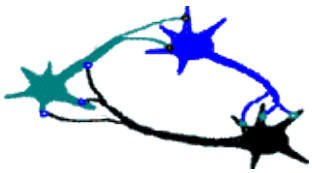
4. Grazer Konferenz

Qualität der Lehre  **Medizinstudium 2000**

Making Change Feasible:
Curricular Innovation and Implementation

Universität Graz/Wallgebäude, 25. - 27. April 1999

Featuring

Prof.DDr. Ralph BLOCH
Institut für Aus-, Weiter- und Fortbildung (IAWF), Med. Fakultät der Universität Bern

Prof.Dr. Henny P.A. BOSHUIZEN
Programme director of the Master of Health Professions Education, University of Maastricht

Prof.Dr. Florian EITEL
Institut für Theoretische Chirurgie, Ludwig-Maximilian-Universität München

Prof.Dr. Charles ENGEL
Center for Higher Education Studies, University of London

Prof.Dr. William FULTON
Academic director and faculty coordinator, Webster University Vienna

Prof.Dr. Wim GIJSELAERS
Department of Educational Development and Educational Research, University of Maastricht

Dr. Heinz JIREZ
Generaldirektor der UNION Versicherung, Wien

Prof.Dr. Nu Viet VU
Unit of Development and Research in Medical Education (UDREM), University of Geneva

Topics

Ignited by the 1997 change in the law governing Austrian university education (UniStG 97) all Austrian medical schools are working on a new curriculum. Previous Graz conferences have laid the groundwork by covering issues such as quality considerations in medical education, evaluation, staff development, and fundamental considerations in curriculum design. The 4th conference will focus on the key issues in the implementation of a new medical curriculum including the required change management strategies.

Program

Sunday, April 25th 1999

16:00 Opening (Richard MÄRZ and Jörg-Ingolf STEIN)

16:30 Presentations / Topic 1: Change Management
Ralph BLOCH: "Reform des Medizin-Curriculums: Und bist du nicht willig, dann brauch ich Gewalt"
Heinz JIREZ: "Organisationsentwicklung und Change Management in der Privatwirtschaft"

18:00 Erwartungen an die Reform
Vertreter der österreichischen Medizinischen Fakultäten nehmen Stellung

* Wolfgang Schütz (Dekan, Wien)
* Stefan Diermayr, Oliver Hausmann (Studenten, Wien)
* Erich Brenner (Mittelbau, Innsbruck)
* Martin Schiffkorn (Student, Innsbruck)
* Gilbert Reibnegger (Professor, Graz)
* Mathias Horacek (Student, Graz)
* Udo Kastner (Arzt, Graz)

19:30 Opening Reception

Monday,April 26th 1999

9:00 Presentations / Topic 2: The Whys and Hows of Medical Teaching
Henny P.A. BOSHUIZEN: "Development of Medical Expertise: Implications for the Curriculum"
Florian EITEL: "Learning Medical Competence - Physician Heal Thyself!"

10:30 Coffee Break

11:00 Small Groups

12:30 Lunch

14:30 Presentations / Topic 3: Assessing Learning in Teachers and Students
Charles ENGEL: "Assessment of Students' Progress and Achievement - Aims, Methods and Consequences"
William FULTON: "Development and Evaluation of Teaching in Instructors"

16:00 Coffee Break

16:30 Small Groups

18:15 Poster Party (Poster session & buffet)

Tuesday, April 27th 1999

9:00 Presentations / Topic 4: Designing an integrated curriculum

Nu Viet VU: "Introducing an Integrated Curriculum: Implications in Program Design"

10:00 to 15:30

Workshops

Ralph BLOCH: "Kapazitätsplanung aufgrund definierter Qualitätsparameter" (Deutsch)
Henny P.A. BOSHUIZEN: "Modern Theories of Learning and Implications for Medical Education"
Florian EITEL: "Das 1. Jahr im Medizinstudium: Lernmöglichkeiten und Leistungsbeurteilung"
Charles ENGEL: "How to design a Block in the new curriculum"
William FULTON: "How Can We Use Student Course Evaluations to Improve Teaching and the Curriculum?"
Nu Viet VU & Wim GIJSELAERS: "A guide to integrated curriculum design: A beginning practical exercise" (English)

16:00 Summingup

W. GIJSELAERS: Tying it all together
Speakers from the Austrian Medical Schools:
Where do we stand now and how will we continue?
* **Jörg STRIESSNIG**
(Member of Curriculum Committe, Innsbruck)
* **Wilhelm FIRBAS** (Chairman of Curriculum Committe, Vienna)
* **Franz EBNER** (Chairman of Curriculum Committe, Graz)
R. MÄRZ / J.I. STEIN: What will YOU do next Monday?

