

The need for and design of a multi-dimensional system to support study choices – the German experience

Prof. Dr. Frank Ziegele | Tbilisi, June 2019

The German situation

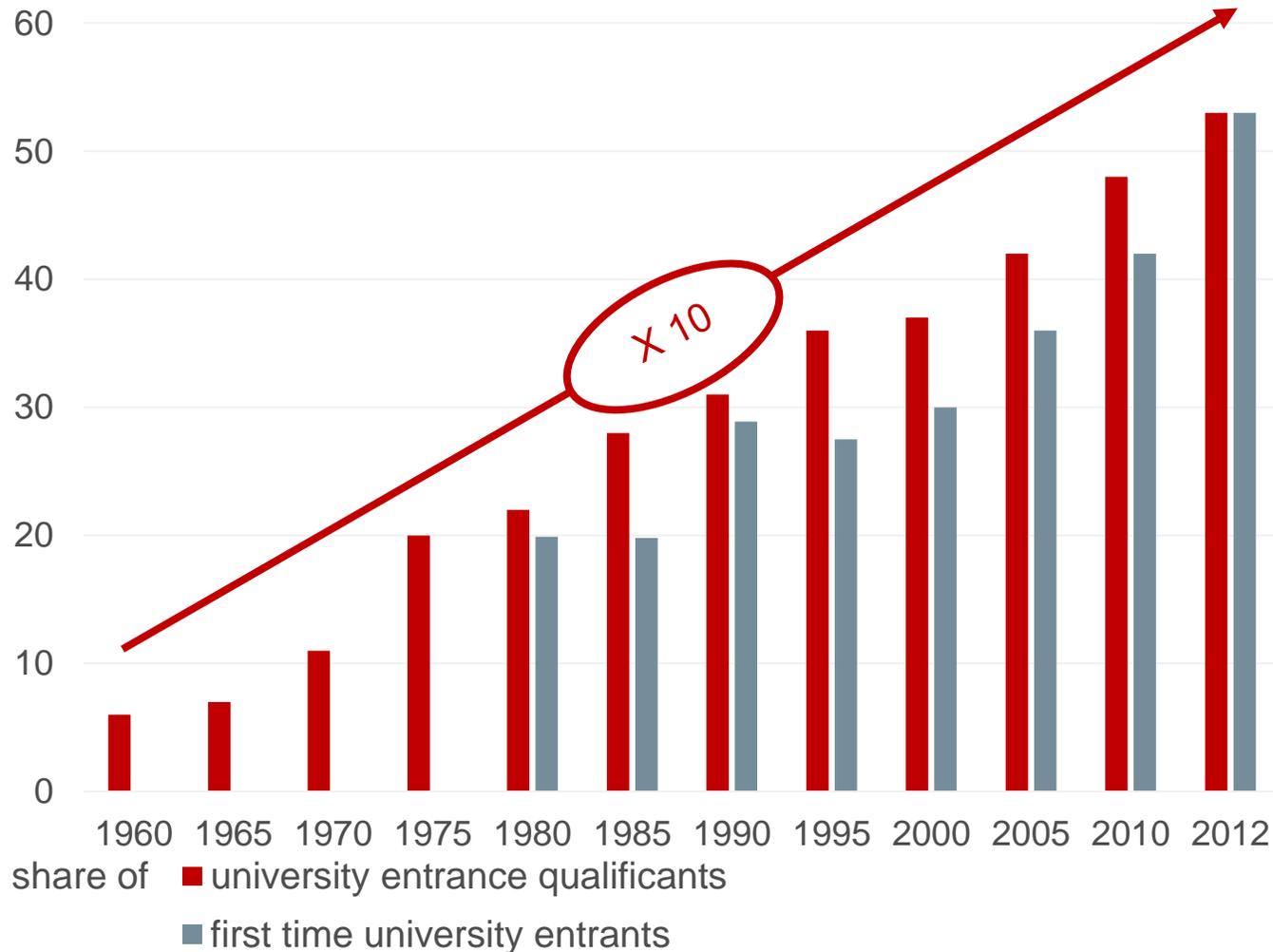
Why league table rankings fail

The „CHE Ranking“ as a solution to the information problems of students

Basic problem: Many students don't have the necessary information to make good study choices. Students' preferences and the profiles of the universities/study programmes often don't match. This leads to drop-outs, long duration of studies, low success of studies.

Students need better information!

