

tion, format and subject matter similar to final examinations used in their pre-clinical courses. A 19-student control group with an identical level of training uninvolved in the elective also completed the evaluation. Evaluation responses were scored separately by each of two faculty blinded to the cohorts. These faculty were not involved in teaching the elective course.

Results: There were 28 Post-course and 19 Control assessments. The Median and Interquartile Range (IQR) Control total score was 34 (30.3-38.5). The Median IQR Post-course total score was 48 (42 - 53.3). Control and Post-course score differences were statistically significant. Kruskal-Wallis chi-squared value, with *degrees of freedom* adjustment, was 16.8 with 1 degree of freedom, to yield $p = 0.0001$.

Conclusion: Bedside teaching of basic science principles and their application to explanation of case presentations during an elective course serves as an **effective teaching method** improving pre-clinical medical student **competence** with understanding and integrating such concepts into clinical medicine practice.

The Use of Bloom's Taxonomic Hierarchy of Educational Objectives as the Basis for Designing and Refining Pre-clinical Coursework

Keywords: *instructional design, course design*

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Summary: Bloom's **taxonomy** describes the evolution of intellectual capabilities in terms of a **six-step** hierarchy. Step 1: acquisition of information (**surface learning**). Step 2, comprehension via transformation of acquired information into a personalized and potentially useful **knowledge base** (**deep learning**). Step 3, application of personalized **knowledge base** to new situations. Step 4, analysis designed to **identify the more** and less relevant/useful aspects of one's **knowledge base**. Step 5, synthesis of a refined **knowledge base** following **additional** experience and further analysis. Step 6, **evaluation of current** the 'state of knowledge' designed to detect fallacies, **insufficiencies** and define new directions for learning and **research**. There is little evidence to suggest that Bloom's taxonomy serves as guiding principles in the design of medical school **course work**. Over the past four years the authors have designed **pre-clinical** coursework consistent with Bloom's first three educational objectives. In a previously presented pilot investigation, principal components analyses was used to construct three composite variables representing students' attitudes towards the utility of the information acquisition (surface learning) sessions, comprehension (deep learning), and knowledge base application segments of the course. Multiple regression analysis revealed that together, the three instructional approaches accounted for 40% of the variance in the dependent variable (evolving sense of clinical competence). Of the three instructional approaches/objectives, knowledge base application opportunities appeared to have the greatest impact in terms of the students evolving sense of clinical competence. This presentation describes ongoing efforts to use Bloom's taxonomy as the basis for redesigning additional pre-clinical courses.

Which medical students like problem-based learning?

Keywords: *Problem-based learning; personality; learning style*

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Summary: Problem-based learning (PBL) has become increasingly popular in medical schools, including in the United Kingdom, where it has been included in some of the new accelerated graduate-entry courses. Although the theory and practice of PBL have been much discussed, and meta-analysis shows it to be as effective as traditional curricula, we could find no studies asking what characterises students who do or do not like the method. Here we describe the relationship between personality, learning styles, and satisfaction with PBL in 99 students at a London medical school. Satisfaction with PBL was assessed with a 26-item questionnaire that asked about the utility and enjoyment of the components of PBL. Factor analysis identified two clearly distinguishable factors labelled Personal Learning, which assessed whether students felt PBL helped them personally in clarifying and remembering new information, and Contribution to Case Discussion, which assessed whether students found the PBL process enjoyable and useful, and found it helpful to make suggestions about the case. Personality was assessed using a 15-item questionnaire assessing the 'Big Five' personality factors (extraversion, neuroticism, openness, agreeableness and conscientiousness), and Learning Styles (Surface, Deep and Strategic) were assessed with an 18-item version of Biggs' Study Process Questionnaire. Students who learned well in PBL had a deeper learning style, whereas students who liked contributing to the group process were less neurotic, more agreeable, and had a deeper learning style and a less strategic learning style. We believe these results have implications for schools using PBL.

Have tutors and residents got similar communication skills?

Keywords: *communication skills; residents; tutors; patient centered care*

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Summary: Introduction: Improving doctor's communication skills is a matter of priority for its influence on the quality of health care. Role modelling and the informal curriculum are known to influence the training period.

Objective: To detect communication skill differences between tutors and residents at our hospital.

Material and Methods: Location: Sabadell (Spain) Hospital reference for 380,000 inhabitants, situated 30 Km from Barcelona.

Personnel: medical post grade programme for 18 specialities with 32 tutors, 34 R1 and 32 R2

Material: 1) questionnaire relating to identification, speciality, years of experience and demographic data. 2) A validated videotape with poor model communication skills in a simulated encounter between a doctor in the emergency service, dealing with a complaint from a patient's relative. As far as communication skills are concerned, there are many arguments on the video which can be improved. **Procedure:** Viewers, who saw the video, scoring the doctor's communication skills on a scale from 0 - 10. **Statistical analysis:** SPSS, Mann Whitney, Spearman.

Results Attendance: R1 28 (82,4%); R2 29 (90,6%); Tutors 24 (77,4%). **By speciality:** core specialities (CS) 23, medical (MS) 24; surgical (SS)19; central services (CeS) 15 **Sex:** female 49 (20 R1, 21 R2, 8 T) **Score (SD)** of the "poor" video by residents and by