



Educational Article

Development and evaluation of an online course about the social accountability of medical schools



Mohamed E. Abdalla, PhD^{a,*}, Charles Boelen, MD^b and Wail N. Osman, MD^c

^a College of Medicine/Medical Education Center, University of Sharjah, United Arab Emirates

^b Independent Consultant in Health System and Personnel, Former WHO Program Coordinator, France

^c Faculty of Medicine, University of Gezira, Sudan

Received 13 October 2018; revised 23 March 2019; accepted 24 March 2019; Available online 4 May 2019

المخلص

أهداف البحث: الهدف من هذا التواصل هو عرض تطوير، وتنفيذ، وتقييم دورة رائدة عبر الإنترنت لبناء قدرات الطاقم الأكاديمي في كليات الطب في منطقة شرق البحر المتوسط حول المحاسبة المجتمعية لكليات الطب.

طرق البحث: تم تطوير هذه الدورة المكونة من أربع وحدات باستخدام نهج الخطوات الست لتطوير المناهج. أعطيت الدورة عبر الإنترنت من خلال منصة "مودل" إلى الأوساط الأكاديمية المشاركة من قبل ثلاثة من أعضاء هيئة التدريس من ذوي الخبرة في المحاسبة المجتمعية. تم تقييم محتويات ومدى ملاءمة الدورة باستخدام نموذج تقييم "كيرك باتريك" من خلال استبانة تعباً ذاتياً وتقييم آراء المشاركين وتغذيتهم الراجعة.

النتائج: تم قبول ١٦ مشاركاً من أربعة بلدان في الدورة. أكمل ما يصل إلى ٧٥٪ من المشاركين أربع وحدات. كان متوسط عدد مواضيع المناقشة عبر الإنترنت هو ٣٦ استجابة لكل وحدة. واعتبر جميع المشاركين أن الدورة تحتوي على رسالة واضحة، ووافق الأغلبية على أن الدورة قدمت لهم مفاهيم جديدة وصحت بعض سوء فهمهم بشأن المحاسبة المجتمعية لكليات الطب. كانت المشاكل الرئيسية التي واجهها المشاركون هي ضيق الوقت ومشاكل الإنترنت التقنية.

الاستنتاجات: يحتاج تطبيق مفهوم المحاسبة المجتمعية في العمل اليومي لكليات الطب إلى أن يكون أعضاء هيئة التدريس على علم ويتم تدريبهم. توفر الدورة عبر الإنترنت طريقة مرنة لإجراء برامج لتطوير أعضاء هيئة التدريس.

الكلمات المفتاحية: المحاسبة المجتمعية؛ التدريب؛ عبر الإنترنت؛ شرق البحر المتوسط

Abstract

Objectives: The objective of this communication is to describe the development, implementation, and evaluation of a pioneering online course about the social accountability of medical schools intended to develop the skills of academic staff at medical schools in the eastern Mediterranean region.

Methods: This four-module course was developed using a six-step approach for curriculum development. Three faculty members with vast experience in social accountability delivered the course online through the MOODLE platform to participants. The content and appropriateness of the course were evaluated using Kirkpatrick's evaluation model, by offering a self-administered questionnaire that assesses the participants' opinions and feedback besides the analysis of the responses of the participants to the discussion points.

Results: Sixteen participants from four countries were admitted to the course. An overall 75% of the participants completed four modules. The mean number of online discussion threads was reported to be 36 responses per module. All participants regarded the course as having a clear take-home message. The majority agreed that the course introduced new concepts and corrected some of their misunderstandings about social accountability in medical schools. The main problems that participants experienced were time constraints and technical Internet problems.

Conclusion: The application of the concept of social accountability in the day-to-day work of medical schools requires faculty to be informed and trained. The online

* Corresponding address: College of Medicine, University of Sharjah, United Arab Emirates.

E-mail: melsayed@sharjah.ac.ae (M.E. Abdalla)

Peer review under responsibility of Taibah University.



course provides a flexible way to conduct faculty development programmes.