17:30 Conference Close

Detailed information to presentations and workshops

Ralph BLOCH: "Reform des Medizin-Curriculums: Und bist du nicht willig, dann brauch ich Gewalt"

Wie läßt sich der Prozeß organisieren in dem Prioritäten definiert und Widerstände überwunden werden? Wie soll die Diskussion innerhalb der Fakultät gesteuert werden, damit es zu einer kritischen Auseinandersetzung mit dem bestehenden Curriculum kommt und als Folge Reformschritte gesetzt werden?

Heinz JIREZ: "Organisationsentwicklung und Change Management in der Privatwirtschaft"

Wie funktionieren (oder funktionieren nicht) diese Prozesse in der Privatwirtschaft? Welche Rollen spielt der Veränderungswiderstand von Organisationen bzw. die Disziplinierung durch den Markt? Achtung Menschen: Zur Bedeutung von Personen bei Veränderungen in Organisationen. Was sind Anreize für Veränderung und Verbesserung?

Henny P.A. BOSHUIZEN: "Development of Medical Expertise: Implications for the Curriculum"

Human learning and problem solving are largely affected by the amount and organization of the knowledge a person has. For instance, research in medical expertise and medical problem solving shows that experts use integrated biomedical and clinical knowledge while students use isolated bits and pieces of knowledge that they have to link together while reasoning about a problem. As a result students have more difficulties solving the problem. This cognitive process requires a great deal from the students' cognitive capacity leaving less "space" for learning from the excercise.

These two aspects, knowledge organizationa and reorganization and effects of cognitive load on problem solving and learning will be taken as a starting point to discuss implications for curriculum. What kind of knowledge should be integrated? How can that be attained? Is it possible to overcome cognitive load effects on learning from experience? How can that be used in a curriculum?

Literature:

BOSHUIZEN, H. P. A. & SCHMIDT, H. G. (1995).
The development of clinical reasoning expertise; Implications for teaching. In: Higgs, J. & Jones, M. (Eds.), Clinical reasoning in the health professions. Oxford: Butterworth-Heinemann.

BRUER, J.T. (1993):
Schools for thought (Ch3. Intelligent novices: Knowing how to learn, p 51?79). Cambridge: MIT Press.

SCHMIDT, H.G., NORMAN, G. R. & BOSHUIZEN, H. P. A. (1990):
A Cognitive Perspective on Medical Expertise: Theory and Implications. Academic Medicine, 65, 611-621.

Florian EITEL: "Learning Medical Competence - Physician Heal Thyself!"

Werner Heisenberg discovered the Nobel Price winning "Unschärferelation" when he was 26 years old. Everyone of our students is a potential Heisenberg, even if the probability is low. Nevertheless it is quite clear that our curriculum does not facilitate becoming a Heisenberg researcher. Moreover, didactic learning prevents students from becoming knowlegeable, empowered, motivated personalities, instead of fostering these competencies. Learning is not only a rational enterprise as generally conducted in the traditional curriculum, it should comprise experiences developing intuition, passion and social behavior. The outcomes of the traditional curriculum are people who are more or less rationally trained, yet whose education remains compartmentalized. Summing up one can suppose that German speaking universities are thus continuously wasting human capital.

The adverse effects of the medical curriculum require a radical revision of teaching and learning. To what extent will teachers be capable of reframing their policies, attitudes and conduct of teaching will be decisive for the future quality of educational processes and outcomes. Medical teachers are forced to learn how to walk their daily talk, how to relearn, how to "produce" quality learning. They must be able to do what they require of their students: creating a learning organization for teaching,and learning respectively.

For that purpose we could use four technical / methodological innovations with respct to teaching methods:

1. Application of the new media in order to efficiently gain evidence-weighted information,

2. Critically appraising the information gained, visualizing inherent concepts by concept mapping techniques in order to create evidence-based clinical algorithms, and training in diagnosing, medical decision making and evaluation [EITEL, STEINER, TESCHE 1998].

