

Higher Education Information Systems in Germany

Dr. Edgar Frackmann
Zagreb, June 2007

The Idea:

- Present the German Higher Education System: ICE and its applications in Germany
- Inform about the context of German Higher Education Information Systems, past and present
- Discuss Successes and Failures

Hypothesis:

- What in the bigger federal system in Germany is undertaken by many organizational units and actors might be implemented in Croatia via the „multi-functionality“ of fewer organizational units: Role of Councils and AZVO
- Information on Higher education might be served in the bigger German System by a number of Information Systems while in Croatia one might decide to have fewer „multi-purpose“ information systems, i.e. integrate functions: Role of MOZVAG

German Higher Education System

- Universitaeten (Universities) (103)
- Fachhochschulen (Universities of Applied Science) (206)
- Kunst- und Musikhochschulen (Colleges of Art/Music) (53)
- Together: 383 Institutions

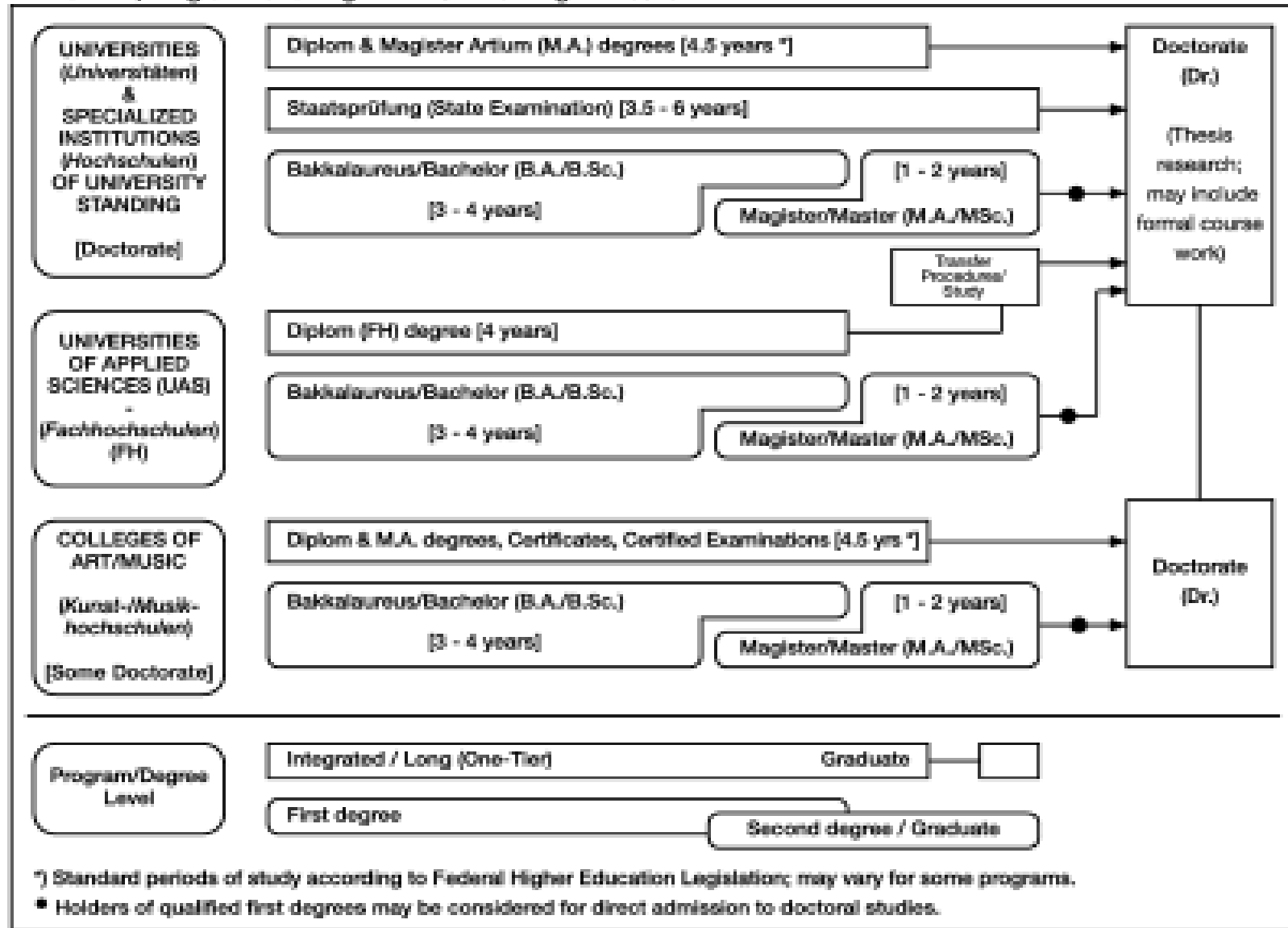
Higher Education Institutions

	Hochschulen		
	2004/2005	2005/2006	2006/2007 ¹⁾
Hochschularten			
Hochschulen insgesamt	372	376	383
Universitäten	102	102	103
Pädagogische Hochschulen	6	6	6
Theologische Hochschulen	15	15	15
Kunsthochschulen	52	53	53
Fachhochschulen	167	170	176
Verwaltungsfachhochschulen	30	30	30
1) Vorläufiges Ergebnis			

Aktualisiert am 08. März 2007

Institutions, Programs and Degrees

Institutions, Programs and Degrees in German Higher Education



Students

Students

Regional breakdown	Total	Number of students (at) ^{1) 2)}		
		Universities ²⁾	Colleges of art and music	Specialised colleges of higher education (Fachhochschulen ³⁾
			number	
Year/month/reference day	winter term 2006/2007 ⁴⁾			
Baden-Württemberg	244,927	165,279	4,223	75,425
Bayern	257,898	180,268	3,297	74,333
Berlin	130,953	95,477	4,985	30,491
Brandenburg	42,331	27,601	648	14,082
Bremen	30,258	19,112	816	10,33
Hamburg	71,104	48,472	1,463	21,169
Hessen	163,536	109,672	1,382	52,482
