A Global Perspective on Leading Change and Innovation

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Translating Standards and Breaking Down Barriers:
How Dental School Leaders Embrace Standards from Around the World
Development of the German catalogue of learning objectives
based on the ADEE and Canadian Can-MEDS framework

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Only the one who knows his goal will find his way``

(LAOTSE 6th cent.B.C.)

Our Goal as teachers in dentistry

…..enhance the quality
of patient care

Our emphasis is on the “outcome”

…..what kind of dentist will leave
our university

(Harden et al. 1999)
How to reach our goal?

outcome based education

……is crucial for the development of a modern curriculum -
……but - is it always correctly understood?

I taught *Stripe* how to whistle...

but, I do not hear that he is whistling

You said that you taught him to whistle, not that he has learned it....
Outcome based education

- **outcome determine the curriculum**

  - **Content**
    - Organization
    - Teaching methods and strategies
    - Courses offered
    - Assessment process
    - Educational environment
    - Curriculum timetable
    - Framework for curriculum evaluation

(Harden et al. 1999)
Dental Education in Europe

Agreement about

• Framework for Qualifications of the European Higher Education (Bologna Process)
• European Qualifications Framework for Lifelong Learning (Lisbon Process)
German politicians and stakeholders realized:

There is a need for modernization of dental education

Conference of German Ministers of Higher Education

demanded to develop a qualification framework for Germany

Assignment of three Associations:

- GMA Association for Medical Education
- MFT Association of Medical Faculties
- VHZMK Association of University Teachers of Dentistry and Oral Medicine
Aims

• Enhancement of education and studies
  – More medical education: dentistry is a discipline in medicine
  – Closer cross-linking of dental and medical programs of studies
  – Early clinical education
  – Interdisciplinary education
  – Outcome based education

• Qualification framework for dentists and doctors

• Simultaneous amendment of the Dental Licensure Act
Stakeholders during the development process

**NCLD Steering Committee**
- Reps of Soc. for Medical Education, Assoc. of Medical Faculties, Assoc. of Professors, Assoc. Dental Sciences
- Representatives of legal institutions, ministries, professional and student associations

**Project Team**
- 24 working groups with about 300 colleagues
Description of “the profile and the competencies” of dentists (and physicians) in Germany

- Development of a National catalogue of learning objectives
- Derived from the professional context of dentists/physicians and the requirements of the society

Harmonize dental (and medical) education in Germany
NCLD / NCLM describe Core Curricula

- Elective Subjects
  - NCLD/NCLM
  - Core Curriculum
    - Compulsory requirements

- Curricular Concentration of the faculties

- Catalogues of Learning Competencies of the Faculties

- Postgraduate Education
  - Continuing education

- Catalogues of Learning Competencies of Postgraduate-Education programs

- Lifelong Learning
Some facts about dental education in Germany

- 30 dental schools
- 15,000 students (62% female)
  - Average 500 students per school
- 5 years (10 semester)
- Intermediate and final state exams
  - Oral and practical examinations
- Final grade: license to practise dentistry
Some facts about dental education in Germany

- Dental (and medical) education is public
- No fees
- Demanding admission restriction
- A national law regulates education
  - learning outcomes described with a very global list of subjects
- Dental schools are (mostly) part of a medical faculty
Structure of the German National Catalogue of Learning Objectives in Dentistry (NCLD)

Section I
Key Competences

Section II
Medical Knowledge, Clinical Skills and Professional Attitudes
- Principles of Structure and Function
- Pathogenetic mechanisms
- Information Gathering & Diagnostics
- Treatment Planning
- Ethics and Law

Section II
Medical Knowledge, Clinical Skills and Professional Attitudes
- Prevention and Management of emergency
- Prevention & Health Promotion
- Oral Medicine and systemical aspects
- Medicine/Dentistry of Ageing People
- Biomaterials and clinical material science

The dentist as Medical Expert

Section III
Patient-centered Health Care
- Causes for Dental Consultations
- Disease-Related Treatment

Communicator
Professional
Scholar
Collaborator
Manager
Health Advocate
Competence levels

Millers Pyramide (1990)

DOES

SHOWS HOW

KNOWS HOW

KNOWS

Competence Levels

NCLD & NCLM

Sound theoretical knowledge and understanding the subject and ability to solve clinical problems independently

Sound theoretical knowledge and understanding the subject and ability to solve clinical problems with guidance

Sound theoretical knowledge and understanding the subject (How? and Why?)

Sound theoretical Knowledge (What?)
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tbody>
<tr>
<td>2011, Mar</td>
<td>Demand by the Conference of German Ministers of Higher Education</td>
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<tr>
<td>2014, Mai</td>
<td>1st Version after review process and revision</td>
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<td></td>
<td>- National online-review with all (30) faculties and all (33) scientific dental associations</td>
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<td></td>
<td>- Agreement about the draft of NCLD by the steering committee</td>
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<tr>
<td>2014, Oct</td>
<td>Start of a national Delphi-Process (2 rounds)</td>
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<tr>
<td>2015, Mai</td>
<td>Adoption of NCLD and NCLM</td>
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Status quo NCLD

- Voluntary use of the catalogue at the faculties
- Preparation of the nationwide implementation
  - Presentations and informative meetings on faculty level and during conferences of the different dental societies
  - Workshops to “teach the teachers“
- Advancement of the digital, interactive tool for the use of the catalogue
  - with search function and cross references
- Further development of a software to map the existing curriculum against the new catalogue
  - To find congruencies and differences
  - To construct an action plan to realize implementation
  - Mapping of the learning objectives in Frankfurt, Berlin, Tübingen; preliminary results
Forecast

- Facultative implementation at the faculties
- Review of the catalogue on a regular basis
  - Plan: every 3 to 5 years
- Compulsory implementation at all faculties after the 1. or 2. review process
  - Probably at the level of the competences, not at the level of the learning objectives
- Translation into English to make it useful internationally
Barriers and Problems

- Keep the working groups motivated
- Structure: no orientation on subjects
  - orientation on the roles and the course of action during clinical treatment
- Understanding of the definition of the competencies
- Curricular overload
  - Too many details, too high demands
  - Redundancies
- Cooperation with the medical organizations
Positive experiences

- Clear mandate from the national health policies

- All parties of the dental society were included in the process
  - Dental professional and scientific societies
  - Student organization
  - Representatives from the government departments

- Clear structure of the project
  - Aim, responsibilities, timeplan

- Regular meetings of working groups and steering committee
Conclusion

- Development of NCLD is an important step in the direction of harmonization education in Germany on the base of ADEE recommendations
- Further development of all parts of the curriculum is needed to realize the aim of an outcome-based education
- Amendment of the Dental Licensure Act will activate the modernization process
Questions ?