

MicroDeCine: The Teaching of Clinical Microbiology at the University of Santiago de Compostela by Means of Film

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Summary

The development of new ways of learning and a closer approach of education to social reality and its problems, to which all forms of disease are inseparable, is among the challenges of the European Higher Education Area. Bearing in mind that the University of Salamanca has consolidated itself as a pioneer in the use of film for teaching purposes, it seems that film has at last entered into the classroom and that Spanish Universities are increasingly taking up this kind of activity. The present authors wish to contribute the experience they have drawn from the activity MicroDeCine, which took place during November 2008 at the University of Santiago de Compostela, and which positively surprised everyone, both teachers and students.

Keywords: Film, Microbiology, Infectious Diseases, Teaching, Educational Experience.

Background

The recent article in the Current Affairs Journal SEM, "Film and Microbiology"¹, can only support the fact that the original initiative taken by Dr José Elías García-Sánchez, Dr M^a José Fresnadillo and Dr Enrique García-Sánchez² of the University of Salamanca has been of use to encourage other Microbiology lecturers who have sought to join this interesting educational activity. There is no need to explore the communicative virtues of film in depth, or even to insist on the validity of this means as a social educator, aspects which have been developed by several authors since the beginning of the Journal of Medicine and Cinema³⁻⁶. However, in view of the experiences which have been implemented in several Spanish and foreign universities⁷ it is necessary to insist on the fact that film can and should be incorporated into classrooms as an educational tool. Based on the experience at the University of Santiago de

Compostela, the intention is to encourage the implementation of these educational innovations within the academic timetable, without interfering with other compulsory academic activities.

When the authors of this article, teachers of Clinical Microbiology at the Faculties of Biology, Pharmacy and Odontology-Medicine, got together to start this activity, they knew that it was not a new initiative in the University of Santiago de Compostela (USC), as it is usual to find film courses on offer at the Faculties of Journalism and Geography and History. However, they also knew that previous experiences in medical areas had not been very successful until then, maybe because of the fact that they had been in charge of the students themselves, who were mainly seeking a source of funds for their end-of-degree "baptismal" trips. In these cases, the students had always complained about the low quality of the screenings and, in addition, they would just go to

watch a film without any kind of educational orientation, as a result of which many of these activities were cancelled owing to a lack of attendance. Therefore, they had serious doubts concerning the students' reception of the course.

Not neglecting the activity's informative and entertaining nature, the main purpose was to improve students' attitude and motivation towards the study of infectious diseases. Therefore, to avoid failures like those mentioned, the decision was taken to:

-Use the best facilities available at the faculty to offer quality screenings, as regards both image and sound. In this case, the course was held in the Main Hall of the Faculty of Pharmacy, which has 240 seats available, as well as updated and sufficient audiovisual resources.

-Strengthen the teaching purpose by inviting a qualified professional who, during a small speech, would introduce the students to the subject of infectious diseases in the film. From here we want to thank all the guests for their contribution and enthusiasm, most of them belonging to the Microbiology Service, the Intensive Care Unit Service and the Preventive Medicine Service of the Hospital Complex of the University of Santiago de Compostela.

The course was offered as 1 Free Elective Credit for students of the Faculty of Biology, the Faculty of Pharmacy, the Faculty of Medicine and Odontology and the Nursing College.

The experience

1.-Length of the course

The first question to decide upon was that of how many films were going to be shown in the course. Given the fact that 1 Free Elective credit is the equivalent to 30 hours, a 1-week long course could not be planned, that is, 5 films, as this was not enough. On the other hand, to screen 10 films in 2 weeks was too intensive, as it forced the students to take part during two consecutive weeks, rendering the simultaneous performance of other activities, such as laboratory practicals, impossible. The decision was taken to hold 2 screenings a week: on Mondays and Wednesdays, over 4 weeks.

2.-When?

The second question to decide upon was which would be the ideal month to carry out the activity. Since the subjects in which infectious diseases are dealt with are subjects belonging to the first term, the decision was taken to leave out the months of December and January as well as that of October, which is an "adaptation" month for many students. November was finally chosen, despite being a month in which students are already absorbed in compulsory laboratory practicals. The choice of 8 films, at two films a week, allowed the reduction in each individual student of the probability of the screenings taking place at the same time as other compulsory academic activities.

