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Photo: Einar Nilsen

Blackboards and whiteboards are underestimated teaching aids. They can be used as either an alternative or a supplement to PowerPoint

Using the blackboard

The teaching of medicine is to a large extent based on direct contact between the teacher and the students – face to face. Questions are asked in small clinical groups, then discussed and answered, opinions are exchanged, errors pointed out and feedback given – verbally, directly, continuously and independent of technical limitations. Lectures give the teacher the opportunity to explain principles, create an overview and review particularly difficult topics for many students at the same time (1). In the old days it was not uncommon for lecturers to restrict themselves to merely lecturing, i.e. reading from a manuscript, often without or with the minimal use of a blackboard – «reading a paper» as it is expressed in English. Now, nearly all lecturers use visual aids, but the blackboard has largely been replaced: first by overheads, then by slides, and in recent years by PowerPoint.

PC-based presentation tools such as PowerPoint have been invaluable for the quality of lectures and have made it much easier for lecturers to prepare themselves and to update their teaching material (2). Used correctly, PowerPoint is a blessing for both teachers and students. But it can easily be misused, for instance by the use of far too many images or images that are boring and overfilled with information. PowerPoint can undermine the contact between teacher and students and can obstruct the message the lecturer wishes to transmit. Flexibility is limited. Some writers have been strongly critical of PowerPoint and claim that the program causes stupidity – or even worse (3).

There is still an alternative to PowerPoint, and it is cheap, readily available and easy to use: a blackboard (or a whiteboard). An experienced and competent lecturer at the Faculty of Medicine in Oslo writes on his website: «The blackboard is the most underappreciated teaching aid of our time. Few things make me as angry as when I arrive at a modern auditorium that has no blackboard» (translation by this author) (4). I have tried out his (and others') recommendation to base some lectures on the use of a blackboard, and I have found that it functions very well – it quite simply feels liberating! The contact with the students improves, and tempo and progress can be adapted to input and questions from the auditorium. Important words, terms and statements can be written on the blackboard (or whiteboard), often based on answers the students have given to the lecturer's questions during the session, and it can be used to illustrate significant points by means of simple lines and diagrams (5). In fact good blackboard teaching means that the students must be active.

In my opinion, a blackboard or a whiteboard can be crucial for a good lecture. This also applies when the lecture must be based

on PowerPoint – yes, particularly in this case, since questions always turn up during the lecture that need a board to enable major points to be explained. Fortunately most of the auditoriums and other teaching rooms are equipped with a blackboard or a whiteboard, but not all. In some auditoriums, for example at Rikshospitalet University Hospital, the blackboard is hidden behind a screen that is used for the projection of PowerPoint images. This is not an optimal solution since the flow of the dialogue is affected if the lecturer has to spend time finding the correct buttons on the control panel, raising the screen, switching off the light on the projector and adjusting the light in the room (and on the blackboard) before writing or drawing on the board. And it is even more frustrating when there is no chalk – or when the felt pens for a whiteboard are dry. Afterwards the same procedure must be repeated to get back to the PowerPoint presentation. It may also be useful to have a PowerPoint image on the screen at the same time as one makes notes on the board, and in this case the board and the screen must be positioned side by side.

So this is not a case of one or the other – *either* a board *or* PowerPoint. Studies indicate that it is precisely the combination of and exchange between several types of teaching aids that produce the best learning (6). And of course using a board has its weaknesses, such as illegible handwriting, poor drawings and the fact that the lecturer has his or her back to the audience while he or she talks towards the board.

Today's medical students use online sources for medical information. With their PCs, tablets or smart phones they have updated and quality-assured medical information at their fingertips. Teachers' PowerPoint presentations are downloaded from the net. Videos of lectures at leading universities abroad are available. Students communicate with each other and with teachers on academic and practical questions via e-mail, text messages and apps. In a few years we will have a far greater number of electronic teaching aids at our disposal that are even more user-friendly. Although it takes time and a lot of resources to establish well-functioning E-learning systems, there is no doubt that E-learning is changing medical education and medical practice (7).

A good medical lecture is characterised by dialogue between the lecturer and the students, varied use of teaching aids, and by adapting the tempo and progress to the students' requirements. The use of a blackboard or a whiteboard is neither old-fashioned nor nostalgic. Just the opposite: they are modern, direct, dynamic, intuitive and readily available – and they don't need electric power or a functioning access to the Internet.

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References

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