Keywords: Eastern Mediterranean; Online; Social accountability; Training

© 2019 The Authors.

Production and hosting by Elsevier Ltd on behalf of Taibah University. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Introduction

The mission of medical schools is to adapt their educational, research, and service programmes to provide a better response to the priority health concerns of citizens and society as a whole. Hence, schools should adopt policies that will help them achieve this goal. The World Health Organization (WHO) has announced the need for social accountability of medical schools. It defined social accountability as the ‘obligation of the medical schools to direct their education, research and service activities towards addressing the priority health concerns of the community, region, and/or nation they have the mandate to serve. Priority health concerns are to be jointly identified by governments, health care organisations, health professionals and the public’.¹ This definition was adopted by the Global Consensus for Social Accountability of Medical Schools² and implies that medical schools must consult the stakeholders—including society—they need to serve. Thus, they will be able to identify the priority health needs and expectations they need to address for the short-term and long-term benefit of both the community and the medical school.³

The concept of social accountability has been significantly expanded and applied to many contexts. The World Federation for Medical Education (WFME) recognises it as a part of its updated standards of accreditation for medical education programmes,⁴ and Network: TUFH adopted the Tunis Declaration for social accountability in 2017.⁵ A further remarkable development in social accountability has been the inclusion of related standards in the National Health Workforce Accounts Handbook developed by the WHO and launched in 2017.⁶ Despite all these initiatives to improve understanding and to create a culture of social accountability, more work is needed to translate the concept into action. Challenges remain regarding the educational mission of medical schools and how they elaborate on the medical curriculum and other functions of medical schools.⁷ For example, faculty perceptions of social accountability are still unclear.¹ There is some confusion regarding other terms, such as social responsibility and social responsiveness.⁸ A study from Uganda revealed that faculty members are unfamiliar with the term ‘social accountability’ and its implications.⁹

It is evident that, to maintain momentum in working towards social accountability, faculty members need to be well-informed about the concept and to be adequately trained in how to execute the necessary changes. To our knowledge, no structured work describing formal training in social

accountability has been published. For the above reasons, the Group on Social Accountability (GOSA) in the Association of Medical Education in the Eastern Mediterranean Region (AMEEMR) has developed an online course for faculty development in social accountability. The course was conducted in collaboration with the Education Development Centre, Faculty of Medicine, University of Gezira (EDC-Gezira), Sudan.

The goal of the course is to improve faculty knowledge of the social accountability concept and empower faculty members to be engaged in and to participate actively in the processes of achieving social accountability. The objective of this communication is to describe this online course on social accountability, including the process of its development, its implementation, and evaluation.

Materials and Methods

The course was conducted in the 2017–2018 academic year as a collaboration between GOSA-AMEEMR and EDC-Gezira. It was an online course that took place over eight weeks (two weeks for each module), concluding with the submission of a final project (a requirement for completing the course and obtaining a certificate). The course was developed following the six-step approach for curriculum development described by Kern et al. (1998). **Table 1** below summarises the six steps for the social accountability course.

Recruitment of participants

The course was first announced through the GOSA mailing list and then through personal communications with individuals in medical schools in the EMRO region. The intended audience consisted of faculty members at medical schools throughout the region. Participation was based on individual interest and registration.

Course development team

The first author of this article developed the first draft of the course. Then a course construction team consisting of three faculty members—the three authors—reviewed and finalised the course manuscripts. The course was subsequently revised by two other experts in medical education and social accountability. Administrative assistants and IT personnel also provided support.

Instructional methods

The course started with an introductory week, during which each participant familiarised themselves with the Moodle platform and set their expectations for the course.

The course consisted of a series of four modules, each module containing video lectures, reading materials, and an asynchronous discussion board that used predesigned discussion triggers and questions. These trigger questions would pop up during the participants’ responses and reflections. **Table 2** below describes the content of the modules, the trigger questions, and points for consideration.

The course included two synchronous online lectures, one following the second module and the other following the fourth module. These two online sessions aimed to consolidate understanding and respond to queries from participants.