More people than ever before seek higher education in Germany



More than
50% of each
birth cohort
study at a
HEI

The job
markets
embrace the
graduates

An onrush of students has led to high diversity:
as a group students are becoming more heterogenous

More than 9 percent foreign
students

14 percent with health
problems

Almost 2 percent without
„Abitur“

5 percent with kids

3 percent in lifelong
learning programs

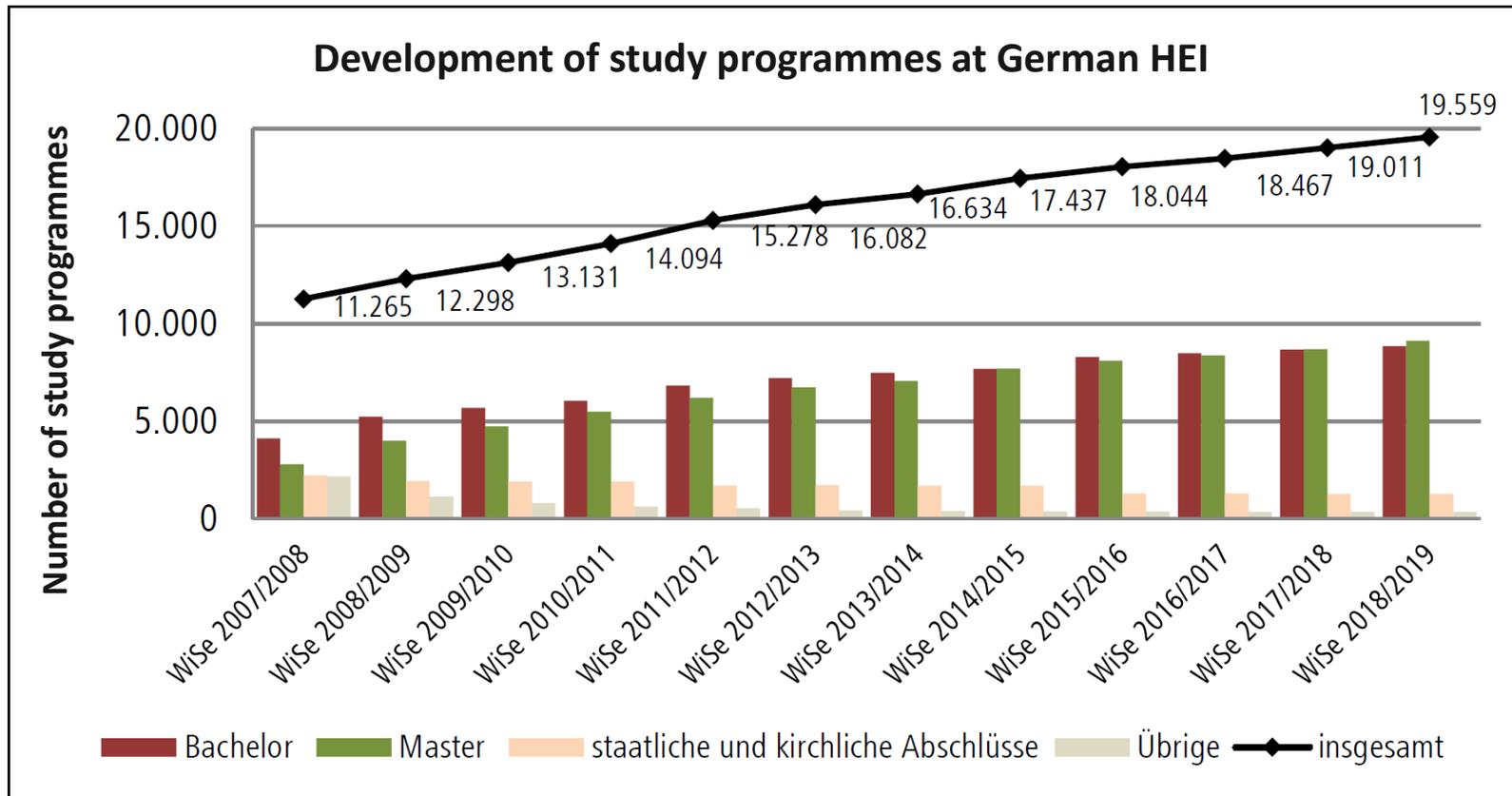
22 percent did vocational
training before

.....

