Learners' Cultures in the Context of Education

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Abstract. Job-related migration has been fostered across Europe balancing unemployment in one country with demands for employees in others. However, the numbers of early school leavers and university dropouts significantly increased in the hosting countries. We propose a higher measure of cultural sensitivity in education in order to prevent frustration. The Learning Culture Survey investigates learners' expectations towards and perceptions of education on international level with the aim to make culture in the context of education better understandable. After a brief introduction, we subsume the steps taken during the past seven years and found results. Subsequently, we introduce a method for the determination of conflict potential, which bases on the understanding of culture as the level to which people within a society accept deviations from the usual. We close with demonstrating the usefulness of the data and insights from our Learning Culture Survey in the context of practical scenarios.

Keywords: Culture-sensible education · Educational culture · Culture-related conflicts in education · Learning culture survey

1 Introduction

With the increasing internationalization of classrooms and the distribution of e-Learning programs and content through the Internet, a better understanding of the role of culture in education gets indispensible. Reports of increasing numbers of early school leavers and dropouts in universities accumulate; mainly learners with migration background are concerned [1]. It is not in the responsibility of the learners to adapt the given conditions of their learning context, but the educational institutions' duty to ensure that an environment is provided which leads to productive learning for any kind and type of learner [2]. Even established e-Learning providers rather waive the chance to attract a higher number of learners and stick to their local markets, instead of risking unsatisfied learners because of unforeseen cultural conflicts [3]. Meanwhile, in support of finding solutions, the EC defined a related key issue for funding in the context of the 2015-call for project proposals.

In his study, Nilsen [4] found that the main reasons for students dropping out were ineffective study strategies, a mismatch between expectations and content in the study program, and a lack of motivation. Bowman [5] even claims that strong efforts should be made in order not to 'destroy' the initial motivation by confronting the learners with unnecessary conflicts. So far, we know that besides language gaps and content-related

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issues, the learners' motivation is threatened by unmet expectations and not understandable regulations, arising from culture-specific differences between their origin and the new context.

In e-Learning scenarios, a constantly high level of motivation is the most crucial success factor [3]. If learners lose their motivation in a face-to-face scenario, the educator still has a chance to recognize that and can support the regain of motivation [6]. In e-Learning scenarios, this chance rarely is given; without recognizing the learners' mimics and gestures as tools to communicate frustration [7], the instructors depend on explicit communication, which often does not happen due to cultural reasons.

The Learning Culture Survey investigates learners' perceptions in different national and regional contexts and aims to support educators to better understand educational culture in general and cultural differences between specific educational contexts, in particular. Such an understanding is relevant for the development of culture-sensitive education. We further on aim to support both learners and educators in their preparation efforts when planning to study or teach in other countries.

2 The Learning Culture Survey (LCS)

In the following we distinguish between "culture in education", which is used as a general term, without a direct relation to a particular context, "educational culture", which is used when a specific context is referred to and "learning culture", which is related to perceptions of and attitudes towards education from the perspective of the learners.

Today's applied comparative culture research mostly refers to culture as persistent value-driven perceptions and attitudes, which, amongst all people within national societies are homogenously favored or refused (e.g. literature reviews from [8, 9]). Geert Hofstede [10], as a pioneer [11] and still, one of the central proponents of this "etic" concept for culture research, speaks of culture as the "Software of the Mind" which goes back to Montesquieu's "spirit of a nation" (18th century). In his research, Hofstede initially found four cultural dimensions (later on, two more dimensions followed), which focused on basic values and classified around 40 nations through specific key values per dimension. Following Hofstede's demonstrated examples [12], it is possible to predict and compare the relative cultural distance between two nations according to concrete attitudes and perceptions that are related to each of the dimensions. In other words, according to the results, people from one nation are considered more likely to act or react in a certain way than those of another nation. Köppel [13] suggests that one reason for the persistent high level of popularity of this approach lies in its' simplicity. Alongside its achieved prominence, Hofstede's Dimensions Model has constantly been challenged and criticized on methodological, interpretational, and ethical levels (e.g., [8, 9, 14, 15]).

Several further reasons than the already found points of criticism affirmed our own doubts if the national values from Hofstedes' dimensions model and the concept of a general national culture would appropriately reflect culture in education. For the context of culture in education, we initially decided to adopt the majority-based and

group-related culture definition of Oetting [16], who suggests using the term 'to describe the customs, beliefs, social structure, and activities of any group of people who share a common identification and who would label themselves as members of that group'. We could not imagine that basic values exclusively should be responsible for educational culture. According to our own practical experiences from the fields of school education, Higher Education, and professional training, we saw significant differences between their modi operandi, which did not necessarily reflect basic values or national cultures at all.

Another reason for doubts regarding the applicability of Hofstede's dimensions model in the context of educational culture resulted from the reported experiences from Mitra et al. [17] which later on were confirmed by Buehler et al. [18]: Both research groups found that the children in their studies below an age of twelve years acted quite differently from older children as they rather followed their curiosity than the assumed cultural biasing. Last, we were unsure if the culture within educational institutions actually stays persistent over time after changes regarding basic conditions took place.

