

Diversity-Management Strategies of Universities and Technical Colleges in Germany

Theoretical Reflections and Empirical Findings

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Introduction

Within my talk I would like to present theoretical considerations and empirical findings from a project with the acronym „HELGA“.

This project is located within a group of research projects funded by the German Federal Ministry of Education and Research (BMBF) which are designed to evaluate the so called “Quality Pact for Teaching” (“Begleitforschung zum Qualitätspakt Lehre”).

The „Quality Pact for Teaching” (Qualitätspakt Lehre, in short QPL) is a competitive federal program, that was established in 2007 to support higher education institutions in Germany in their efforts to improve their services for students as well as the quality of their teaching.

Within their grant proposals, many institutions focused on issues such as diversity and diversity-management. Nevertheless, funding was predominantly requested in order to research ways to deal with the rapidly growing number of students and, in particular, the growing percentage of “non-traditional” students in higher education. In the following, I would like to present theoretical considerations and empirical findings from a project with the acronym „HELGA“, in which these strategies were investigated.

In Germany (like in many other countries), more and more young adults decide to continue their education by enrolling at a university or technical college. This trend began approximately fifty years ago but has accelerated in the last decade.

As a consequence, the student body has become – at least generally speaking - more and more diverse in terms of gender, social background, age, prior education and many other aspects.

Many higher education institutions are affected by this trend, although technical colleges and universities located in urban areas and in West Germany are affected in particular.

The leadership of these universities welcome this development on the one hand. On the other hand, they are concerned due to the high dropout-rates that are attributed to an increasing number of students with comparably low prior content knowledge or problematic attitudes and insufficient self-regulation skills. Hereby it is worth noting, that an individual’s decisions to turn away from university-level education or to change their degree subject leads not only to costs for themselves, but also for the institutions concerned in the form of a misguided allocation of institutional resources.

Up to now, there have been few empirical findings which support the assumed relation between student body diversity and academic success-rates within **German** higher education. However, several international studies underline that for example low SES-students both with and without a

migrant background are more likely to struggle with academic and social integration and therefore have a higher risk of abandoning their studies.

Moreover, German bachelor degree programs in mathematics, computer sciences and engineering as well as the natural sciences have registered a rapid increase in student intake and, at the same time, higher-than-average dropout rates.

Therefore, many institutions strive for the development and implementation of measures to reduce differences in student's initial attitudes and competences both in general and in particular in the degree courses previously mentioned.

The scope of our project

In order to analyse the array of relevant measures, Wiebke Esder and I conduct content analyses of the initial programs of successful institutions belonging to the aforementioned Quality Pact for Teaching.

All institutions intended to improve teacher-student-relations in order to reduce gaps in competence and attitudes of students at the beginning of their courses. However, we didn't pay this measure any further attention because these expensive efforts were - in retrospect – crossed over by unexpected higher increases in the numbers of first-year students.

Instead, we focused on the effect of

- Pre-courses and “bridging courses”
- Counselling offers for students with academic integration problems
- Mentoring programs and
- Further training for professionals

and also investigated the quality of implementation of these measures in greater depth.

Theoretical background

Up to now, the majority of studies designed to identify reasons for student's drop-out in higher education relies on the approach of Tinto already developed in 1975.

According to this approach, the risk of drop-out increases the more students fail to become academically and socially integrated.

In the meanwhile, several studies have provided empirical support for this core assumption. Therefore, we integrated these consideration in a broader model, we develop in order to explain and predict differences in student's academic attainment.

Hereby, we referred to the Angebot-Nutzen-Modell which was jointly develop by several German researchers (such as Fend, Helmke, Schrader, Ditton) ten years ago and designed to explain interindividual differences in academic attainments of **primary and secondary** students. This model is based on numous empirical findings in the field of educational research and was often used to evaluate the quality of German schools.

Wiebke Esdar and I captured elements of this model and fine-tuned them to correspond with the specifics features found in the context of higher education within our “offer adoption model”. These features are mainly seen in a greater degree of autonomy that institutions have to create curricula and offer extended student services, alongside a larger degree of students' autonomy in the utilization of these offers.

Let me give you first a short description of the core assumptions of the offer-adoption model and then direct your attention towards components of the model which were investigated in our project.

Our model includes a wide array of indicators which can be used to investigate differences in both individual as well as institutional-level outcomes and outputs. In HeLGA we focused on three outcomes that are particularly important for higher education institutions because they imply additional costs: dropouts, students changing their degree subject and students exceeding the regular number of semesters for their chosen degrees.

From the perspective of our model, the likelihood of these negative outcomes depends first of all on the degree to which students utilize regular courses and additional student services in a meaningful way.

Interindividual differences in students' academic behavior may in turn result from differences in student's characteristics as well as from differences in the quality of lectures and the appropriateness and availability of additional student services. Both aspects point towards the qualification and motivation of lecturers in higher education in general and the occupational situation of 'hybrid' staff members (i.e. persons who have a dual function of both teaching and research) in particular.

Derived from the briefly presented model we pursued the following aims:

Many higher education institutions have developed and implemented additional measures such as offering students pre-courses, student consultation and mentoring-programs because they expect that it will reduce the number of dropouts, lead to fewer students changing their degree subjects and fewer students exceeding the regular number of semesters for their degree programs. Therefore, we *evaluated the expected benefit of these measures by comparing students that had utilized at least one of these measures with students that hadn't utilized them in a quantitative manner.*

In addition, we investigated the *quality of implementation of these measures* by undertaking qualitative interviews with QPL-lecturers that were analysed with reconstructive methods. Amongst other aspects, we addressed the institutional incorporation, occupational ambitions/perspectives and motivation of QPL-lecturers as well as the quality of employee selection and staff training from the perspective of our interview partners. According to our model, these factors should may explain - at least indirectly - why students may or may not benefit from such additional measures.

