**** Award Finalist**

IS DRAWING STILL A VALUABLE LEARNING TOOL IN HISTOLOGY?

Anca M. Stefan, M.D.*, *Cristian Stefan, M.D., Department of Cell Biology, University of Massachusetts Medical School, Worcester, Massachusetts 01655 USA*

A diverse array of histological images in printed and electronic format has become increasingly available to medical students over the years and this rich pool of visual information is continuously expanding. As a result, students tend to look only at images instead of sketching of what they see under the microscope or on the monitor or creating their own diagrams. Drawing by students as part of in-lab activities or take-home exercises has not been a requirement for medical students taking the Histology course at UMMS. However, students enrolled in the Histology course in the last two years were occasionally asked to draw diagrams of histological structures as part of take-home quizzes. The assignments were graded according to the correct representation of structures / facts. For the purpose of the present study, other factors were analyzed, including: mono or polychromatic representation, originality of expression, and simplicity/complexity of drawings. The results are presented and discussed. In addition, the end of the course evaluation conducted in June 2005 included questions about how useful students considered diagram drawing assignments in our course. 57% of the students considered useful such assignments as part of the take-home quizzes, 36% did not consider them useful, and 7% were undecided. When asked if they would consider useful diagram drawing assignments as part of some in-lab exercises, 38% of the students favored this idea, 49% answered negatively, while the percentage of undecided students almost doubled (13%). The response to this survey, combined with the analysis of students' individual work in complying with the assignments given over the last two years, suggest that drawing in Histology retains its educational value and, meaningfully used, could enhance the active learning process.

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FACULTY DEVELOPMENT NEEDS AND EXPERTISE: SHARED VALUES BETWEEN BASIC SCIENCE AND CLINICAL SCIENCE EDUCATORS

*Cindy C. Wilson, Ph.D. and **Mark Adelman, Ph.D.,*** *Departments of Anatomy, Physiology, & Genetics, Uniformed Services University of the Health Sciences, Bethesda, Maryland 20814 USA*

Faculty Development is essential to teaching and learning in all areas of medical education. Efforts to match faculty needs and University expectations have typically focused on subsets of medical school faculty with mixed results; few efforts have attempted to build a program spanning both basic and clinical science educators. This program development effort identified common professional development needs of faculty in a military medical school as stated by both the faculty as well as those perceived as needed by department chairs and program directors. The assessment determined: self rated faculty teaching knowledge, attitudes and skills necessary to the work in a medical school as well as the level of expertise of performance of these activities; chair's perspectives of faculty expertise and needs; and differences between basic and clinical science educators' needs. A mixed method study of all faculty appointees was conducted to include an online survey of all faculty combined with intensive personal interviews of chairs/program directors. A total of 418 faculty surveys (48% response rate) and all (20) department/program director interviews (N=20) were completed. Chairs' perceptions differ from those of faculty in their ability to assess program/project effectiveness (Fisher's exact test, p =0.04). Clinical Science chairs (90-100%) felt faculty needed budget preparation, program assessment, study design and grants preparation knowledge/skills. Basic Science faculty was felt to need skill building on writing exam items and program assessment assistance. Data indicate a need to align institutional support with institutional expectations for promotion. A shared value for faculty development was identified, although secondary needs differed.

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TOWARDS GERMAN - NORTH AMERICAN CO-OPERATION IN HEALTH EDUCATION

W. Breipohl* and J. Rotgans**, *Department for International Medical Education and Development, Medical Faulty, University Bonn, Bonn/Germany **Association for Medical Education – German Section of AMEE; RWTH Aachen University, Aachen/Germany