To receive the course certificate, participants were required to submit a proposal for a change they could implement in their institutions that would advance social accountability. [Box 1](#) describes the requirements for these projects.

Evaluation of the course

To evaluate the course, Kirkpatrick's four-level evaluation model was used as a conceptual framework (Kirkpatrick & Kirkpatrick 2006). Only Levels 1 and 2 of the model—the participant's satisfaction and learning happened—were addressed in this study. These were addressed using the responses to a participant feedback survey, as well as an analysis of the number and quality of forum discussion posts.

Participants were required to participate in discussion by producing at least two original posts and responding to the posts of two other participants. In all posts, they were required to 'show reflection, critical thinking, and understanding of relevant literature. Inclusion of the participant's experience and context is preferred. Posts should be as evidence-based as possible, using published literature and proper citation'.

Results

Participants

The first cohort consisted of 16 participants (seven males and nine females) from Pakistan, Saudi Arabia, Sudan, and the United Arab Emirates, 12 (75%) (five males and seven females) of them completed the four modules of the course.

Table 1: a Six-step approach to curriculum development as applied in the social accountability course.

Step	Description
Problem identification and general needs assessment	Knowledge about social accountability concept is not as expected.
Needs assessment for the learners targeted	Faculty members need to master the principles of social accountability.
Goals, objectives, and competencies	The goal of the course is to empower faculty members to be engaged in the processes of creating a socially accountable medical education.
Educational strategies	The course was designed in a facilitator-led online format.
Implementation	Resources were considered and made available (including personnel, IT, time, and facilities) and overall costs and funding issues were addressed.
Evaluation and feedback	Evaluation of the course used levels one and two of Kirkpatrick's evaluation model.

All participants were employed by medical schools in the respective countries.

Learning

Participants completed 143 online discussion threads that fulfilled the criteria mentioned to them for a "good thread" in course instructions (described above), a mean of 36 thread per module. The highest total number of posts was in the first module, and the lowest was in the third module. All participants were active, and they posted as required (that is, at least two posts per module). Six of the 12 participants were more active than the others, posting more than two or three posts per module.

Because participants were encouraged throughout the course to recount experiences at their institutions, so the participants were introduced to social accountability practices in medical schools from nine different medical colleges in four different countries. To maintain confidentiality, participants were asked to explain their contexts as much as possible without mentioning the name of their medical school.

According to the participants' written reflections, the most important benefits they obtained from the course were an understanding of the definition of social accountability, the ability to differentiate social accountability from social responsibility, the ability to think in context-based manner about social accountability, and the application of social accountability measurement frameworks.

The projects submitted by participants to obtain course certificates addressed different aspects of medical school's functions, including courses, services, policies, and partnerships. Titles of successful proposals included the following:

- 1 Improvements in social accountability in the health services provided by [university name]
- 2 Implementation of interprofessional education to improve social accountability in the undergraduate medical school curriculum
- 3 Establishment of a committee for social accountability
- 4 Scaling up social accountability in a rural residency course
- 5 Identifying community needs as a first step towards social accountability
- 6 Enhancing social accountability by improving primary health care services

Evaluation

The course was evaluated through feedback from participants in the form of an online, open-ended questionnaire sent to those who completed the course.

In summary, all participants regarded the course as having a clear take-home message. They also believed it had material that was useful and relevant for them in their roles as faculty members. However, they thought that the amount of material presented was excessive and that this affected their participation in the discussion forums. A majority of participants thought that the course introduced them to new concepts and corrected some of their misunderstandings about social accountability of medical schools. Most participants faced problems with time constraints during the course, and some of them had problems with Internet access.

Table 2: Module content, trigger questions and points for reflection.