**share of atypical (i.e.
older, part-time,
online) students in the
US: 75%**

Consequences: diverse
prior knowledge, style of
learning, need for support,
etc.

There are more than 19,000 courses of study – with different foci, degrees, etc.



Quelle: HRK-Hochschulkompass, 1.9.2018 (WiSe 2018/2019)

Additionally, within subjects an almost impenetrable internal differentiation is taking place

Business-Ethics und CSR-Management
Business Innovation Management
Business Administration in mittelständischen Unternehmen
China Business and Economics
Business & Law in Accounting and Taxation
Digital Business Management
HR Management - Business Partner
Multichannel Trade Management in Textile Business
Entrepreneurship & Business Development
Bachelor in General Management, International Business Studies
Business Coaching und Change Management
Business with Europe
BWL - International Business
eBusiness
Business Intelligence and Process Management
Business-Ethics und CSR-Management
Business Application Architectures
Business Communication Management
Business and Engineering
Aviation Business and Piloting -Technik und Wirtschaft in der Luftfahrt
Business Management & Entrepreneurship
International Business and Sustainability (MIBAS)
Marketing and International Business
Kulturwirtschaft/International Cultural and Business Studies
International Business Studies
Business and Technology Management
Vision Science and Business
Global Brand & Fashion Management
WirtschaftsNetze
Agribusiness
Business Administration in Transport & Logistics
Business Analytics
Business Psychology
International Wine Business
Sportbusiness Management
Betriebswirtschaft
Auditing, Business and Law
Betriebswirtschaft (Business Administration)

The sum of these developments is a jungle of possibilities difficult to navigate for those seeking education

More students than ever before.

HEIs with highly diverse profiles.

Student body becomes more diverse.

There are de facto two legal systems for HEIs in Germany. At least the two legal

Students' needs become more diverse.

Student body become more diverse.

**NEED FOR INFORMATION AND
TRANSPARENCY!**

twofold diversity

Drop-outs

**But: complexity, problem of matching and risk
of wrong decisions -
JUNGLE OF POSSIBILITIES**

unsuitable
supply

The German situation

Why league table rankings fail

The „CHE Ranking“ as a solution to the information problems of students

League tables are totally useless for informed decision-making, they even mislead students

Times Higher World University Ranking

What's behind it?
Students don't know that it's not about teaching

Changing weights changes place, user patronized

No university is doing equally well in all subjects

Medicine and natural sciences help

If an indicator is missing: estimate!

Platz	Hochschule	Punktzahl
1	Caltech (USA)	94,3
2	Harvard (USA)	93,3
3	Oxford (UK)	93,2
4	Stanford (USA)	92,9
...	...	
13	ETH Zürich (CH)	84,6
...	...	
29	LMU München (D)	71,9
...	...	
67	Göttingen (D)	61,0
...	...	
102	Purdue (USA)	54,0
...	...	
117	Groningen (NL)	53,1

Method unfair to non-english language

Most of it is about research

What about diversity of missions? These are all universities of the same type, but a strong HE system needs diversity (sports analogy)

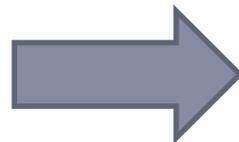
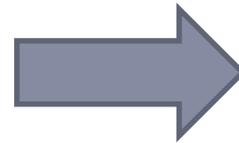
Very small differences are exaggerated

Replacing league tables with student information systems leads to different (and useful) messages

league table

University X is ranked 25th.

The performance of university X is the 5th best in Germany.



student information system

If I want to study chemistry, there are 20 universities to do so, and they have different strengths and weaknesses/profiles.

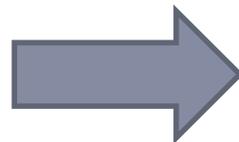
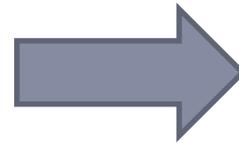
If I want to see top researchers, I have to study at university X. University Y focuses on close contact student/professor and university Z offers strong ties to potential employers. What do I want?

Replacing league tables with student information systems leads to democratization of rankings

league table

The ranking producers decide how much each indicator should count.

It is enough to know the performance-based position to make a study choice.



student information system

The user decides which indicator/information is relevant to her/him.

Information about better or worse (vertical diversity) is relevant, but also information about differences (horizontal diversity, e.g. theoretical vs. applied education, regional mission).