The European Commission (DG EAC) and the US Department of Education (FIPSE) are developing a new concept for joint consortia under the future EC/US agreement on higher education and training – for the period 2006 – 2013) based on the experience acquired under previous agreements. The basic idea is to provide a framework for higher education institutions on the two sides of the Atlantic to set up together recognised double or joint degrees at undergraduate level ("Transatlantic Degree"). Under this new concept financial support would be provided for (i) multilateral consortia of EU and US institutions for setting up and running the Transatlantic Degree and (ii) providing transatlantic mobility grants (scholarships) for students and scholars, with the advantage that students to earn two separate degrees or a joint degree in less time and lower costs than would be required if the degrees were completed separately, and institutions would compare, review and adjust their courses and join their best curricular resources using their comparative strengths to build a broader and higher quality offer of education and training for students. Involvement in the transatlantic co-operative curricula will strengthen international standing of the participating institutions. Students and Faculty will benefit from in-depth internatio-nal/transatlantic exposure, cross-cultural training and experiences and enjoy the added value of a double or joint degree fully recognised on both sides of the Atlantic Criteria will be established seeking to ensure that joint consortia include as balanced a representation of higher education institutions from all EU Member States as possible. Against this background

- mainstreams in health education curricula in Germany will be presented – special attention is given to inter-European network strategies in education and vocational training.
- the Bologna Process, i.e. trans-European harmonization efforts, will be outlined -- just as concrete options to utilize the respective instruments for intensified educational and vocational strategies through IAMSE on one side, and European counterparts on the other side (e.g. AMEE, AMSE, EMA, EUA, EUROPET, GMA).
- an eventual Bologna strategy as model for intensified co-operation under the future EU-US/EU-Canada co-operation programme will be explained together with discussions how to utilize the planned Teaching Certificate of IAMSE.
- The presentation is planned as basis for joint curricular funding strategies commencing already in August 2006. by oral (poster) presentation; information is disseminated during consecutive working group sessions, particularly aiming at the formation of Transatlantic Degree Consortia in the Health Sector during the 2006 IAMSE Annual Meeting explicitly to apply for funds from August 2006 on.

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SIMULATED PATIENTS AS A TEACHING TOOL: WHAT IS HAPPENING TO THEM?

Myriam Deveugele*, *Frederik Boone, Marij Sercu, Stéphanie De Maesschalck, Roland Rogiers. Department of General Practice and Primary Health Care, Medical school Ghent University, Belgium*

Medical curricula use simulated patients for training of communication and clinical skills. Most of the studies on simulated patients focus on feasibility, reliability and validity. However the effect of repetitive simulation of patient conditions has not often been addressed. Following study describes the experiences of simulated patients with emphasis on the effect of simulation on their own life. Research questions: Has role-playing within a medical encounter with students an effect on the own well-being of the individual. If so, to what extend. Does being a simulated patient affect the perspective and/or the relation toward the own health-care professionals? We conducted in depth interviews with experienced simulated patients (N=8) helping in communication training with medical students. The interviews were audio-taped and transcribed. The information was independently grouped and categorized using content-analysis procedures. Helping students to become a doctor with attention for patient perspective was the most heard motivation. Role-playing was described as stressful. Fear of failure was common. Having some experience with performing as a hobby was found positive and helped to overcome the stress. Against expectations, roles that had too little connection to own life were less appreciated and challenging roles were more valued. Repetitive simulation of the same person during several weeks and in different medical conditions had a high relation with elevated emotional distress. In relation to the own care givers, simulated patients became more assertive, asked more questions, looked information up on the internet in order to get into discussion. Looking at the effect of simulating on patients is useful and necessary. It helps identifying possible problems and overcoming stress and fear.

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** Award Finalist

TEACHING AND LEARNING LESSONS FROM SEVERE ACUTE RESPIRATORY SYNDROME (SARS)

HE Khoo, Ph.D.*, *and VTK Chow+ ,MBBS, Ph.D., Departments of *Biochemistry and +Microbiology, Yong Loo Lin School of Medicine, National University of Singapore, Singapore 117597*

In 2003, a frightening infectious disease, SARS (severe acute respiratory syndrome) spread in China and South East Asia. Many health care workers were the victims, including students in a medical school in Hong Kong. While no students were infected in Singapore, their clinical studies were affected. We report on the students' experience during this period and how the current teaching and learning of infectious diseases has been affected and improved. As expected, the students were very interested in and aware of SARS during the outbreak. In that year, a University-wide online module on SARS was prepared by a multidisciplinary group of faculty from the Faculty of Medicine and the Centre for Instructional Technology (reported in the International Electronic Journal of Health Education 2005; 8:205-217). The lectures in Microbiology now re-emphasize the importance of emerging and re-emerging infectious diseases, and the need for students to practise self-directed learning. SARS is now included as a topic in "respiratory tract viruses". There is also a greater awareness and interest in infectious diseases on the part of the students. Currently, the intensive media attention on the threat of an avian influenza pandemic has also helped to reiterate the importance of teaching and learning about infectious diseases of global importance (influenza, AIDS, dengue, malaria, etc). This was reflected in the answers to this year's examination question on influenza in which students displayed good and up-to-date knowledge on bird flu.