3.-Choice of the films

At first, the films mentioned below were chosen with the topics they illustrated:

- 1.- *Moulin Rouge* (2001) by Baz Luhrmann, to illustrate the topic of tuberculosis.
- 2.- *Memorias de África/ Out of Africa* (1985) by Sydney Pollack, for syphilis.
- 3.- *Pánico en las calles/ Panic in the Streets* (1950), by Elia Kazan, for plague.
- 4.- *Trainspotting* (1996), by Danny Boyle, for AIDS.
- 5.- *U-Boat/ In Enemy Hands (U-Boat)* (2004) by Tony Giglio, for meningitis.
- 6.- *El Velo Pintado/ The Painted Veil* (2006) by John Curran, for cholera.
- 7.- *En el Amor y en la Guerra/ In Love and War* (1997) by Richard Attenborough, for the infection of wounds and soft tissues.
- 8.- *Estallido/ Outbreak* (1995) by Wolfgang Petersen, for bioterrorism.

When the experience was already scheduled, the possibility arose to include it in the Science Week, "Diverciencia", a proposal from the Ministry of Science and Technology channelled through the Regional Ministry of Innovation and Industry of Galicia, mainly with informative and recreational purposes. Fortunately, a micro-grant - never better said -

was obtained, which was of great help in the purchase of original films, promotional publicity boards and the handing out of a small souvenir for the guests.

During the screening of each film, an attendance record was kept, and on the last day a questionnaire was handed out, of which the results are shown below.

Results

Table 1 reflects the attendance of students

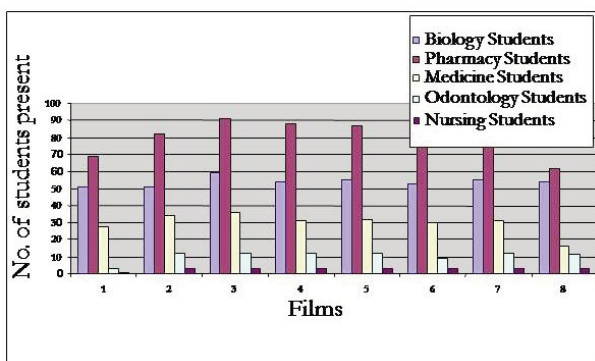


Table 1: Attendance at the MicroDeCine. Science Week 2008

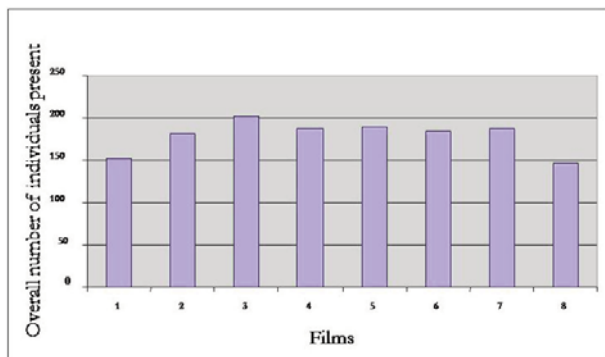


Table 2: Attendance at MicroDeCine. Science Week 2008

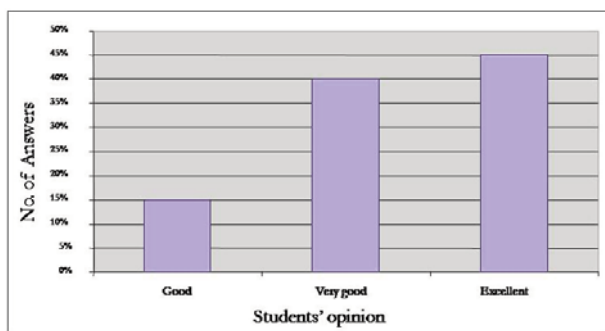


Table 3: Question 1.-What do you think about the idea of MicroDeCine?

according to their faculty and Table 2 reflects the data of overall attendance, an average of 179 students per day of screening being recorded.

At the end of the course, those present were encouraged to answer, anonymously, a short questionnaire, which 114 of the students present completed. The questions and results are shown in Tables 3-9.

