Training Tomorrow's Scientists

self-assessing strategy compared to other approaches and centrally-organized institutions which is opened to 26 000 students. MEFANET cover three main platforms for collaboration and sharing educational objects. As the first, it offers a common gateway to e-publishing web portal. Sophisticated tools for classification of the content, sharing it and controlling access are implemented in the common gateway. The second one is a common installation of learning management system (LMS) Moodle. The third and most surprising one are WikiLectures – a tool for crowd sourcing of educational sources. MEFANET is community of people, not only a portal to depositories and it consists of more education tools than portal to learning sources. MEFANET is open for the medical schools of any other country. WikiLectures (WikiSkripta in Czech, www.wikiskripta.eu), are very opened ensuring maximally effortless contributing and fast updates. WikiLectures are not a dictionary as Wikipedia is; they are rather a textbook with well-defined target reader and specified learning objectives. WikiLectures contains more than 9600 "chapters" and this number is permanently growing. WikiLectures encountered over 40 000 visitors annually. English version is ready and freely opened. WikiSkripta is a vibrant academic community

IS-11

E-MED: AN E-LEARNING PLATFORM TO AUGMENT AND EVALUATE MEDICAL EDUCATION

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Electronic learning is an educational model in which computing, internet and related tools are used to augment and mediate teaching and learning. We have implemented e-learning in our curriculum not only as a tool for effective learning but also as an integral part of both execution and evaluation of the medical education program. We have built the platform (E-MED) on Blackboard, one of the most common learning managements systems, using almost all functions of the software including customized page design, learning modules, surveys, assignments and assessments. However, the real distinction of the E-MED platform arises from the use of the software's two less known functions: the analytics module and the goal alignment feature.

Analytics module enables close monitoring of student activities within Blackboard course pages as well as student grades obtained from various assessment pieces. We have implemented an advisorship program in which advisors have access to statistical reports of the students in real-time, making it possible to detect patterns of decline in an earlier point and intervene promptly. Advisors discussed these reports with the students in regular meetings and gave feedback in order to improve their performance. The second mentioned function, goal alignment, has been used to introduce all course outcomes of the medical education program to Blackboard. These outcomes then have been aligned to all electronic materials uploaded to the system including presentations, multimedia tools, book chapters, articles, assignments and test questions. Aligned assessment pieces are especially important because with the use of analytics tools we are able to produce reports detailing success of the students in an outcome-based manner. Therefore, for each outcome, we obtained a report containing student success rates which was used in course and program evaluation processes. In conclusion, we have constructed E-MED in order to fully use the advantages of electronic medium in augmenting and evaluating medical education by using outcome alignment and analytics. We believe that this model can be used for future initiatives seeking an analytical way of executing advisorship as well as course and program evaluation. This talk aims to explain key elements of the E-MED platform. Discussion session is preserved for live-demonstration of the system as well as a Q/A session.

IS-12

VIRTUAL LABORATORIES: A TOOL TO SUPPORT LEARNING

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Teaching laboratories often lack the resources to accommodate hands-on experimentation on many modern types of analyses and techniques.

This may be due to limitations in the accessibility to suitable samples, lack of equipment, or safety measures that would need to be implemented. There is hence a need for means to provide complete and up-to-date training for students even when real experimentation is not feasible. One solution to fill such a gap is the use of multimedia resources that display such experiments or techniques, another is to run computerised simulations of the experiments. This is useful but still does not provide the full experience; it is particularly desirable to have true spaces for experimenting, in the form of open-ended virtual laboratories, rather than watching animations or videos that always progress in the same way and end with the correct or expected result. Such an open exploration may be very significant for assimilation of the underlying scientific concepts, both methodological and analytical or diagnostical, and to gain relevant professional abilities like experimental design, observation and analysis of results. In this talk, these features will be highlighted while presenting some available resources. Particular attention will be devoted to demonstrate environments that allow users to design their own experiment and explore conditions, amounts, combinations with results that are not prefabricated, but depend on the actual conditions used.

IS-13

USING PROTEOPEDIA IN YOUR TEACHING OF BIOMOLECULAR STRUCTURE AND FUNCTION

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Molecular structure is an inherent part of nearly any lesson in biochemistry, necessary to understand both the properties of biomolecules and the interactions among them. There are, however, limitations in this understanding when the student is presented only with two-dimensional depictions of biomolecules, particularly so for bigger ones like proteins and nucleic acids. The use of three-dimensional molecular representations and the possibility of interactively exploring such molecular models are of great help in perceiving multiple issues of structure, interaction and, consequently, function. In this respect, the Proteopedia website offers ready-made materials, free to use, as well as a platform to develop new ones. This talk will provide an introduction to Proteopedia, its content and features, and several ways it can be used in the educational process. Particular attention will be put into how to make profit of Proteopedia, on the one hand to support teaching and on the other hand to entice students towards learning about the structure of biomolecules in an interactive, content-rich medium. In the associated small group session, attendees will have a chance to request more information and also to practice creating their own material in Proteopedia.

IS-14

EUROPEAN SCIENTIFIC POLICY IN LIFE SCIENCES SUGGESTIONS FOR THE FP9

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European Scientific policy was for the first time politically endorsed as a major driver for the future of the Europe at Lisbon summit meeting of Heads of State and Government of the European Union in March 2000. "The Lisbon Strategy" as it became known announced a bold agreement by all EU states to work "Towards making the EU the most competitive and dynamic knowledge based in the world, capable of sustained economic growth providing more jobs and achieving greater social cohesion" Progress in the basic science was then recognized as being as important as innovation.

As is obvious this decision stimulated the scientific community to collaborate in Science Policy issues in order to achieve the goals set up for the "European Research Area" (ERA) Recognizing the need for scientists to act collectively in order to contribute to shape the future of Science Policy in Europe, a Pioneering group of European scientists emphasized the need to join forces with other international organizations, to work forwards for the creation of European Research Council with the aim of supporting basic Research.