Mecklenburg-Vorpommern	34,527	24,29	493	9,744
Niedersachsen	146,827	102,856	2,605	41,366
Nordrhein-Westfalen	476,409	346,898	5,017	124,494
Rheinland-Pfalz	103,019	70,705	0	32,314
Saarland	19,78	14,864	633	4,283
Sachsen	105,685	74,254	2,822	28,609
Sachsen-Anhalt	51,064	30,141	1,071	19,852
Schleswig-Holstein	46,917	28,304	1,056	17,557
Thüringen	49,697	34,7	816	14,181
Deutschland	1,974,932	1,372,893	31,327	570,712

Characteristics and Traditions of the German Higher Education System

- Federal System: Responsibility of the State
- Research University Tradition
- Weak Institution/Organisation as a whole
- Strong role of the government
- Attention to educational services of higher education?
- Government responsibility for quality? Quality or equality?
- Problems: Duration of studies, drop-out rate, professional/vocational qualification of graduates?
- Process of changing the steering model in higher education: towards more autonomous, competitive responsible HEIs as a whole

Changing the Steering System for Higher Education

- Financing, Accounting
- Legal Form
- Selection of Students, tuition fees
- Management Structure
- Evaluation, Evaluation Agencies, not only education related
- Competition, Institution as a whole, international competitiveness, Exzellenzinitiative, Initiative for teaching and educational excellence

The Actors in German Higher Education, especially with regards to Information Systems

- State Ministries of Science and Education
- Federal Ministry of Education
- KMK (Standing Conference of Ministries of Science and Education)
- Wissenschaftsrat (Science Council)
- Akkreditierungsrat (Central Accrediting Unit)
- Accrediting Agencies
- HRK (Rectors Conference)
- HIS Hochschul-Informationen-System (Research on Higher Education and Information Services, e.g. Development of MIS for HEIs and Information Systems for system level)
- CHE (Consulting of Higher Education, Rankings)
- State and National Statistics Offices with Higher Education Statistics Committee (Ausschuss fuer Hochschulstatistik)

