Exclusive design or one size fits all?
Focusing on student diversity in educational research and development

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Abstract

The general discourse on social justice and equity along with the widening participation agenda in educational policy has led to a growing awareness of student diversity in higher education (HE). HE research widely accounts for student diversity by investigating the academic performance of selected subgroups and informs educational development to provide support for special target groups. However, research practice that contributes to the construction of student subgroups as groups at risk who need special support appears to disregard ethical principles of non-discrimination. Based on their literature review on first-generation students Spiegler and Bednarek (2013) criticise the tendency to relate differences in performance to individual deficits rather than to structural problems of HE institutions. If educational development relies on the exclusive design of interventions for certain subgroups, it reinforces this deficit approach and neglects the need for institutional change to accommodate the diverse needs of all students.

Focusing on student diversity, this paper presents a mixed-methods study on the first-year experience in German HE including a survey on students’ academic competence, document analysis of first-year interventions and semi-structured interviews with participants of selected support programs. The methods and first results of this study serve as an example to reflect on the ethical implications of HE research and educational development. The paper asks about the normative assumptions guiding research based interventions and discusses the chances for an institutional change that benefits all students.
Agenda

• Introduction
  – Policy & practice in German higher education
  – Diversity discourse

• Research design
  – Research focus & conceptual framework
  – Mixed-methods design

• Findings
  – Objectives of first-year support
  – Design of first year support
  – Profiles of academic competence & individual student voices

• Discussion
Higher Education Policy & Practice in Germany

• General concern about widening participation and study success (58% entry rate, 30% drop out rate) (Wolter, 2013; Heublein, 2014)

• Public funding to improve the overall quality of teaching and learning and the first-year support in particular, e.g. Quality Pact for Teaching (BMBF, 2010)

• Expansion of first-year support to accommodate students’ diverse needs (Grützmacher & Willige, 2016; Bargel, 2015; Hanft, 2015):
  
  – “exclusive design”: support directed at selected social groups and / or students of specific disciplines (e.g. mentoring for first-generation students, remedial math courses for STEM students)
  
  – “one size fits all”: support provided for all students focusing on selected first-year challenges (e.g. induction week for an orientation on campus and within the university system, peer tutoring for facilitating learning strategies)
Diversity Discourse in German Higher Education

- Higher education policies and strategies use “diversity” as an umbrella term to highlight differences with regard to social, individual and organisational characteristics (Bosse, 2015):

  - Social: ethnic background, educational biography, etc. (socio-structural categories)
  - Individual: academic skills, motivation, etc. (psychological categories)
  - Organisational: disciplinary affiliation, stages in student life-cycle, etc. (institutional categories)
How can HE research inform educational development?
The StuFHe research project focuses on the interplay of individual and institutional factors that influence transition, investigating the

1) profiles and development of academic competence

2) effects of support programmes

3) role of student diversity
## Mixed-Methods Design

<table>
<thead>
<tr>
<th>Phase</th>
<th>Quantitative study</th>
<th>Qualitative study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start</td>
<td>Methodological &amp; theoretical foundation</td>
<td></td>
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</tbody>
</table>
| Phase 1 | Profiles of academic competence  
1st wave of student survey               | Classification of first-year support  
Document analysis & expert interviews                                              |
| Phase 2 | Profiles & Development of academic competence:  
2nd wave of student survey          | Short-term effects of first-year support:  
Interviews with students                                                          |
| Phase 3 | Academic competence & effects of support programmes  
3rd wave of student survey         | Long-term effects of first-year support:  
Interviews with students                                                          |
| Conclusion | Integration & Dissemination of Results                                           |                                                                                   |
Mixed-Methods Design (1st phase)

Quantitative Study

Sample
• First-year students of 4 German higher education institutions

Data collection
• Online questionnaire with items regarding 1st-year challenges & factors of academic competence (Richardson et al., 2012)
• 2,248 participants (12-19% return rate)

Statistical Analysis
• Confirmatory Factor Analysis with Mplus (MLR estimator (type=complex))
• Multiple Regression Analysis with SPSS

Qualitative Study

Sample
• 80 German higher education institutions that receive funding to develop the first-year & to accommodate student diversity

Data collection
• Document analysis of online information on 1st-year support programmes (n=80 HEI)
• Expert interviews with 1st-year support programme coordinators (n=8 / 4 HEI)