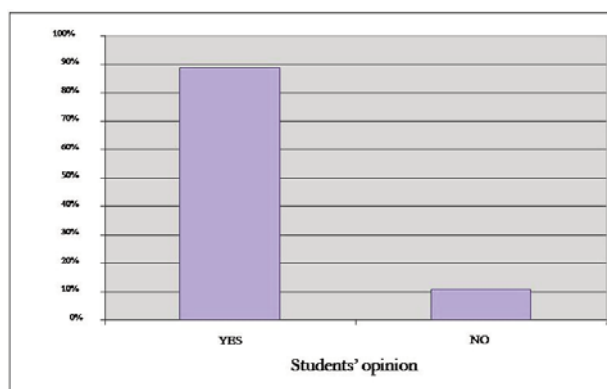


Table 4: Question 2.-Have you found the course useful to increase your interest in Clinical Microbiology?

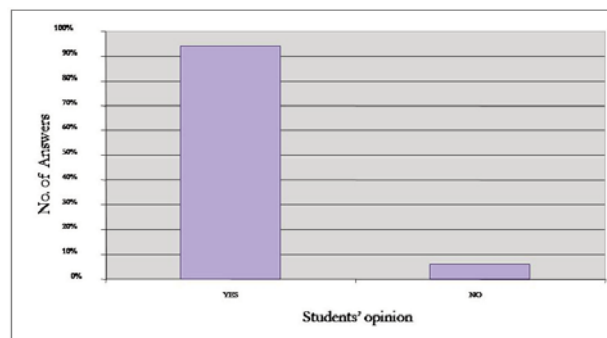


Table 5: Question 3.-Do you think you have learnt anything new about infectious diseases?

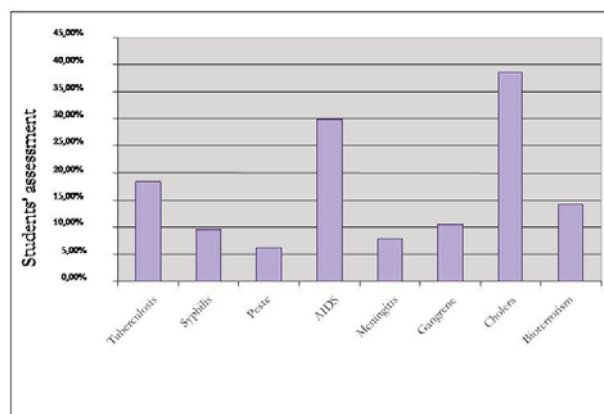


Table 6: Question 4.-Which of the topics dealt with have you liked the most?

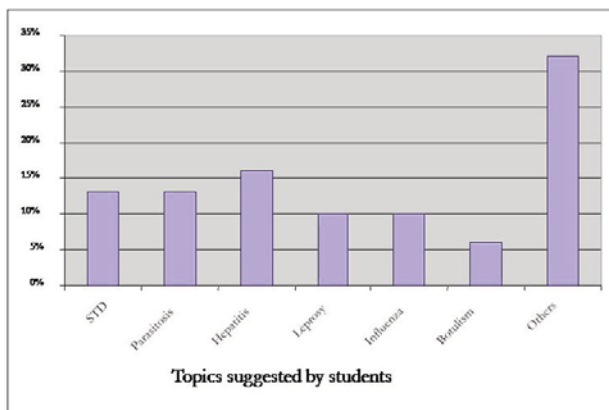


Table 7:

Question 5.-What other subject matter would you like the course to deal with?

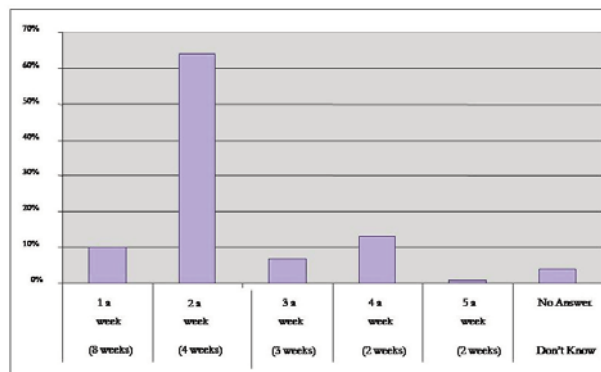


Table 9:

Question 7.-With what frequency do you think the films should be screened?

