the topics of EBM and clinical research. Theory from those sessions could then be applied in on-line assignments and in a group exercise. Experts from Mali and Cameroon facilitated those group exercises and discussions between participants. Seminars, exercises, group discussions and a virtual community were integrated in the eLearning platform designed for this purpose, allowing participants to connect with experts and fellow students.

The pilot course was evaluated using both quantitative and qualitative methods, such as: attendance statistics from Google Analytics, results of pre- and post-course tests, users' satisfaction surveys and participants' focus group discussions.

Results: 33 out of 38 participants starting the course completed a final test and the course evaluation. For 24 out of those 33 (73%), the Internet connectivity remained the main barrier for attending the course. Although the on-line webinars required limited bandwidth, only 23% of participants has not had any problem when watching on-line sessions. Despite these problems, hardly any participants would have preferred to be approached by a different learning method. 82% valued applying theory in a group exercise as essential component of this on-line course. The application of the main principles of EBM and research were tested through a few practical examples before and after the course. Participants would be most eager to continue taking on-line courses if these covered statistical analysis within clinical research and methods on how to write scientific papers. They named a lacking "research culture" and difficult

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access to scientific journals as main barriers to start mastering research. Their main motivation to engage in research was a possible future academic career, i.e. teaching at the Faculty of Medicine.

Conclusions: A potential to let many students successfully complete a course in EBM and clinical research is there, but it requires engaging participants in an active exchange with fellow participants and experts involved in the on-line course development or at the Faculty. The impact and benefits of linking even more peers and experts in the field should be investigated in a second pilot phase of this EBM and clinical research course.

Keywords: Education, Distance, Research ,Evidence-Based Medicine

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