

Distance learning to support postgraduate training in obstetrics and gynaecology

Rob Finch, Sean Duffy

A number of major distance learning programmes have been launched by the medical Royal Colleges for the purposes of training and/or continuing medical education. The most recent is 'StratOG', a modular programme published by the Royal College of Obstetricians and Gynaecologists (RCOG) and aimed primarily at candidates for the part 2 RCOG Membership examination.

INTRODUCTION

The Royal College of Obstetricians and Gynaecologists (RCOG) established a distance learning working group in 1999 to consider the development of a definitive, structured, distance learning programme for trainees in obstetrics and gynaecology. Due consideration was given to the media, logistics, personnel requirements and costs of producing such a package and the Royal College of Surgeons of England and the Royal College of Physicians of London were consulted about their distance learning development experiences.

The working group reviewed a number of CD-ROM and internet-based distance learning products. Their report concluded that a well-designed distance-learning programme would benefit any obstetrics or gynaecology trainee but would particularly benefit those preparing for the part 2 Membership of the Royal College of Obstetricians and Gynaecologists (MRCOG) examination. A project management team subsequently appointed subject specialists to begin writing the materials. The programme was conceived as a strategic resource to aid structured training and so the name StratOG (strat-oh-jee) was coined as an acronym for Structured-

Dr Rob Finch is Head of the Education Division, Royal College of Obstetricians and Gynaecologists, 27 Sussex Place, London NW1 4RG and **Mr Sean Duffy** is Senior Lecturer and Consultant Gynaecologist, St James's University Hospital, Leeds

Correspondence to: Dr R Finch

Training Resource to Assist Trainees in Obstetrics and Gynaecology. StratOG was officially launched in September 2001.

GLOBAL DELIVERY

StratOG is one of a number of new obstetrics and gynaecology training initiatives produced by the RCOG that aims to facilitate local 'delivery' of excellent, centrally-developed education. This strategy for dissemination of College-led education is also being applied to training course materials (workbooks, programmes, guidance for trainers), self-study packages, conferences and courses, and is being driven by the opening of a new education centre at the RCOG in Regent's Park, London. Thus, the RCOG is reaching out globally to support and facilitate the education of obstetricians and gynaecologists wherever they happen to be and this requires a careful choice of media. StratOG comprises paper-based modules supplemented by a web-based resource centre (<http://www.rcog.org.uk/stratogflyer.html>).

SUPPORTING STRUCTURED TRAINING

The quality of the UK regional education programmes implemented to support structured training in obstetrics and gynaecology is variable; time and availability of resources are key factors. However, a distance learning programme can support trainers as well as trainees. Thus, the full benefits of StratOG are experienced by trainees

learning in groups at regional study events supported by trainers who can spend more time facilitating discussion and debate and less time preparing learning materials.

In addition to these regional study days, central study events are also planned and these may be broadcast over the internet. StratOG is offered to individual trainees worldwide, but in the UK its adoption by regions or deaneries is preferable to ensure group participation. Trainees must pay for the programme (in some cases, study leave or other funds are used), but trainers directly involved in facilitating the regional programmes involving these trainees receive the StratOG materials free of charge. Since the best teachers are also learners, it is hoped that many trainers will actively participate in the use of the materials.

DESIGNING THE PROGRAMME: WHY PAPER?

Multimedia is the spice of a good educational experience. To many, 'multimedia' refers to video, sound-clips and images, but it also includes paper. Paper-based material has some unique properties – you can write on it, you can carry it around easily and you can read it almost anywhere. Thus, the tutorials comprising the paper-based, ring-bound modules of StratOG are intended to be written on, added to and carried around. These tutorials engage the reader in self assessment and reflection and are therefore every bit as interactive as many computer-based resources.

However, web-based resources come into their own when video, sound and communication are required. The availability of good, inexpensive compression software means that it is now feasible to publish good quality video on-line. Thus, the electronic resources on the StratOG website include a number of short video clips.