Wissenschaftsrat (Science Council)

- Advisory Body for Science and Higher Education Policy (founded 1957)
- All questions of development of science and higher education system
- Evaluation and recommendations, also in the context of planning/investment decisions
- Institutional Evaluations (e.g. Role in German Re-Unification)
- Accreditation of non-government (private) higher education institutions (since 2001)

Wissenschaftsrat: Scientific Community and Governments

- Vollversammlung (General Assembly)
- Wissenschaftliche Kommission (Scientific Committee: Scientists and Layperson)
- Verwaltungskommission (Administration Committee: Science Ministries)
- Geschäftsstelle (Secretariate)

Accreditation System: Central Framework Regulations, Decentralized accreditation

- Governments (KMK): Laendergemeinsame Strukturvorgaben (General Structure of Bachelor and Master Programmes)
- Akkreditierungsrat: 1. Kriterien zur Akkreditierung von Studiengängen (Criteria for Accreditation of Study Programmes); 2. Accreditation of Accreditation Agencies, Contracts with Agencies
- Accreditation Agencies: Accreditation through Peer Review, Using/awarding the official “seal” of the Akkreditierungsrat, Accreditation Decision made by SAK (Standing Accreditation Commission of the respective Agency)

Accreditation System: Organization

- Akkreditierungsrat: Stiftung zur Akkreditierung von Studiengängen in Deutschland
- Agencies (some general, some subject specific):
 - AQAS: Agentur fuer Qualitaetssicherung durch Akkreditierung von Studiengängen
 - ASIIN: Akkreditierungsagentur fuer Studiengaenge der Ingenieurwissenschaften, der Informatik, der Naturwissenschaften und der Mathematik
 - AHPGS: Akkreditierungsagentur fuer Studiengaenge im Bereich Heilpaedagogik, Pflege, Gesundheit und Soziale Arbeit e.V.
 - ACQUIN: Akkreditierungs-, Zertifizierungs- und Qualitaetssicherungs-Institut
 - FIBAA: Foundation for International Business Administration Accreditation
 - ZEvA: Zentrale Evaluations- und Akkreditierungsagentur Hannover
- Competition between Agencies (?)

Akkreditierungsrat

- Legal form: Foundation under public law
- Members:
 - 4 from Higher Education Institutions
 - 4 from State Governments
 - 5 from the employment system
 - 2 Students
 - 2 foreign members with extensive experience with accreditation
 - 1 representative of the Agencies (non voting)
- Financing: By the State Governments
- Structural Decisions not against Government Members
- Akkreditierungsrat-Agencies: Accreditation, Contract, mutual information

Akkreditierungsrat: Tasks

- Accreditation and reaccreditation of Agencies (providing with the right to award the seal of the Akkreditierungsrat)
- Transfer structural decisions of the States into binding rules for Accreditation through the agencies
- Defining binding minimum standards/criteria for accreditation of programmes and prerequisites for “cluster” accreditation
- Monitoring activities and task fulfillment of Agencies

HRK: Projekt Q (Involvement of Higher Education in Quality Assurance)

- Exchange of Experiences with regards to Quality Assurance
- Strengthening acceptance for Quality Assurance within higher education
- Developing standards and common procedures for quality assurance
- Informing the public about quality assurance efforts in higher education
- Activities among others: Pilot Project Process Accreditation, EvaNet
- HRK also is shareholder of CHE

evaNet

- News
 - Actual news
 - Archive
- Newsletter
 - Actual issue
 - Order
 - Archive
- Calendar of Events
- Institutions
 - Accreditation
 - Evaluation
 - Quality in general
- Procedures
 - Quality Assurance, Quality Management, Quality development
 - Fund allocation
 - Quality Assurance in the Corporate World
 - Change Management
- Opinion (Actual and Archive)
- Literature Pool
 - Accreditation and Evaluation
 - Bologna Process
 - Higher Education Steering and Management
 - Quality of Teaching and Learning
 - Surveys, Studies
- Linkpool
- Project Q