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A COLLEGE-WIDE APPROACH TO PROMOTE PROFESSIONAL BEHAVIOR IN A COLLEGE OF VETERINARY MEDICINE

IF Lane*, *E Strand, M Sims, D Hendrix, The University of Tennessee College of Veterinary Medicine, Knoxville TN 37996 USA*

A series of activities were developed to introduce a proposed set of guidelines for professional behavior, and to increase dialogue and awareness of professionalism among administrators, faculty, staff and students. Activities during "Professionalism Week" included a faculty grand rounds presentation, facilitator-led discussion sessions for each student class and each departmental unit, and a college-wide seminar. A website, including definitions and resources related to professionalism, also was created. Thematic analysis of the comments from student and faculty/staff sessions was performed, using the constructs of the ten existing guidelines for professional behavior. Themes from both groups were similar, supporting a shared understanding of professionalism within the constructs of competence, pride/dignity, respect, responsibility, integrity, collegiality, and effective communication. Faculty/staff discussions were more likely to highlight professional behavior in relation to work roles and to interactions with colleagues than to students. Students' discussions reflected attention to broader values and goals; the discussions were perceived as more valuable by students that were more advanced in the professional program. The discussions also revealed issues not explicitly addressed in the pre-existing guidelines. Based on evaluation results, the activities were effective in stimulating dialogue and thought about professionalism. Respondents also agreed that professionalism was an important topic for discussion in the college. The events were perceived as less effective in helping attendees learn to respond to unprofessional behavior or to change their own behavior. Feedback from the sessions will aid in the planning of future events and curricular projects.

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MOTIVATION AND TIME MANAGEMENT AS A PREDICTOR FOR POOR ACADEMIC PERFOMANCE

Castañeda A., Hernández M., Pinzón-Estrada E., ***López-Cabrera M****, *Unit of educational programs for enforcement of the medical studies, School of Medicine, National Autonomous University of Mexico, 04510, Mexico City, Mexico*

The School of Medicine of National Autonomous University of Mexico has established two programs to strengthen its curriculum and increase the terminal efficiency at the School by means of the control and evaluation of students with high and poor academic performance. In order to know the deficiencies and strength of the students in the High Academic Demand Program (NUCE) we applied the Learning and Studies Strategies Inventory (LASSI) and psychosocial stress questionnaire (PSSC) to guide activities that supports the students academically, vocationally, and emotionally. LASSI consists on 77 statements graded on a 5 component Likert scale, which are grouped in 10 different categories, as follows: attitude, motivation, use of time, anxiety, concentration, processing of information, selection of main ideas, learning strategies, self regulation and exam preparation. PSSC ask about stress levels particularly psychological demanding. The objective of this study was to know the relation of each category of LASSI and PSSC with their academic performance in students in their first year of medical studies. The LASSI and PSSC were applied to 111 first year NUCE students and their rates and grades were analyzed using Pearson correlation. The results show a positive relation ($p<.05$)between motivation and time management and grades, but we do not found any relation in the PSSC with the grades. This results permit develop strategies that promote independent learning as a tool to increase poor academic performance and guide the academic institution to direct their efforts in the formation of tutors that provide follow up and teaching skills independent learning in order to increase terminal efficiency at the School of Medicine. We conclude that a low average in results of LASSI in motivation and time management categories can serve us as a predictor for poor academic performance.