Module	Content	Discussion trigger	Reflection
1: Understanding social accountability	<ul style="list-style-type: none"> • understanding the social obligation of medical schools • definition of social accountability • the Global Consensus for Social Accountability • examples of social accountability practices • stakeholders and their role 	<ul style="list-style-type: none"> • From your context and understanding, what does social accountability mean for medical schools? • Give examples of social accountability activities. • To whom are medical schools accountable and why? 	<ul style="list-style-type: none"> • What did you learn? • What are the gaps in your understanding? • How do you plan to fill these gaps?
2: Social accountability and the medical school's mission	<ul style="list-style-type: none"> • socially accountable educational programmes • socially accountable research • socially accountable health services 	<ul style="list-style-type: none"> • What specific actions/steps are required to improve/develop socially accountable curriculum, research activities, and health services in a medical school? You need not mention the name of a specific school, but you may need to describe the context in which the medical school operates. • What roles are different stakeholders to take to ensure the achievement of the above actions? How will you evaluate these roles? 	
3: Assessment of social accountability	<ul style="list-style-type: none"> • different frameworks for social accountability assessment • building indicators for social accountability • social accountability and accreditation 	<ul style="list-style-type: none"> • Based on the discussion of activities of social accountability, what indicators can we use to assess it? • How can accreditation help in promoting social accountability? 	
4: Change management	<ul style="list-style-type: none"> • change models • leading change 	<ul style="list-style-type: none"> • How can we lead sufficient change to improve the level of social accountability of our medical schools? Please base your discussion on one of the change models. 	

Box 1

Description of the project to be submitted by each course participant

The project can address any of the school's mission areas: education, research or services. The project can address improvements in practice, understanding of practice, or development of the situation in which practice takes place.

The project proposal should contain four sections:

- What is the problem to be addressed? *Elucidate the issue in a manner that clarifies the extent of the problem and why it is important. Provide sufficient context to enable current levels of social accountability to be evaluated.*
- What will be tried (i.e., method)? *Outline your proposed solution, saying how it is designed to fit the context of the problem, what resources are required, and how the idea is likely to succeed over the long term. You must take into account timeframe and budget.*
- What lessons do you expect to be learned (i.e., results)? *Explain the available opportunities and how you are going to make use of them. Outline the anticipated challenges and how you propose to overcome them. Highlight how the perspectives of stakeholders can be influenced to ensure that change succeeds.*
- What are your recommendations? *Present your own reflections on your work and how it will help improvements in social accountability.*

Direct communication with the four participants who did not complete the course indicated that time constraints were the main reason for this.

Discussion

Social accountability is creating a new mandate to medical schools beyond their normal function of educating future doctors.¹⁰ Nevertheless, the application of the concept of social accountability in the day-to-day work of medical schools does not yet match the steps taken towards institutionalising the idea.¹¹ Furthermore, there remains a lack of clarity around the conceptual issues of social accountability.¹⁰ This new role for medical schools and the lack of clarity around it necessitate training on social accountability. If the concept of social accountability is to be widely applied, it is necessary to ensure that faculty members and other stakeholders are well-informed. In the above described course, all the participants agreed that the concept of social accountability was relatively new to them, although the sample was too small for the results to be generalisable.

The course was developed in the form of modules that could be studied as stand-alone units. A common disadvantage of modular teaching is that it fragments learning,¹² but a modular format was identified as the most suitable structure for this course. This is because the course was to be studied

during the participants' free time; even if they were unable to complete the whole course, they would derive the benefit of the individual modules that they had managed to finish. Despite this consideration, participants mentioned time constraints as the primary issue they faced during the course.

The online nature of the course added to its flexibility, as participants were able to access it anytime and anywhere. It also allowed greater interactivity between participants from different contexts.¹³

The fact that course discussions built on the participants' experience will add to the relevance of the course content; building on the student's experience is a core principle of adult learning.⁴ The other advantage is that such discussion will lead to the sharing of different experiences between participants; in this course they shared experiences from four different countries. Online discussions in this course were monitored and facilitated by tutors whose job was to provide support to participants by raising relevant questions that related to the learners' context. They also gave feedback so that students could achieve positive learning outcomes.¹⁵ The tutors' role reflected consideration for adult learners' background.¹⁴

Limitations

The course had some limitations. On a technical level, a continuous login to the LMS was required to download materials and participate in discussions. This had a negative impact on participants who did not have enough time to do so. Regarding learning, there was no objective assessment of the learning that occurred during the course. This made it difficult to establish what knowledge participants had at the beginning of the course or what they gained as a result of it. A further limitation is that the projects were selected by the participants themselves; as a result, their relevance to their respective schools cannot be guaranteed. A long-term follow-up to evaluate the impact of the course on individuals and institutions should be established.