HIS Hochschul Informations System

HIS Higher Education Information System GmbH

Managing Director: Prof. Dr. Martin Lethner
Deputy: Dr. Bernhard Hartung

Dept. I IT for Higher Education

Head of Department: Henning Cioes
Deputies: Dr. Uwe Hübner, Rainer Pankeu, Friedrich Oppelt

Teaching and learning I

Head: Rainer Pankeu
Deputy: Dr. Susanne Meyer

Resources of higher education institutions I

Head: Friedrich Oppelt
Deputy: Folke-G. Stimpel

Development

Head: Dr. Wilhelm Jauer
Deputy: Jan-O. Lustig

Dept. II Research on Higher Education

Head of Department: Dr. Michael Leszczensky
Deputy: Karl-Heinz Milks

Research on students

Head: Dr. Christoph Helke
Deputy: Dr. Ulrich Herberich

Studies on graduates and life- long learning

Head: Karl-Heinz Milks
Deputy: Dr. Hilde Schaefer

Dept. III Higher Education Development

Head of Department: Dr. Friedrich Strähmann
Deputy: Dr. Bernd Vogel

Organisation und Resource Planning

Head: Dr. Horst Moog
Deputy: Dr. Bernd Kleinmann

Higher Education Development – Buildings

Head: Dr. Bernd Vogel
Deputy: Korinna Haase

Administration

Head of Department:
Dr. Bernhard Hartung
Deputy: Michael Kober

Finance and IT Infrastructure

Leiter: Dr. Bernhard Hartung
Deputy: Matthias Klewitz

Teaching and learning II

Head: W. Schramm
Deputy: Dr. Martin Klingsporn

Resources of higher education institutions II

Head: Bettina Floss
Deputy: Wolfgang Klatz

Testing, Reporting, Services

Head: Dr. Susan Gadow
Deputy: Karsten Kleink

Steering, Funding, Evaluation

Head: Dr. Michael Leszczensky
Deputy: Frank Döhl
Deputy: Dr. Michael Jaeger

Information Systems and Online Research

Head: Peter Mückig-Trapp
Deputy: Hans Dicken

Organisation and Management Consultancy

Head: Dr. Harald Gilch
Deputy: Dr. Peter Altwater

Facility Management, occupational health and safety, environ- mental protection

Head: Ralf Tegtmeier
Deputy: Joachim Müller

Personnel and Legal Affairs

Leiter: Michael Kober
Deputy: Horst Feder

Purpose of Higher Education Information Systems

- Information for Planning, Investment Decisions
- Monitoring the Higher Education System, Higher Education Policy, Recurrent Decisions, e.g. for fund allocation
- Informing the Public (Statistics)
- Informing the „clients“ and „stakeholders“
- Self-knowledge of HEIs:
 - for management and administration
 - for improvement of services, quality assurance and competitive advantages

„Higher Education System“ in Germany today

- Several information systems serving the above mentioned purposes, institutional level, national level, public
- A service organization, dealing with information services for higher education: HIS Hochschul-Informations-System, Hannover

The Appearance of Higher Education Information System at the End of the Sixties

- Expansion of Higher Education
- Planning euphoria
- No information about higher education, no Higher Education Statistics
- For Higher Education Planning we need information!!!

HIS: an Initiative of the Volkswagenfoundation

- Set up a central higher education data base
- Facilitate the establishment of Planning and Information Centres (PIZ) at the HEIs
- Develop information systems for the HEIs, which should be maintained by the PIZs and have the only purpose to deliver data to the central data base

In the meantime:

Hochschulstatistikgesetz (Higher Education Statistics Act)

- HEIs to deliver data to the state (Laender) Statistic Offices:
 - Students
 - Examinees (includes graduates and failing graduations)
 - Deregistrants
 - Guest Students
 - Habilitations
 - Positions
 - Staff
 - Premises (Space)
 - Expenditures and Revenues