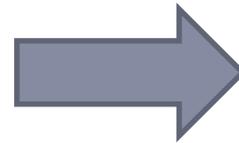
Replacing league tables with student information systems gives a voice to students

league table

Bibliometrics and reputation surveys are the relevant source of information.



rejection of rankings



student information system

Diverse sources of information are needed, including – especially – student surveys.



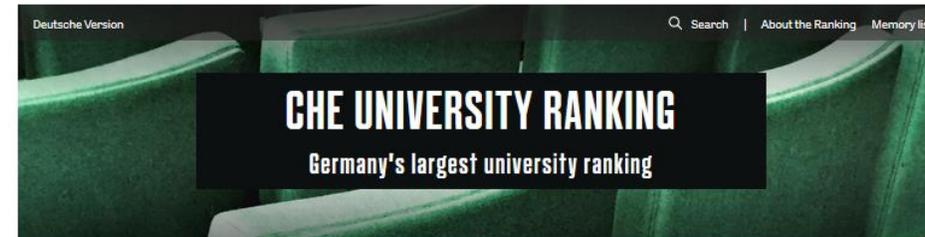
design principles for student information system

The German situation

Why league table rankings fail

The „CHE Ranking“ as a solution to the information problems of students

The German information system is published in two formats: print and online



Psychology University Show ranking

20 Jahre CHE Ranking	RELIABLE Scientifically consolidated	INDIVIDUAL Choose own criteria	EASY Get result with a few clics
----------------------	--	--	--

RANKING OF UNIVERSITIES IN GERMANY

In the CHE University Ranking you can find valuable information for your choice of the right subject of study and the university in Germany fitting best for you. The ranking results are based on facts as well as assessments by 150,000 students and 9,000 professors.

That's how it works

Choose one specialization from 39 subjects, a type of institution and a type of degree. You'll receive a list of german and some selected austrian universities of applied science offering that subject — together with an overview of their ranking results by your individual criteria.

[Find out more about the CHE Ranking →](#)



297 Universities Select a town →	2,609 Departments Select a subject →	6,969 Courses of study Select a topic →	3,213 Master's courses Select a subject →
---	---	--	--

We achieved high coverage of institutions and subjects

80 %

Coverage of German first year students by subjects

300

German higher education institutions included

> 2.600

Departments in subject rankings,
nearly full coverage in most fields examined

> 10.000

Degree programmes of those departments

> 35.000

Students participating in the student survey every year

The indicators cover aspects relevant to students (example Electrical Engineering)

Academic studies and teaching

- Courses offered (S) ?
- Exams (S) ?
- 2. Overall study situation (S) ?
- Research orientation (S) ?
- Study organisation (S) ?
- Support in studies (S) ?
- Support in the study entry phase [points] (F) ?
- 4. Teacher support (S) ?

Equipment

- IT-infrastructure (S) ?
- Laboratories (S) ?
- Library (S) ?
- Rooms (S) ?

Students

- 1. Total number of students (F) ?

Result of study

- Graduations in appropriate time master's [%] (F) ?
- 3. Graduations in appropriate time undergraduate [%] (F) ?

Job market and career-orientation

- Bachelor theses in cooperation with work environment [%] (F) ?
- Contact to work environment master [points](F) ?
- 5. Contact with work environment Bachelor [Points] (F) ?
- Job market preparation (S) ?

International orientation

- Support for stays abroad (S) ?

Research

- Citations per publication (F) ?
- Doctorates per professor (F) ?
- Inventions (F) ?
- Publications per academic (F) ?
- Third party funds per academic [T€] (F) ?

Town and University

- Population of the town (F) ?
- Proportion of students in this town [%] (F) ?
- Student accommodation rent [€] (F) ?

Some are ranked (better-worse),
some are descriptive (different)

S = student survey, F = facts (from publicly available data or
from questionnaire filled by universities)

Live illustration using the
online tool

CHE Ranking is successful

- high number of users reached through DIE ZEIT media
- 2/3 of first year students say they used such systems
- typical use: first orientation, followed by further efforts (exploring website, talking to students...)
- keeping up high participation of universities over 20 years
- system already transferred to other countries (Spain)

Ensuring data quality is a major success factor

Stakeholder orientation

- Consultation with stakeholders on indicators, definitions and delineation of subjects
- Advisory board for each field, representing students and academics as well as people from the universities' management/coordinators

Inbuilt quality checks in data collection

- Questionnaires include several inbuilt automated checks for consistency and plausibility
- Direct feedback to institutions