Conclusion

Concepts and methods of social accountability must be translated into action. An informed capacity-building activity for faculty members that considers their needs, their context, and their access to technology is required.

Source of funding

None declared.

Conflict of interest

The authors have no conflict of interest to declare.

Ethical approval

None declared.

Authors' contributions

All Authors contributed to the development of the course and the design, writing and finalising of the paper. All authors have critically reviewed and approved the final draft and are responsible for the content and similarity index of the manuscript.

References

1. Boelen C, Heck J. *Defining and measuring the social accountability of medical schools* [Internet]. Geneva, Switzerland: Division of Development of Human Resources for Health; 1995. Available from: <https://apps.who.int/iris/handle/10665/59441>.
2. GCSA. *Global Consensus for social accountability of medical schools* [Internet]vol. 2011. GCSA Consensus for Social Accountability of Medical Schools; 2010 [cited 2018 Oct 2]. Available from: <http://healthsocialaccountability.sites.olt.ubc.ca/files/2011/06/11-06-07-GCSA-English-pdf-style.pdf>.
3. Boelen C. Adapting the health care institutions and medical schools to societies needs. *Acad Med* 1999; 74(8 Supplement): S11–S20.
4. WFME. *Basic medical education WFME global standards for quality improvement* [Internet]; 2015 [cited 2018 Oct 4]. Available from: <https://wfme.org/standards/bme/>.
5. The Network:TUFH. *Tunis declaration* [Internet]; 2017 [cited 2018 Sep 5]. Available from: <https://thenetworktufh.org/wp-content/uploads/2017/06/Tunis-Declaration-FINAL-2.pdf>.
6. WHO. *National Health Workforce accounts – a Handbook*; 2017.
7. McCrea ML, Murdoch-Eaton D. How do undergraduate medical students perceive social accountability? *Med Teach* 2014 Oct; 36(10): 867–875.
8. Boelen C, Woollard R. Social accountability: the extra leap to excellence for educational institutions. *Med Teach* 2011; 33(8): 614–619.
9. Galukande M, Nakasujja N, Sewankambo NK. Social accountability: a survey of perceptions and evidence of its expression at a Sub Saharan African university. *BMC Med Educ* 2012 Dec; 12(1): 96.
10. Kirby J, O'Hearn S, Latham L, Harris B, Davis-Murdoch S, Paul K. Introducing a collaborative E2 (Evaluation & enhancement) social accountability framework for medical schools. *Int J High Educ* 2016 Oct; 5(4).
11. Emadzadeh A, Karimi Moonaghi H, Mousavi Bazzaz M, Karimi S. An investigation on social accountability of general medicine curriculum. *Electron Phys* 2016 Jul; 8(7): 2663–2669.
12. Cornford IR. Ensuring effective learning from modular courses: a cognitive psychology-skill learning perspective. *J Vocat Educ Train* 1997 Jun; 49(2): 237–251.
13. Niebuhr V, Niebuhr B, Trumble J, Urbani M. Online faculty development for creating E-learning materials. *Educ Health* 2014; 27(3): 255.
14. Taylor DCM, Hamdy H. Adult learning theories: implications for learning and teaching in medical education: AMEE Guide No. 83. *Med Teach* 2013 Nov; 35(11): e1561–e1572.
15. Thomas A, Menon A, Boruff J, Rodriguez AM, Ahmed S. Applications of social constructivist learning theories in knowledge translation for healthcare professionals: a scoping review. *Implement Sci* 2014 Dec; 9(1): 54.

How to cite this article: Abdalla ME, Boelen C, Osman WN. Development and evaluation of an online course about the social accountability of medical schools. *J Taibah Univ Med Sc* 2019;14(3):241–245.