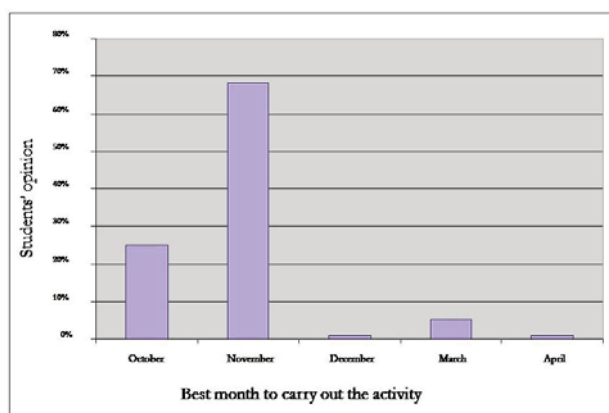


Table 8:

Question 6.-Taking into account the dates of practicals and exams, do you think the month of November is the best one to organise the course? If your answer is NO, please state which month you would prefer

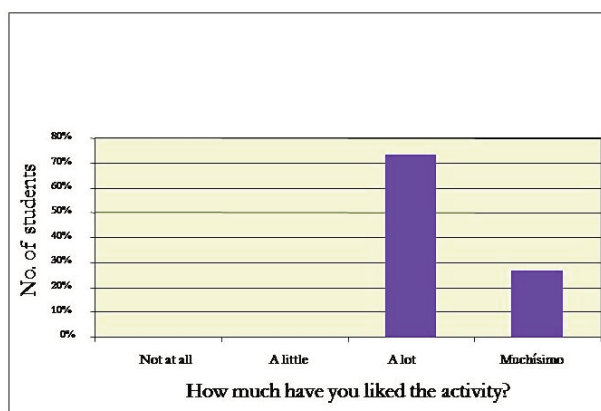


Table 10: Public Opinion Survey requested by FECYT (Spanish Foundation for Science and Technology. Ministry of Science and Technology)

As stated previously, the course was a part of the Science Week sponsored by the Regional Ministry of Innovation and Industry of Galicia. An assessor from the FECYT (Spanish Foundation for Science and Technology) was sent, who randomly handed out a questionnaire with questions related both to the attending individual's profile and to the development of the activity. Table 10 reflects the degree of success of MicroDeCine.

Discussion

The most "successful" medical issue among students was that of cholera, illustrated in *The Painted Veil*, a film of great artistic quality and no nonsense. The least popular was *Panic in the Streets*, on the plague, perhaps for being in black and white, perhaps because the main characters are more affected than the actors we have nowadays, although it is a very good film from an epidemiological point of view (Table 6).

According to other authors^{8,9} the films should be chosen carefully, avoiding very well-known ones, and guiding students towards a critical assessment of the scientific content. In this sense, *Outbreak* was screened as an example of a not very rigorous film, although the final analysis of short extracts commented by the guest allowed the students to spot and forgive the small mistakes shown in the film as purely cinematographic liberties.

Many other topics were suggested for future MicroDeCines by the students and, with absolute certainty, there is at least one film for each of the infectious diseases that make up a Clinical Microbiology syllabus (http://www.usal.es/~micromed/cine_infeccion.htm).

If we bear in mind the fact that more than 90% of the students answered that both their interest and their knowledge of infectious diseases increased considerably on attending the course (Tables 4 and 5), it is tempting to suspect that this

kind of activity should be included among the academic choices with a reserved timetable, which means that during the screening sessions there should not be any incompatibilities with other compulsory theoretical/practical classes. This has been the most common complaint among students, in spite of which, and as Tables 1 and 2 illustrate, the attendance of a high number of students was recorded (an average of 179). In the initially requested pre-enrolment, more than 400 students enrolled, an impossible number to accommodate within the appointed classroom, but one that does reflect the interest raised by the initiative.

The period in which the student is a mere recipient of knowledge is now coming to an end with the introduction of the EHEA, and education must also be extended to the acquisition of several attitudes and talents. Beyond class attendance and sitting exams, there are many activities in which students can get involved. Film is one of them; the student should not necessarily be reduced to a passive individual, but can also take part in the design and execution of the activity itself, thus assuming another of the challenges presented by the EHEA: i.e., active participation by students. Teachers are required to transmit information in the most attractive way possible; only by doing so will they guarantee that students will not forget it after their exams. In this sense, film is a great tool which cannot be overlooked. Indeed, attempts to include it in curricula are a must.

Translation by the team of the Languages Service of the University of Salamanca.

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