Feedback loops with institutions

- After first submission of data, data is checked by CHE
- Direct questions and comments in the questionnaire
- Second phase of data correction and delivery

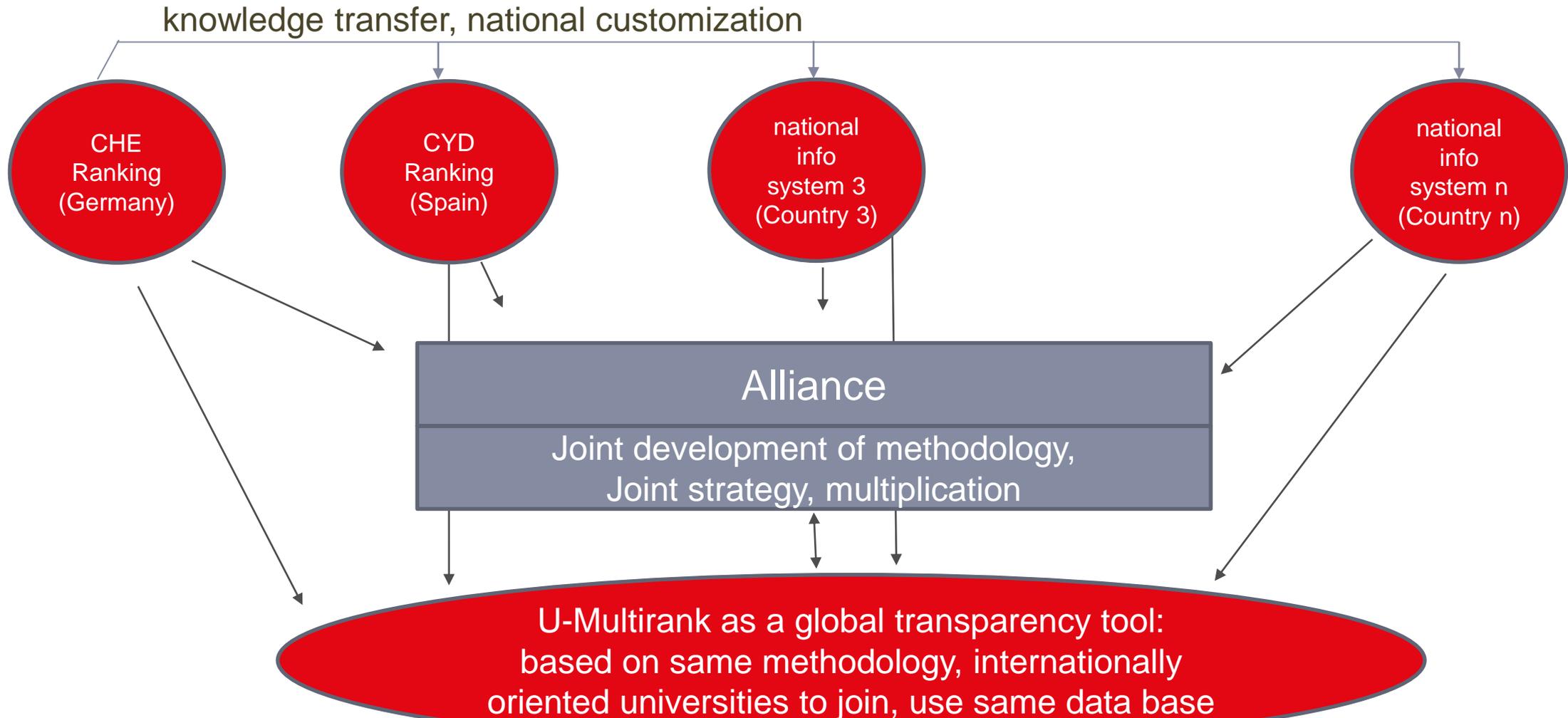
Data verification and validation

- Statistical checks: plausibility, consistency, outliers
- Comparison over time and with available data from others sources e.g. federal statistical office

Success factors for implementation

- outreach (+ funding) through media partner
- credibility through independence + expertise
- transparency of everything
- advisory structure, stakeholder consultation
- ability to balance interests of students – universities – media partner

We have a vision: alliance of reliable information systems for students across the globe



The need for and design of a multi-dimensional system to support study choices – the German experience

Prof. Dr. Frank Ziegele | Tbilisi, June 2019