3. Facilitating and administering new forms of learning: Evidence-based learning [EITEL 1998]. That is, roughly speaking, quality circle work which means a mixture of project management techniques with problem-based, case-based learning and evidence-based reflection in action, i. e. coaching of each other in a group-dependent learning process which can be determined as cooperative self-qualification. This is a continuously spiraling, evidence-based indepth study of health care. Why shouldn't we install processes similiar to quality circles in the first year of medical education in order to stimulate independent study and critical thinking, social responsiveness, responsibility and attitudes, collaboration and motivation to solve problems instead of caring for symptoms?

4. Our students are bright, enter Medical school motivated and more or less prepared for academic study. The only competency frequently missed is the skill how to learn. Therefore we have to teach, beyond basic sciences, during the 1st semester

evidence-based learning techniques. We have to work together with them at the bedside and we have to mentor them [EITEL, MOORE-WEST 1997].

To attain the MCW goals we, as teachers, must focus on our students? rational intelligence, but in addition they posess an emotional intelligence, motivational and practical intelligence which also needs our support if our intended outcome of teaching are doctors who are able not only to cure but to heal patients. Healing patients presupposes the doctor's ability to heal herself, i.e. to cope with constraints and to cultivate the growth of her personality.

Literature:

EITEL, F.; MOORE-WEST, M. (1997):
Problembased Learning - genus or species? Zeitschrift f&#65533;r Hochschuldidaktik 21, 23-35.
EITEL, F. (1998):
Evidenzbasiertes Lernen Medizinische Ausbildung 98, 101-112.
EITEL, F.; STEINER, S.; TESCHE, A. (1998):
Quality management: making the transition to medical education. Medical Teacher 20, 444-449.

Charles ENGEL: "Assessment of Students' Progress and Achievement - Aims, Methods and Consequences"

This review will consider the needs of the public for safe doctors, the needs of academics that students' acquire competences in a wide range of disciplines, and the needs of students to mature into responsible and responsive professionals.

Literature:

DUPRAS, N. A. and J. T. LI (1995):
"Use of an objective structured clinical examination to determine clinical competence." Academic Medicine 70, 1028-1034.
FELETTI, G. I., N. A. SAUNDERS and A. J. SMITH (1983):
"Comprehensive assessment of final year medical students performance based on undergraduate programme objectives." Lancet, 34-37.
SAUNDERS, N. A., C. E. ENGEL and G. I. FELETTI (1982):
"Clinical supervisor's report." Medical Teacher 4, 151-154.

William FULTON: "Development and Evaluation of Teaching in Instructors"

University instructors find themselves in the awkward position of having to perform a job for which they have received no formal training: teaching. We will examine the need for the ongoing training of instructors in didactic methods and a variety of teaching skills. We will also consider how student evaluations of individual courses and entire programs can be used to improve teaching effectiveness and the curriculum.

Literature:

ALEAMONI, Lawrence M. (ed.) (1987):
Techniques for Evaluating and Improving Instruction. San Francisco: Jossey-Bass.
FULTON, William (1996).
Fundamental Considerations of the Evaluation Process: Goals, Validity, and Utility, Zeitschrift f&#65533;r Hochschuldidaktik 20, 44-65.
MARSH, Herbert W., and ROCHE, Lawrence A. (1997).
Making Students' Evaluations of Teaching Effectiveness Effective: The Critical Issues of Validity, Bias, and Utility, American Psychologist 52, 1187-1197.

Nu Viet VU: "Introducing an Integrated Curriculum: Implications in Program Design"

* Curriculum integration: the whats and whys?
* How the many different curriculum reforms attempt to integrate their basic sciences and clinical curricula?
* How different instructional formats address the issue of integrated learning?

Literature:

SCHMIDT, H.:
Integrating the teaching of basic sciences, clinical sciences, and biopsychosocial issues. Academic Medicine, Vol. 73, S24-S31, 1998.
BARROWS, HS.:
Taxonomy of problembased learning methods. Medical Education, 20, 481-486, 1986.

Ralph BLOCH: "Kapazitätsplanung aufgrund definierter Qualitätsparameter"

Henny P.A. BOSHUIZEN: "Modern Theories of Learning and Implications for Medical Education"

Modern theories of learning show that the following four factors, Context, Construction, Cooperation and Competence, play a major role in human learning and in the final results of that learning process.