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**** Award Finalist**

MEDICAL STUDENTS USAGE OF DISSECTORS AND ATLASES IN GROSS ANATOMY AND ITS EFFECT ON LABORATORY PRACTICAL PERFORMANCE

*Stephanie Teasley, M.A., Karen Wendel, B.S. and **David L. McWhorter, Ph.D.*,** Basic Sciences Department, Georgia Campus – Philadelphia College of Osteopathic Medicine, Suwanee, Georgia 30024 USA*

Presumably, anatomy instructors either require or recommend students to use dissection guides and/or atlases in cadaver-based anatomy courses to facilitate the dissection process and to enhance the learning of anatomy. This study was conducted for two reasons: 1) to quantify students' usage of the required dissector and atlas throughout the first-year gross anatomy program at Kansas City University of Medicine and Biosciences (KCUMB), and 2) to determine whether dissector and/or atlas usage was related to laboratory practical performance. First-year medical students (n = 239) were randomly divided into groups and assigned to one of 25 cadavers. Dissector and atlas usage for each group was recorded for the 2004-2005 academic year. A Pearson correlation test was used to assess the relationship between dissector and/or atlas usage, and anatomy laboratory practical performance. The mean usage of the dissector and atlas were 71.43% and 46.3%, respectively. Average usage of both the dissector and atlas was 31.76%. The correlation coefficients for dissector usage, atlas usage, and both dissector and atlas usage relative to laboratory practical performance were -0.027 (P = 0.574), 0.032 (P = 0.617) and 0.037 (P = 0.651), respectively. Results from this study show that a majority of students use the required dissector during gross anatomy laboratories. However, less than one-half of students use the required atlas, and only about one-third of students utilize both a dissector and an atlas. Finally, dissector and/or atlas usage does not appear to be related to laboratory practical performance.

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THE EBB AND FLOW OF MEDICAL STUDENTS INTO THE CARIBBEAN REGION: THE DEVELOPMENT OF ON-SHORE AND OFF-SHORE MEDICAL SCHOOLS

Tomlin J Paul, MB, BS, MPH*, *Anika D Mitchell BSc., Satnarine R Maharaj MA, FFPHM, Janet LaGrenade MPH, MRCPsych. Department of Community Health and Psychiatry, University of the West Indies, Kingston 7, Jamaica*

One of the earliest medical schools in the Caribbean region was the University College of London in the West Indies (UCWI), established in Jamaica in 1948. It is now operating today as the Faculty of Medical Sciences, University of the West Indies with 4 campuses in Jamaica, Barbados, Trinidad and Bahamas. Politics, economics and globalization are factors impacting on the economy of medical training in the Caribbean. This emerging landscape must be examined as regional governments take stock on the future viability of medical training. This paper reviews options for medical training in the Caribbean region with emphasis on development between 1948 and 2005 and examines policy implications emerging from a growing competitive environment for medical training. A review of the history of the establishment of medical schools in the Caribbean region was done using records from library, medical school archives and web-based documentation of these schools.

Since UWI was established over 5 decades ago, the Caribbean region has seen the growth of a number of on and off-shore medical schools. There are now over 50 medical schools distributed among 19 of the 31 Caribbean countries (from The Bahamas to Guyana) with 21 in the English-speaking Caribbean. Of these 21, 16 have been established within the last 20 years (1995-2005). More recently the original indigenous medical school has itself started to recruit non-Caribbean medical students in an effort to shore up its financial viability. There has been substantial growth in the options for undergraduate medical training in the Caribbean over the last two decades. It is apparent that an emerging competitive environment for medical education in this sub-region is changing the way the indigenous medical campuses do business.

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**** Award Finalist**

EVALUATING THE SUCCESS OF AN ACADEMIC SUPPORT PROGRAM

Norma S. Saks, Ed.D.*, *Robert Lebeau, Ed.D., Maris Cutting, MA, Cognitive Skills Program, UMDNJ-Robert Wood Johnson Medical School, Piscataway, NJ 08854-5635 USA*

