

Designing a Logbook for Medical Educators

Ba Min Ko¹, Imogen Glover², Jessica Hickman³ & Swe Khin-Htun^{4*}

¹*CCT, ST6 Specialty Registrar, South London and Maudsley NHS Foundation Trust, England*

²*CT2, Whittington Hospital, England*

³*CT2, West Suffolk Hospital, England*

⁴*Senior Medical Education Fellow, Trent Simulation and Clinical Skills Centre, Nottingham University Hospitals NHS Trust, Honorary Assistant Professor, School of Medicine, UoN, England*

***Correspondence to:** Dr. Swe Khin-Htun, Senior Medical Education Fellow, Trent Simulation and Clinical Skills Centre, Nottingham University Hospitals NHS Trust, Honorary Assistant Professor, School of Medicine, UoN, England.

Copyright

© 2021 Dr. Swe Khin-Htun, *et al.* This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Received: 14 June 2021

Published: 21 June 2021

Keywords: *Logbooks; Medical Education; Quality Teaching*

Abstract

Logbooks are widely used in the field of medical education and training. They can enhance learning through facilitating discussion between trainee and teacher, highlighting areas for development and creating a record of experience. However, they are not yet widely used in the speciality of medical educators, despite teaching skills being an integral part of most specialties. For this reason, the team have designed a logbook that could be used by medical educators to enhance their skills and practice.

To create the structure for the logbook we have incorporated the domains listed in the Academy of Medical Educators professional standards framework [1]. Within these domains varying standards

of achievement are detailed as described by Mclean, Cillars and Francis 2002 [2]. There is the opportunity to record multiple levels of evidence including formal feedback, certificates, grants and reflective practice. The logbook contains competency checklists to allow the user to amalgamate information into a summary document. This document will be able to function as both a record and a guide to learning and experience.

The aim of our logbook is to enhance learning, but its structure also provides aspirational objectives candidates can target. The format and structure mirrors other existing clinical logbooks in the hope that human factors and ergonomics will not be a barrier to its use. We have created a logbook specifically catering to the requirements of medical educators helping to promote high quality teaching and educational skills.

Introduction

A logbook is defined as a written record of activity in which details and events are recorded. Logbooks are widely used in the field of medical education and training to formally record completed activities. These logs can also be used by trainers to gain quick overview of the requirements of training and the trainees learning progress [3]. They play a crucial role for clinicians providing opportunity for self-reflection, ultimately encouraging professional development and improvement of their clinical and technical skills.

The use of logbooks in pursuit of education is widely evidenced. They create multiple opportunities for educational development including; facilitating communication between trainee and clinical teacher [4], standardising learning [5], and revealing weak points and therefore areas requiring further development [6].

Doctors in training can record activities such as case-based discussions, clinical procedures, clinic attendance and their continued professional education. Such activities are clearly outlined as requirements for training by various Royal Colleges who have developed their own specific logbooks. For example, the Royal College of Surgeons has developed shared electronic logbooks and portfolios for surgeons to record all aspects of their professional lives including clinical practice, audit tools, peer analysis and professional development activities. This supports the revalidation process for surgeons across the UK [7].

Medical education has become an essential part of a clinician's skillset. The GMC has released several documents pertaining to medical education, emphasising that clinicians are responsible for 'developing the skills and practices of a competent teacher' [8]. Good Medical Practice asks of doctors 'you should be prepared to contribute to teaching and training doctors and students'. This is mirrored in the 'person specification' for application to multiple specialty training programmes, when evidence of teaching is often requested as either essential or desirable criteria. The UK Professional Standards Framework for teaching requires individuals to have a record of effectiveness in teaching, impact at a strategic level and leadership in academic development. The GMC requires trainers to maintain skills by reflecting on 'training responsibilities' and to evidence supporting information for both appraisal for, and recognition as, a trainer [9].

The field of medical education continues to gain traction as an independent speciality with roles primarily devoted to education, such as teaching fellows, becoming prominent. Despite this, a formalised logbook catered to medical educators for their own professional development has not yet been created. In order to fill this gap, the Nottingham Undergraduate Medical education department (UMED) has developed a medical educator logbook which aims to help trainees build their portfolios in accordance with official points systems of recruitment for various specialities.

Materials and Methods

This logbook was developed using criteria from various different sources including the professional standards framework from the Academy of Medical Educators (AoME).