IMPLEMENTATION

Production and publication

Production of an effective distance learning programme requires a compendium of skills of which subject knowledge is only a part. Project management, graphic design, typesetting, web design and programming, and instructional design skills are all essential. For the production of StratOG, most of these skills were developed in-house based on experience gained in publishing DIALOG – an interactive, case-based CD-ROM learning package (RCOG, 1998–2002). Training materials were produced for the authors to encourage the adoption of a suitable writing style. Some specialized production work, including aspects of the website programming, was undertaken by contractors, but StratOG is published by the RCOG.

Finance

The business plan for StratOG required production to be initially funded by the RCOG but to become fully self-supporting within 2 years. This was based on the first module being published within 18 months of inception and subsequent materials being made available module by module when completed. This approach not only ensured that the programme was launched relatively quickly, but also provided an early income stream to fund production of the latter modules. The most significant costs relate to personnel salaries and printing.

CONTENT

Introductory tutorial

An introductory tutorial is provided but this does not attempt to give study skills training. At this stage in their training, trainees have established their own learning techniques and are expe-

rienced in applying these to various educational opportunities. However, a number of general points about the approach to study are highlighted. Learners are prompted to:

- Seek out and participate in further learning opportunities that support the learning process facilitated by StratOG
- Relate the contents of StratOG to day-to-day work focusing on areas where learning has become useful ‘on-the-job’
- Set personal learning goals in addition to the stated learning objectives.

Paper-based modules

There are ten paper-based modules, five covering the core of the specialty and five covering specific subspecialty areas, each subdivided into chapters or ‘tutorials’. Modules are normally provided to participants individually at 3-monthly intervals and it is thus expected that participants will follow the programme for a period of between 2 and 3 years (although some trainees may choose to undertake only one or a few modules). Each module comprises a contents section followed by a series of tutorials. The contents section provides tick boxes so that learners can monitor their progress through the materials.

Each tutorial is relatively self-contained and is based on a standard structure. The format is meant to be simple and clear, and is designed such that progress through the material from one page to the next is rapid. At the beginning of each tutorial, learning objectives clearly identify what participants will be able to do once they have completed all aspects of the tutorial. The objectives are repeated at the end of the tutorial to allow the learner to confirm their achievement. Further features include the following:

- Each tutorial has a pre-test comprising a series of true/false questions, although in some cases extended matching and short, free-response questions are posed. The same questions are repeated at the end of the tutorial as a ‘post-test’, and having completed the latter participants are

prompted to check the answers to both tests by referring to the website. Learners can therefore gauge the extent to which their knowledge has improved as a result of studying the tutorial.

- Essential reading is specified at the start of each tutorial. Much of it is provided in full-text form on the website but, because of copyright restrictions, some needs to be accessed from one or more of the recommended discounted textbooks listed on the website.
- Participants are provided with an indication of how much time is needed to cover the tutorial and the essential reading to help them plan their studies. However, further time is needed to cover the additional reading and to undertake the assessments and other activities specified. It is recommended that learners study the subject area covered by each tutorial for between 1 and 3 weeks.
- The main learning text is divided up into short sections and subsections. As learners work through the text, they are prompted to undertake various activities as indicated by a series of icons or ‘flags’. These flags also appear on the website providing links to the associated resources.
- Regular self assessments appear throughout the text. These are either true/false questions, free-response questions, case studies or short essay questions, the latter provided in the same format as in the MRCOG part 2 examination. Space is provided for answers to be written on the page and model answers are given on the website where appropriate, although many questions prompt discussion with trainers and peers.
- Tutorials may include key facts where important issues detailed in the text are summarized. These are intended to help demarcate distinct, manageable learning sections and are more frequent in the longer and more complex tutorials.
- At regular intervals throughout the text, lined space is provided for

written notes. Participants are encouraged not to feel inhibited about writing on the pages. Appropriate paper was chosen and lines provided for this very purpose. The ring-binder format allows learners to insert printed versions of the articles that appear on the website (if copyright permission allows) or to insert any updates and/or errata. Each module is thus designed to develop into a learning portfolio.