The Cognitive Skills Program (CSP) at UMDNJ-Robert Wood Johnson Medical School has provided academic support to medical students for over 20 years. Cognitive Skills faculty meet individually with students who want to improve study strategies, test taking skills and time management in the context of basic science courses and clinical clerkships. The goals of the CSP are (1) To promote efficient and effective learning, (2) To foster self-directed learning, and (3) To encourage self-reflection, self-questioning, and self-monitoring. Yearly program evaluation includes counting numbers of students seen in individual consultation, numbers of sessions provided to students, and distributing a student satisfaction survey. During the 2005-06 academic year we developed and implemented a Strategy Effectiveness Rating Form (SERF) for use during individual consultations. Students and CSP faculty record needed changes in study practices on the SERF. Students use the form to document strategy use and to rate on a scale of 1 (very ineffective) to 5 (very effective) how well each strategy is working. The SERF is proving to be an effective tool for encouraging students to monitor and critically evaluate adjustments to study practices. Student ratings provide a measure of whether students are identifying and implementing effective strategies. The form is a useful tool for generating timely feedback on individual Cognitive Skills sessions.

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**** Student Scholarship Winner ****

NOVEL YEAR I/II TUTORING PROGRAM WITH A "PREVIEW / REVIEW" STRUCTURE

Rebecca E Sadun,* *Michael J Goldstein, and Peter J Katsufrakis, M.D., MBA.*
Keck School of Medicine, University of Southern California, Los Angeles, CA 90033 USA

This program provides academic assistance to Yr I/II students with demonstrated poor academic performance. Participation was voluntary for students who self-identified as having exam scores < 75% (70% = passing); 27 of 62 eligible students participated. Group tutoring sessions, taught by advanced students, were of two formats: "Preview Sessions," held the first week of each course, and "Review Sessions," held the final week of each course and mid-course for courses > 5 weeks. Previews helped students develop a "tree of knowledge" by providing an overview of the course's structure, explaining the "big picture," highlighting important topics, and introducing challenging concepts. Reviews combined high-yield presentations with case-based learning; quiz questions and Socratic methods were used to ensure student comprehension and retention. Participants' perceptions of the program's value were determined with anonymous evaluation forms (1-5 Likert scale; 5 = outstanding): "Preview" = 4.42 ± 0.77, "Review" = 4.63 ± .50, "Promotion of Independent Learning"=4.03 ± 0.66, and "Program Structure"=4.53 ± 0.61 (n=19). Wilcoxon signed-rank analysis of Yr II participants' scores (n = 14) before, during, and after this intervention (duration = 3 consecutive courses) revealed a significant (p = 0.030) increase in students' scores from before the intervention (10% below class mean) compared to during the intervention (5% below class mean); scores after the completion of the 3-course program were suggestive of significant (p=0.048) sustained improvement (7% below mean). These data suggest that the Preview / Review model is a successful structure for efficient group tutoring and produces lasting improvement in students' academic performance.

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ESTABLISHING AN INTERGRATED APPROACH TO ACADEMIC SUCCESS PROGRAMS AND SERVICES

Katherine Houghton Ed.D.*, *Kal Winston, John Szarek Ph.D, Charles Seidel Ph.D, Ross University School of Medicine, Dominica, West Indies*

Establishing and maintaining effective academic success programs for medical students is a challenging and rewarding endeavor. Academic programs and services that provide a diverse and comprehensive support network based on the learner are essential to academic integrity, retention efforts, and learning outcomes. Our experience with large diverse student populations has led us to develop the following model for an academic success program. The core of this support network is a student centered needs assessment that identifies student competencies and skills. This assessment provides the framework for student referrals, educational programming, and support services. Student referrals to academic, advising, and counseling services are based on qualitative and quantitative student data. Educational programming enlists designated and trained faculty who provide discipline-specific guidance in a one-on-one or small group format. Support services include peer-tutors, classes in competency development such as test-taking, study-skills, and time-management, and a program for English as a second language. Preliminary evidence suggests that peer tutor groups in physiology benefited from active participation by a liaison from the physiology faculty. Pertaining to the latter activities, our results show that at risk students who participated in the program were more likely (78%) to achieve success than those who chose not to participate (64%). We conclude that optimizing resources on a per-student basis provides incentive for students to participate. Moreover, our model makes academic success the responsibility of everyone by utilizing all resources of the academic community.