1. The Context in which we have learned something is a powerful key to remember that knowledge at a later time. Learning things in a relevant context can be very helpful, but irrelevant contexts have the opposite effect
2. Empirical research shows that knowledge acquisition is a Construction process. Learning even the most elementary knowledge requires that the learner gives it a place in his or her prior knowledge and later uses this knowledge to build more sophisticated understanding. Errors in this process can lead to misconceptions that

can result in serious misunderstandings that are very hard to eradicate.
3. Cooperation is not only a social factor that motivates students with a need for affiliation, it also influences the cognitive processes in learning. In dealing with controversies, by explaining one's viewpoint to each other and discussing and contrasting different understandings and perspectives, students are forced to evaluate their own level of understanding of the subjectmatter. This leads to better metacognitive skills that are needed in self-directed learning.
4. Competence instead of knowledge is emphasized as the desired end-product of earning. It requires knowledge acquisition, cognitive (re)structuring and skill building, and leads to the reallocation of cognitive capacity. Such a sequence can be followed by a new one, building on the preceding, etc.

All these factors have their strengths and weaknesses: wrong contexts, misconceptions, social processes that disrupt the learning process or competence building in a time frame that is too short. In the workshop the strength and pitfalls of these factors will be investigated and implications for medical teaching will be explored.

Florian EITEL: "Das 1. Jahr im Medizinstudium: Lernmöglichkeiten und Leistungsbeurteilung"

Die drei kritischsten Punkte der Studienreform sollen im Format des evidenzbasierten Lernens erarbeitet werden:zun  chst werden individuelle Problemlösungen zu den drei Themenkreisen erhoben, wobei jeder seinproblemlösendes Vorgehen möglichst als Handlungsleitlinie visualisieren sollte (Eigenstandard).Die individuellen Lösungen werden dann mit Konsentierungstechniken zum Gruppenstandard abgeglichen.Letzterer wird mit dem Wissensstand des Schrifttums verglichen und gegebenenfalls modifiziert (-> Evidenzbasierter Standard).

Themen des Workshops

1. Implementierung klinischer Inhalte in die Vorklinik (Theorie-Praxis-Integration. Fall- und Organ- bzw. Funktionsbezug der Lerninhalte. Lernen im Berufsfeld),
2. Entwicklung von critical thinking (Anleitung zum wissenschaftlichen Arbeiten, independent study, Projektarbeit, Evidenzbasierte Medizin)
3. Installation eines neuen Prüfungssystems (Formative Evaluation mit
   a) credit-point-System, Produktevaluation von
   b) Portfolios über den Studienverlauf und
   c) Projektarbeit und summative Evaluation mit
   d) MCQ. Gewichtung zu je einem Viertel.
   Daraus Ermittlung der Durchschnittsleistung der Einzelnen. Cutoff je nach Ausbildungskapazität des nächsten Studienabschnittes, z.B.: Die Ausbildungs-kapazität des nächsten Studienabschnittes beträgt 200 Studierende, die 200 Besten werden zugelassen.)

Charles ENGEL: "How to design a Block in the new curriculum" (English)

Following questions will be addressed:

1. How can the curriculum be organised and managed (no longer by separate departments)?
2. Who will plan the Block
3. What are the educational criteria which should govern decisions of content, conduct, assessment, monitoring?
4. How can the content, etc. of the Block be co-ordinated with other Blocks?
5. What methods can assist in the planning of the Block?
6. What will the plan of a Block contain?

William FULTON: "How Can We Use Student Course Evaluations to Improve Teaching and the Curriculum?"

To answer the question posed by the workshop, we will consider the following related questions:

* What are the most important characteristics of effective teaching?
* How can course evaluations be used to identify teaching deficiencies?
* How can we use the information gained to improve teaching and the curriculum?

Literature:

Fulton, WILLIAM (1996).
"How Can We Use Course Evaluations to Improve Teaching and the Curriculum?" In Richard März and Jörg-Ingolf Stein, (eds), Qualität der Hochschullehre, Proceedings des Workshops an der Medizinischen Fakultät Graz und weiterführende Beiträge (Zeitschrift für Hochschuldidaktik, 20 (1-2) 118-131). Vienna: StudienVerlag.
Green, DORIS (1995).
"Seeking Consensus: What is Good Teaching?" Academic Leader, 11/4, 3.
Wilson, ROBERT C. (1987).
"Toward Excellence in Teaching." In Lawrence M. Aleamoni (ed.), Techniques for Evaluating and Improving Instruction. San Francisco: Jossey-Bass.

Nu Viet VU & Wim GIJSELAERS: "A guide to integrated curriculum design: A beginning practical exercise"