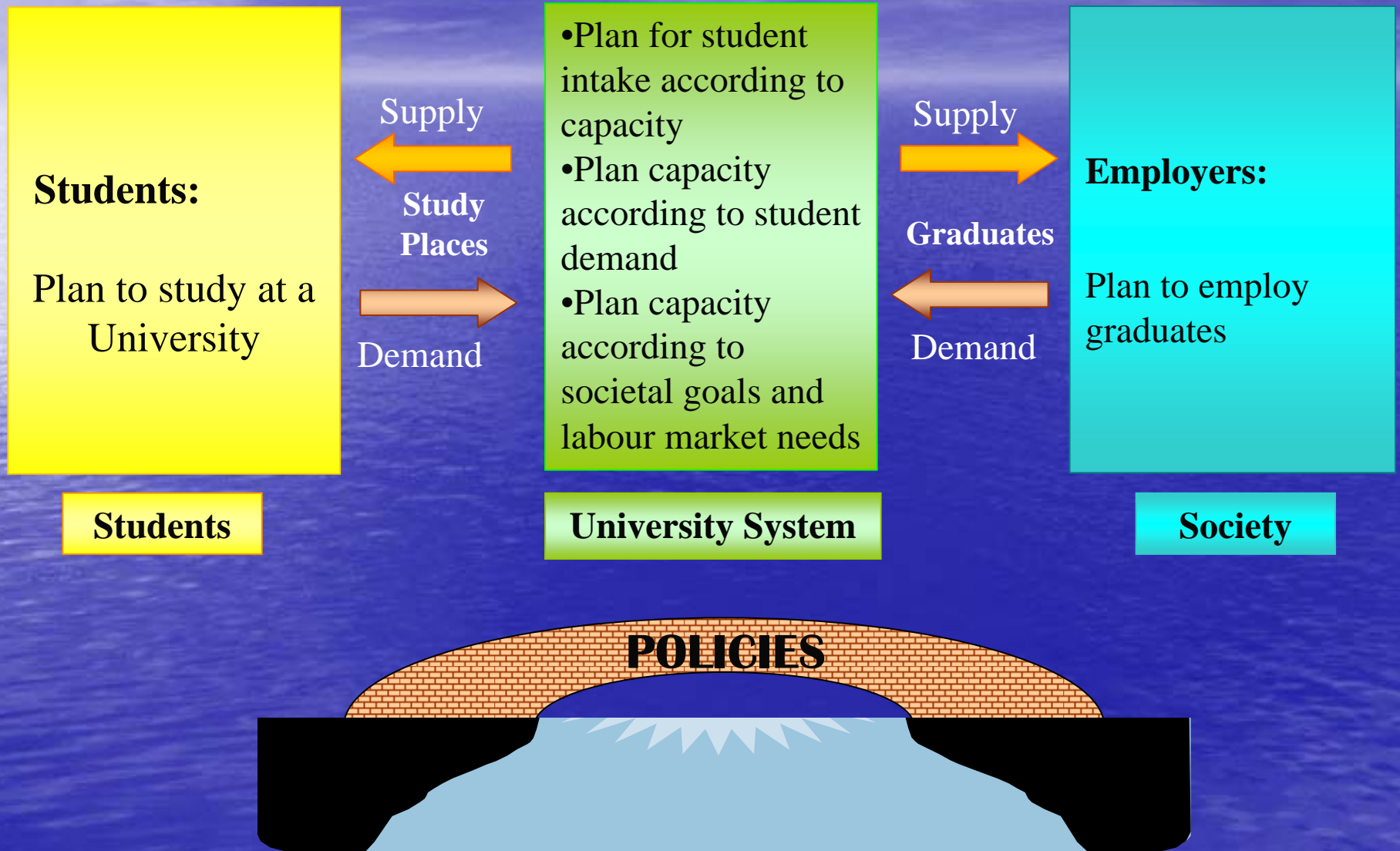
Hochschulstatistikausschuss (Higher Education Statistics Committee)