The logbook mirrors the five domains from the AoME: designing and planning learning, teaching and facilitating learning, assessment of learning, educational research and scholarship, educational management and leadership.

Within the above domains are four standards. These are based on those defined by Mclean, Cillars and Francis 2002 [2]. These range from level one, which details achievements at a basic level, up to level four, where complex skills, educational research and leadership are considered. This is also mirrored in the logbook structure.

The logbook is also designed to encompass different methods of record keeping. These methods are matched to the appropriate level of evidence needed for each domain. There is space for both objective and reflective record keeping making the logbook both a tool for assessment but also learning. To help give structure reflective entries are prompted at each domain.

Results

The logbook is structured to facilitate easy documentation of evidence whilst providing an opportunity to include further detail and reflection.

The initial pages contain summary sheets allowing for the consolidation of important evidence spanning multiple domains. They provide space for objective evidence such as certificates of attendance, organisation, participation or feedback from peers or learners.

These summary sheets are organised by the headings; teaching training, teaching experiences, presentations, publications, designing and planning learning, assessment of learning, teaching management and teaching esteem indicators. Table 1 contains the summary sheet for the consolidation of teaching and training.

Table 1: Consolidation sheets for teaching training

Teaching training session/ Conferences attended	Date and times	Area of training	Evidence (certificate/reflection)

The following section is categorised into the five domains outlined in the materials and methods. Within each area there is opportunity to record reflective practice and peer review.

Designing and Planning Learning

In this section educators reflect on the planning aspect of their teaching events. Here the clinician can provide evidence that they have considered learning principles, analysed the learning needs of their group and their use of teaching methods and resources when designing sessions.

Teaching and Facilitating Learning

This section provides space to detail the teaching events. It is an opportunity to showcase the use of a broad range of teaching methods and resources, as well as techniques for providing feedback. At higher levels this can be a space to exhibit innovation and improvement in teaching practices. These first two sections also prompt documentation of specific details of the event, including the type of teaching event, the number and grade of participants and method of teaching delivery.

Assessment of Learning

Within this area of the logbook educators can divulge their formal assessment methods and include their reasoning behind these specific choices. This evidence should be able to show the design, implementation and ongoing quality maintenance of the assessment strategy.

Educational Research and Scholarship

Evidence of conferences attended, research papers either written or evaluated and research grants awarded can be included. This domain involves consideration of research in medical education or direct participation, as well as implementation into active practice. Documentation of involvement in research projects, supervision of research students and awards for grants is combined with an opportunity for critical evaluation of literature or written conference reports. This section has less focus on reflective practice but instead on evaluation of external educational resources.

Educational Management and Leadership

This domain can include support of other clinical educators, management of educational programmes and involvement in educational governance.

The final section is composed of Medical Educator Competency Checklists organised into the four medical educator levels discussed in the material and methods, this is in a condensed format to facilitate sign off.

Table 2 contains the Medical Educator Development Checklists for level One and Two as examples. These tables detail the actions required for each achievement and give examples of evidence. Work documented elsewhere in the logbook can be tabulated easily at this stage for rapid evaluation. It also allows the objective evidence to be combined with reflection.

Table 2: Examples of Medical Educator Competency Checklist

Medical Educator Development Level 1

Check list	Evidence
Designing and Planning Learning	
Attend the training	Training certificate/CPD
Observe others' course and reflect on that course in terms of matching learning needs/outcomes/teaching methods/evaluation	Course observation and reflection note
Teaching and facilitating Learning	
Attend the training level	Training certificate/CPD
Observe others' teaching and reflect on that in terms of style of delivery/ maintain effective learning environment/ teaching methods and resources/evaluation/ learners engagement	Teachers focus observation and reflection note
Assessment of Learning	
Attend the course	Training certificate
Involve as Assistant or role play in assessment	Certificate of involvement
Observe one set of assessment and reflect on the process and organisation required for these assessments	Assessment report/ Reflection
Educational research and scholarship	
Attend the course/ journal club/ conference	Training certificate/ Conference attendance
Critical evaluation of the article/ literature	Conferences report/ reflection
Educational management and leadership	
Understand roles and regulatory bodies in the provision of quality assurance in medical Education	Training certificate/ Conference attendance Conferences report/ reflection
To be completed by trainee and countersigned by UMED team	Date
Trainee signature	
UMED signature	