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**** Award Finalist**

IDENTIFYING AND RESOLVING PROBLEMS WITH AT RISK STUDENTS

Kal Winston* *Academic Support & PBL; Katherine Houghton Ed.D., Dean of Academic Administration and Student Affairs, Ross University Medical School, Dominica*

Students at Ross University come from diverse academic backgrounds. Some students have difficulty adjusting to the demands of medical school. In order to enhance the success of these students, we developed a program to identify and work with them to improve their deficiencies. Identification of at risk students has been achieved by looking at MCAT scores (<20), performance on a diagnostic test (<70%), and subsequent performance on the first set of exams (<60%). Students so identified are offered learner-centred, small group or individual sessions.

In order to determine what kinds of problems students may be facing, we engage them in discussion of details about their approach to study and tests, and their views of their difficulties. Working with various tools, including multiple-choice questions and course materials, students are encouraged to make their reasoning explicit, to engage in exploratory talk, and to familiarize themselves with the discourse of basic medical science. Typical student difficulties can be grouped into six broad categories: study skills, test-taking skills, reasoning skills, knowledge gaps, questioning, and language.

Our results show that at risk students who participated in the program were more likely (78%) to pass that semester than those who chose not to participate (64%). Student survey results indicate that students consider the program highly beneficial. (4.3 ± 0.7 on a 5 point Likert scale). We conclude that early identification of students who may have academic difficulty, and individual attention to their specific needs, enhances the likelihood of their success in basic science education.

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CHANGING THE PROGRESS TEST FROM A MANUAL TO THE COMPUTER SUPPORTED FORMAT logiEXAM

***Rotgans J.**, Lampert F. Chair of Operative Dentistry/Clinic of Conservative Dentistry, Periodontology and Preventive Dentistry, RWTH Aachen University, Germany*

Changing from a traditional to a modern curriculum includes the problem to choose an examination format, which not only helps to store knowledge in long term memory but also prevents from learning by heart. Such format is the ProgressTest (PT). This test is characterised by a set of correct/not correct/?-to-answer statements at the final examination level, to be taken by all student cohorts - at the same day several times per year: Progress in study should result in an increase of knowledge measured by the PT.
The Aachen dental curriculum is changed successively from 1993 on. Since 1997 30 PTs have been taken by 18 cohorts: The last 25 with 300 statements and an average of 114 candidates.
MATERIAL AND METHOD Until summer semester 2005 all tests have been prepared, scored and evaluated by hand by simple but time consuming procedures: The ItemBank takes 10 sections which are MS EXCEL formatted containing ca. 1,500 items actually. The correct conclusions are shadowed boxes in the corresponding row. The amount of items to use for each section in a test is copied by hand to the preliminary test sheets. From this "mother sheets" a definitive booklet (without shadowed boxes) and an evaluation sheet with corresponding shadowed boxes only are processed on PC.
After students having taken the PT each sheet of the test booklets are prepared to become copied by its corresponding evaluation sheet. As a result test sheets show shadowed boxes at places were the correct answers should have been marked by the students.
Correct conclusions (score 1), wrong answers (score -1) and "I don't know"-answers (score 0) are feed into an SPSS-table by hand (ca. 30,000 strokes). From these data statistics are calculated to decide between pass or failed.
The whole procedure to evaluate PTs and to calculate their results takes ca. 45 hrs to perform in 2-3 days. As a result of the time consuming procedure the soft- and hardware package "logiEXAM" had been purchased in December 2005 for its promise "50 tests – scored and evaluated – in the short brake!".
RESULTS Since December 2005 four PTs have been reviewed using the various formats of test and evaluation sheets of logiEXAM. To familiarise with the software showed to be very time consuming because of its different logic in comparison with the various Microsoft operation surfaces. So, in the beginning there was no time benefit. But after familiarization time reduced till 10% (in cas of the one page score sheet) which is defined by the capacity of the scanner and the accuracy of the students to mark boxes. For students, instead of the one page score sheet, the 36 page test booklet is in favour to score in it at the spot of each item – in consequence, time to score and evaluate increases dramatically (36 times!).
CONCLUSION As it is self-understanding that construction of the ItemBank-database consumes a lot of time, logiEXAM holds exactly what it promises but needs streamlining for big cohorts, Word-modules to insert in the test booklet and links to statistic software as SPSS or SAS.

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