- Advisory body for Higher Education Statistics, consisting of:
 - President of Federal Statistics Office
 - Federal Ministry
 - State Ministries for Science and Education
 - Science Council (Wissenschaftsrat)
 - Representatives from Higher Education Institutions
 - Representatives from Research and Service Institutions dealing with information services, i.e. including HIS

With the advent of Higher Education Statistics: Different Role for HIS

- Development of MIS for HEIs. Main purpose of MIS: Management and administration, not data delivery. But: guarantee that data is being delivered homogeneously and according to Higher Education Statistics Act all over the higher education system (the German ISVUs)
- Support of National Higher Education Statistics via institutional MIS and advisory function in Hochschulstatistikausschuss
- Complementary (to statistics) information generation especially focussing on students, based on sample surveys (e.g. online surveys)
- Development of Information Systems for national and system level (e.g. ICE, e.g. EvaNet, e.g. Internet Platform to support student choices for studies)

Planning Higher Education?



Planning Higher Education in Germany?

- No!, but coordinated and informed investment decisions in the context of expansion of the higher education system. Role of the Science Council (Wissenschaftsrat)
- No! But the reverse: Student intake to individual institution and programme according to existing capacity. Legally defined capacity, right of students to be admitted and mandate to enroll students according to capacity on the side of the institutions

Planning Higher Education in View of changing Steering Model?

- No, but rather remedial, corrective policy decisions and interventions from the side of governments
- Consequences for Information Systems
 - Governments: Input and Output oriented monitoring for policy decisions, information for recurrent funding decisions
 - HEI: Self-knowledge not only for management and administration, but also for quality assurance and competitive advantage
 - Students and Stakeholders: Comparative information to support choice decisions
 - Public: Accountability of HEI

Higher Education Information Systems in Germany

- **Important Basis for all Information Purposes:** Institutional MIS (feeding Higher Education statistics and processes like accreditation, funding, investments), National Level Information Systems (Statistics, ICE) and HIS surveys

Higher Education Information Systems in Germany

- **Planning, Investment Decisions:**
Data Bases of Science Council, Statistics and Analysis department of the Science Council, Central Premises data base at the Federal Ministry

Higher Education Information Systems in Germany

- **Planning, Capacity, Intake Decisions:** Institutional MIS, Institutional Programme data bases

Higher Education Information Systems in Germany

- **Monitoring, Higher Education Policy Decisions, Recurrent Decisions: ICE, HIS surveys**

Higher Education Information Systems in Germany

- **Informing the interested Public:**
Higher Education Statistics

Higher Education Information Systems in Germany

- **Self-Knowledge of HEIs:** HEI MIS, surveys
- **Quality Assurance:** HEI MIS, surveys, EvaNet

Higher Education Information Systems in Germany

- Informing the „Clients“ and „Stakeholders“, especially students´ choice decisions (Programme Data Bases and beyond):
 - HRK: www.hochschulkompass.de
 - Central Labour Agency: Studien- und Berufswahl, www.studienwahl.de
 - Central Labour Agency: Berufenet-data base, www.berufenet.de
 - Universitaet Essen-Duisburg: Studienwahl und Arbeitsmarkt (ISA), www.uni-essen.de/isa
 - CHE and Die Zeit: Rankings, www.das-ranking.de
 - Student self-organization: www.meinProf.de
 - KMK/HIS (in discussion): integrated internet portal to support student choices

CHE Rankings of Programmes

- Judgements of students (questionnaires): overall support and conditions of teaching and learning at the respective university and in the respective programmes
- Reputation of the respective unit among professors (from other universities)
- Publications
- Research Income

KMK suggested (hard fact) Indicators for Rankings

- Input
 - Newly enrolled students
 - Students
 - Intake Capacity
 - Caps for Intake
 - Tuition fees
- Output
 - Average duration of studies in the programme
 - Number of graduates within regular duration
 - Success rates
 - Transfer from Bachelor to Master programmes
 - Existence of structured doctoral programmes
 - Employment ratio of graduates
- Process
 - Accredited? j/n
 - Existence of Quality Assurance System
 - Existence of Alumni and Career Networks