Web-based resources

Upon enrolment, participants receive a username and password giving access to the secure StratOG website (Figure 1). The computer used to access the website need not be the latest in multimedia technology, however, the website contains elements suited to a faster machine. It is necessary to download sound, video and text and so a fast internet connection reduces download times although these are never excessive, even with a 56k modem. Sound and video cards are essential to access the multimedia material on the site. The software needed to view video and text (portable document format = PDF) files is readily and freely available. The website is essentially an on-line resource centre which includes full-text essential and additional reading, answers to self-assessment questions, video clips, sound clips, a forum and a chat-room as outlined below:

- Learners visit the main resource page for the relevant module to access the reading resources or answers. Clicking on the appropriate



Figure 1. Sample page from the StratOG website.

module tab brings up a page where the graphic images representing each tutorial appear around a central distinctive StratOG logo. Each image provides a link to the resource page for the tutorial in question.

- The listed essential reading items and the additional reading icons are active links to the reading resources which may be on another website or an archived PDF file (a non-editable graphic image of text and pictures). Such files are available for most essential and additional reading.
- Links to a page of additional resources and to the answers pages are also provided for each tutorial. The additional resources page provides any audio or video files that

are referred to in the tutorial. The answer pages hold links to model answers to self-assessment, pre-test and post-test and other questions.

- The StratOG forum can be accessed from the main welcome page. The forum allows participants to post their comments, opinions or questions on what is, essentially, an interactive noticeboard. All other StratOG participants can read messages and respond if they wish. The forum is intended for global use and while certain activities will be initiated centrally, it is hoped that focus for the use of the forum will be initiated within and between countries, regions and localities.
- The chat-room (ChatOG) allows participants to communicate informally on-line with any other trainee also on-line. ChatOG is meant to be fun and reduce the feeling of isolation that can affect distance learners. Using ChatOG, participants can, for example, exchange thoughts and ideas and obtain immediate responses from those currently logged on.
- Other features available on the website including help, search and technical support pages help participants get the most from their time online.

KEY POINTS

- StratOG is a modular distance learning programme aimed primarily at candidates for the part 2 Royal College of Obstetricians and Gynaecologists (RCOG) Membership examination.
- StratOG was developed and published by the RCOG in-house with judicious use of external publishing expertise.
- StratOG uses interactive paper-based and web-based learning materials to facilitate local delivery of centrally-developed education.
- StratOG provides a framework for the continued development of regional education programmes.
- Since its launch in September 2001, StratOG has been adopted by five UK regions, and individuals or groups from 16 other countries.

VALIDATION

StratOG provides a comprehensive education programme aimed at all trainees in obstetrics and gynaecology. The regularly reviewed MRCOG part 2 syllabus and all topics from the main RCOG training logbook will be covered to ensure wide applicability, not only to those working towards the MRCOG, but to overseas trainees working towards similar professional qualifications. StratOG is an educational package designed to support a structured training programme and/or a regional education programme and is not a course, as such, in its own right. Moreover, the environment and the circumstances in which the material will be used is highly variable.

However, the validity and quality of the programme will be assured as far as is feasible. Thus, each module written to date was coordinated by a module leader who, as a subject specialist, peer-reviewed each tutorial written for that module. Moreover, each tutorial was allocated a 2-year expiry date to ensure regular review. This review will comprise a 2-yearly revalidation of the programme that will also assess acceptability and aspects of fitness-for-purpose through questionnaire evaluation (and possibly, in due course, through reference to MRCOG part 2 results).

It is important to note that StratOG does not provide an exhaustive programme of study and participation

does not guarantee success in the MRCOG or any other professional examination, each of which has its own standard. However, following a pilot programme of the first two modules, and other widespread feedback, those who produced StratOG have good evidence to believe that full participation in the programme alongside clinical training will significantly enhance trainees' capability of achieving appropriate levels of knowledge and skill. **HM**

Conflict of interest: none.

Royal College of Obstetricians and Gynaecologists (1998–2002) *Distance Interactive Learning in Obstetrics and Gynaecology*. Noor Informatics, Sheffield