Finally, we made an effort to *identify characteristics of learners* (such as motivation, domain-specific self-efficacy and sense of belonging) which could influence the utilization of additional measures, the students' study behavior in general and also predict differences in students' outcomes.

Project design

We started with content analyses of the grant proposals that higher education institutions had composed to apply for funding within the Quality Pact of Teaching.

Subsequently, we contacted those universities and colleges, who intended to develop and implement pre-courses, consultation services and mentoring-programs in their bachelor study programs in the MINT subjects. Hereby, we strived to recruit institutions from different regions of Germany and with different catchment areas.

In the end, we 3 universities and 6 technical colleges fulfilled all these criteria and were willing to cooperate.

By way of internal mailing lists, we informed students, who were starting their bachelor study programs in the winter semester 2015/2016, about our project and asked them to participate in an online survey with three rounds of data collection. About one thousand students agreed to participate and filled out the questionnaires in the first wave of measurement.

The first data collection point was just before the first semester started. Two further questionings were conducted one year later and finally after the students' sixth semester, which is the regular number of semesters needed to complete a bachelor degree. Participation was rewarded in form a voucher to the value of 20 Euro.

After finishing the first data collection, we recruited twenty-six lecturers, who were employed as part of the Quality Pact for Teaching, for narrative interviews. As already mentioned, we addressed the occupational situation of these professionals, their incorporation into their institutions as well as lecturers' qualifications and aspirations in this interviews.

Main Results

Findings derived in the online-Panel

With respect to extra-curricular offers we found that pre-courses were utilized by almost all students, whereas student consultation services and mentoring programs were generally used seldom. This observation contradicts – at least at the surface - the objective of these strategies, i.a. the reduction of differences in freshmen' competencies.

Mean differences between universities and technical colleges were small, although non-traditional students are more likely to pursue a college degree. Moreover, effects of individual usage of extra-curricular (I will refer to immediately) did not depend on the type of institution. Nevertheless, we controlled for the type of institution in most further analyses (in few analyses the small number cases did not allow to control for differences between universities and technical colleges).

Overall, our results support the institutional expectation that students profit from the extra-curricular offers only to a limited extent: The utilization of pre-courses was the sole measure which led to a statistically significant reduction in the risk of both, dropping-out and changing degree subject. However, these effects are weak and students who attended a pre-course were not found to complete their course more rapidly than students who didn't utilize pre-courses. Therefore, the reduced risk of drop-out associated with pre-courses may be interpreted simply as a 'time on task' effect.

In addition it was found, that additional offers were not used by 'non-traditional' more often than by 'traditional' students. Rather, highly motivated students are most likely to use this optional offer. Our study provide insofar empirical evidence for a phenomenon already well known for example in health care and youth welfare, called the 'prevention dilemma'. With respect to higher education this dilemma means that those, who are intended to benefit from additional support, do not use this support either because the offers are not (perceived as) appropriate or because members of the target group are not aware that they may need help.

According to our further analyses, one of the most powerful predictor for academic success is the frequency of *regular* lecture attendance. In this respect, we found considerable differences in this regularity and - again – indications for the 'prevention dilemma'. This is remarkable because institutions that are not allowed or willing to monitor this attendance, expect students to possess

self-regulation competencies including the competence to evaluate one's academic strengths and weaknesses accurately, although they acknowledge, that some students still need assistance in the successive development of these 'soft skills' (for this reason student counselling and mentoring programs are implemented)...

Also in line with previous findings and our offer-adoption model, our analyses provide evidence for the importance of the quality of 'regular' courses. In particular, the perceived ability of lecturers to adjust the difficulty of tasks and the pace of instruction to suit students with differing levels of prior knowledge was correlated with a reduced risk of skipping degree-courses. A similar effect was also found for the perceived ability of lecturers to maintain students' initial subject interest, to foster self-determined motivation and to reduce heteronomous motivation.

Findings derived from the interviews

Further insights into the implementation of measures were gained by analyzing the interviews with professionals that were employed within the quality pact for teaching.

The majority of these staff members identified strongly with their teaching role and the ethos of the "quality pact for teaching" program. At the same time, about fifty percent were also pursuing a career in research and reported intense goal conflicts.

In addition, all interviewees reported little support in coping specifically with these goal conflicts and, more in generally, in dealing with job-related demands.

Figuratively speaking there appears to be an observable "leadership vacuum" which QPL-lecturers attempt to combat by seeking contact to fellow lecturers and research staff within their faculties. As a consequence, those who are connected to an institute, may be better able to pursue their academic ambitions and propagate the mission of the Quality Pact for Teaching.

Concluding recommendations

Based on the presented results, the following recommendations can be made:

First, universities and colleges should provide further training in diversity-oriented inclusive didactics, as well as for the professional development of teachers, lectures, tutors and counsellors.

Second, higher education institutions should ensure that staff members with dual teaching and research roles receive the required guidance and supervision, regardless of whether located in central or decentralised university administration

Third, faculties should ensure that student performance is evaluated regularly and that students receive informative feedback that allows them to evaluate their own level of competence and deficits more accurately and develop effective learning-strategies

Fourth, early warning systems should be established to identify at risk students. These systems should be combined with compulsory controlling to ensure that student support measures are both utilized and effective

Fifth, to overcome the prevention dilemma student consultation should be anchored within the curriculum. Furthermore, measures to support at risk-students should be designed in a low-threshold manner i.e. simple but effective interventions which are easy to participate in.

Finally, student's attendance in regular lectures should be monitored