Thematic analysis of documents and interview data (Kuckartz, 2014; Schreier, 2014)
• systematic procedure of deductive and inductive coding, assisted by MAXQDA-software
Another central objective of HEI_71 is the reduction of student drop-out rates and the support of students graduating within the standard time frame. First-year students will therefore receive comprehensive support from central units and faculties. Furthermore, the different levels of knowledge will be homogenised. (HEI_71_a/11)

HEI_34 is required to adequately support a broad and heterogeneous target group of students. [...] students with different educational biographies and vocational experience, of different age groups and with diverse social and cultural backgrounds. The interventions therefore address the increasing diversity in students backgrounds and needs [providing] flexible and intensive support, variety in teaching and learning and intensified support for “new” target groups. The objective is to support learning not in homogenous, but well-structured and harmonious groups of students. (HEI_34_a/05)
Programme Design: Typology of 1st-Year Support

Guidance on study choice

Induction to university and course orientation

Facilitating transition

Enhancing academic skills

Enhancing subject knowledge

Academic advising & counselling

Guidance for self study

Providing applied learning experiences

Providing flexible study pathways

short-term

continuous

integrative

additive

exclusive design vs. one size fits all

BOSSE
Student Learning: Profiles of Academic Competence

Profile 1 (16.2%)
Profile 2 (11.2%)
Profile 3 (43.2%)
Profile 4 (29.4%)
Student Learning: Profiles of Academic Competence

- Profiles provide insights into students’ individual diversity
- Composition of profiles varies in terms of
  - Organisational diversity (e.g. Profile 4 includes significantly more students of medicine and law)
  - Social diversity (e.g. Profile 1 includes significantly more students with a migrant background; Profile 2 includes more students with an academic background and less with a non academic background)
Student Learning: Individual Voices
Discussion
Thank you for your attention!

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https://www.ew.uni-hamburg.de/forschung/forschungsprojekte/stufhe/english.html
References


References


Data & Methods

- Online-survey of first-year students at 4 German HE institutions
- October – December, 2016

<table>
<thead>
<tr>
<th>Institution</th>
<th>Number</th>
<th>Response rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Hamburg</td>
<td>1171</td>
<td>19,1</td>
</tr>
<tr>
<td>University of Kassel</td>
<td>501</td>
<td>10,4</td>
</tr>
<tr>
<td>University of Applied Science Hamburg</td>
<td>251</td>
<td>14</td>
</tr>
<tr>
<td>Technical University of Applied Science Mittelhessen</td>
<td>325</td>
<td>12,3</td>
</tr>
<tr>
<td>Total</td>
<td>2248</td>
<td>14,5</td>
</tr>
</tbody>
</table>

1. Confirmatory Factor Analysis with mplus (MLR estimator (type=complex))
2. Structural Equation Model with selected competences with mplus
## Perception of 1st-Year Challenges

<table>
<thead>
<tr>
<th>Perception of 1st-year challenges (factor and example of related item)</th>
<th>M</th>
<th>SD</th>
<th>Cronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning activities (e.g. find out how to study effectively)</td>
<td>3.32</td>
<td>0.75</td>
<td>0.79</td>
</tr>
<tr>
<td>Failure &amp; pressure to perform (e.g. cope with exam results)</td>
<td>3.33</td>
<td>0.76</td>
<td>0.78</td>
</tr>
<tr>
<td>Teaching &amp; assessment conditions (e.g. handle schedule and course selection)</td>
<td>3.39</td>
<td>0.72</td>
<td>0.80</td>
</tr>
<tr>
<td>Academic mode (e.g. acquire scientific skills)</td>
<td>3.45</td>
<td>0.79</td>
<td>0.87</td>
</tr>
<tr>
<td>Private life (e.g. balance areas of life)</td>
<td>3.51</td>
<td>0.79</td>
<td>0.64</td>
</tr>
<tr>
<td>Study expectations (e.g. clarify subject interest and study choice)</td>
<td>3.72</td>
<td>0.73</td>
<td>0.70</td>
</tr>
<tr>
<td>Formal regulations (e.g. handle information and advice services)</td>
<td>3.81</td>
<td>0.69</td>
<td>0.64</td>
</tr>
</tbody>
</table>

(5-point scale: 1= most challenging – 5= least challenging)