Medical Educator Development Level 2

Check list	Evidence
Designing and Planning Learning	
Review your course, +/_redesign session or series of sessions/ course Peer review your session and reflect	Course details Peer review form and reflection note
Teaching and facilitating Learning	
Apply educational theories in practice Peer reviewed Your teaching and reflect Students' feedback and reflect	Course/ session details and consolidation sheet on the number of sessions involve Peer review form and reflection note Students' feedback and reflection note
Assessment of Learning	
Write a question to add to the bank, revise until it is accepted Write OSCE scenarios and revise until it is accepted Involve in standard setting Being an examiner and reflect the experience	Description of assessment that you involve Certificate of attendance (examiner/ standard setting) Examiner's report (a summary of how you rated candidates and can be used as self regulation of your performance)
Educational research and scholarship	
Evaluates educational literature and applies in educational practice Participates in own research or projects and applies in educational practice Contributes to others' projects	Course details Consolidation Sheet on the numbers of projects and level of involvement.
Educational management and leadership	
Contributed effectively to shared department responsibilities	Description
To be completed by trainee and countersigned by UMED team	Date
Trainee signature UMED signature	

Discussion

Teaching skills are an essential part of a clinician's skill set as outlined by the GMC and are also key criteria in current specialty applications. Logbooks are frequently used in all other realms of clinical training and

fulfil multiple different functions. They commonly exist as an independent learning resource which can further clinical or professional development through reflection, planning for further activities and creating an expected standard outcome. However, one of the primary functions of a logbook must also be as an evidence store of experiences in this field. This is essential not only to suggest areas which require further improvement, but also for revalidation, appraisal and recruitment purposes.

This same methodology can be transferred to medical education for similar benefits. Proof of competency and experience in teaching is still required for the above processes, and teaching lends itself to a process of reflection and feedback.

This logbook design ensures these twin objectives are met; as a resource which can develop learning, and as evidence of events or achievements.

By using existing frameworks which lay out achievements in teaching and education this log can also guide users towards future development. The competency checklists at the end of the book can act as aspirational objectives and encourage continuing advancement. The standards which exist in the framework have been modified in the logbook to create achievement levels consistent throughout each domain. These levels come under straightforward, simple headings to ensure immediate understanding of what is required at each stage in the hope that this enhances both the ease of recording and appraising the contents.

The overall structure mirrors many logbooks currently in use in the hope that it will encourage uptake and intuitive use. Human factors and ergonomics suggest that individuals will seek out a tool they feel familiar with it and therefore perceive it to be easier to use [10].

Conclusion

We have created a logbook specifically catering to the requirements of medical educators as laid out by various official sources. We have aligned it with existing professional frameworks to ensure it is current and relevant. It promotes high quality teaching and enhances educational skills.

Bibliography

1. Academy of Medical Educators (2014). *Professional Standards for medical dental and veterinary educators*. 3rd ed. Cardiff: Academy of Medical Educators. (Pp. 1-21).
2. McLean, M., Cilliers, F. M. & Van Wyk, J. (2008). Faculty development: Yesterday, today and tomorrow. *Medical Teacher*, 30(6), 555-584.
3. Schüttpeitz-Brauns, K., Narciss, E., Schneyinck, C., Böhme, K., Brüstle, P., Mau-Holzmann, U., et al. (2016). Twelve tips for successfully implementing logbooks in clinical training. *Medical teacher*, 38(6), 564-569.
4. Patil, N. G. & Lee, P. (2002), Interactive logbooks for medical students: are they useful? *Med Educ.*, 36(7), 672-677.

5. Helenius, I., Sinisaari, I., Hirvensalo, E. & Remes, V. (2002). Surgical procedure skills of graduating medical students: effects of sex, working, and research experience. *J Surg Res.*, 102(2), 178-184.
6. Chu, T. S., Chang, S. C. & Hsieh, B. S. (2008). The learning of 7th year medical students at internal medical--evaluation by logbooks. *Ann Acad Med Singap.*, 37(12), 1002-1007.
7. The Royal College of Surgeons of Edinburgh (2018). *Intercollegiate Surgical Logbook*.
8. General Medical Council (2011). *Developing teachers and trainers in undergraduate medical education* (Supplement to Tomorrow's Doctors).
9. General Medical Council (2012). *Recognising and approving trainers: the implementation plan*.
10. Bringman-Rodenbarger, L. & Hortsch, M. (2020). How students choose E-learning resources: The importance of ease, familiarity, and convenience. *FASEB Bio Advances.*, 2(5), 286-295.