2.1 LCS: Operationalization

Besides a cross-disciplinary literature review on reported conflicts in education and culture research in general, we conducted qualitative pre-studies involving university students and educators. In the conducted (informal) interviews, we asked them for perceived cultural conflicts during their times of studying abroad and related to other (foreign) students within the home university. The first version of our questionnaire considered both the reported conflicts in education from the literature and issues that arose from the interviews.

The questionnaire was designed for the context of Higher Education and originally consisted of 128 items related to the following aspects of education [19]:

- Role, responsibilities, and tasks of lecturers
- Feedback
- Motivation
- Gender issues
- Several aspects of group work
- Time management
- Role, responsibilities, and tasks of tutors
- Demographic data

The full questionnaire has been published in its English language version [20].

In 2009, we decided to start with our investigation within the only two national contexts, which Müller et al. [21] found to having more or less culturally homogenous populations, i.e., Germany and South Korea. These two national contexts conveniently also appeared perfectly suitable for the initial study because of their generally very different educational systems and traditions.

Before the implementation took place, the questionnaire was translated to German and Korean. Several test studies and refinement cycles were applied in both contexts in order to ensure its' comprehensibility and appropriateness. Regarding socially sensible

topics, we had to expect that the students would rather provide socially acceptable answers than expressing their actual opinions; even though the respondents were considered to stay anonymous. Thus, we removed related items and reformulated others. In the end, 102 items remained for the initialization of the field study.

For most of the items, we applied a 4-point Likert Scale. We wanted to force the respondents to take a position instead of giving them the chance to choose a neutral response option [22]. Our aim was to design a standardized questionnaire, reusable in later steps within any context in the same form (just translated to local languages). For future contexts, we had to expect that items might not apply in the same measure as experienced in the test studies. Thus, we provided an additional answer-option, which was "not applicable in my context". We visually separated this option from the main scale in order to avoid that respondents misinterpret it as an integral part of the general answer options. The strategy of separated positioning worked out well: In later studies, this option rarely was used.

2.2 Evaluation and Interpretation

As only criterion for the evaluation, we decided to exclusively accept fully completed questionnaires including both the items that had to be evaluated and (most of) the demographic data.

From our investigated contexts, we received very different sample sizes, which, in the original design of the scale, would not have been comparable amongst each other because of the extreme values' different impacts on the full samples. In order to solve this problem, we followed the recommendation of Baur [23] and binarized our results for the contrasting across contexts in positive and negative answers. Baur particularly recommends the binarising of ordinal-scaled results in order to produce clearer results and prepare ordinal-scaled data for operations that originally are reserved for interval-scaled data. There is a controversial discussion on applying higher-level statistical methods to ordinal-scaled data [24]. We followed the recommendation of Porst [25] to case-sensitively check the results for appropriateness, which, in our case, revealed inconsistent results when calculating variance, covariance and standard deviation. In contrast, the calculated mean was sound between the 40- and 60-quantiles and thus, usable to provide information on the answer distributions, which else would have been lost after the binarising process. When directly contrasting results across contexts, we focused on the percentage of positive answers.

For the decision if a result regarding a certain item actually reflects culturally motivated or rather individual preferences of the students, we generally assumed that if we find a clear tendency to rejection or acceptance (negative/positive), the answer was culturally motivated, else, individually. As a clear tendency, we defined everything below 40 % positive answers as rejection and everything above 60 % positive answers as acceptance. All items evaluated between 40 % and 60 % positive answers were assumed to be too close to an equal distribution and thus, probably expressing individual preferences. We chose such a large interval as our "fuzzy area" because in our context of learning culture, we had to deal with opinions of people on aspects of life, which at least to a large part were not substantial for the respondents' survival or the general

functioning of societies. On individual level, such types of opinions easily could be changed from one to another moment. Moreover, we did not know if our results would reveal persistent over time on the large scale.

We cannot clearly determine if the individual responses of the participants in our study are driven by desires (what they wish to be) or the status quo (what they expect to be due to prior experiences). In retrospective and for most cases, the results are quite clearly showing that the students evaluated according to their experiences.

2.3 Implementation

As for the first wave of our large-scale implementation, we found very different conditions in the contexts of Higher Education in Germany and in South Korea.

With our online questionnaire, we were able to address the entire student populations of the three German universities 'University of Cologne', 'University of Applied Sciences Bonn-Rhein-Sieg', and 'University of Potsdam'. Each university-administration sent the invitation for participation to all of their registered students through their internal E-Mail distribution system. The response rates between 2-6 % for each university were in accordance with the usual experiences for response rates in online questionnaires. In total, from the three universities, 3225 students started answering and 1817 students left fully completed questionnaires. The distribution between female and male students was 544/1268 (five students assigned "other").

In the context of Higher Education in South Korea, we did not have the opportunity to use the online survey within the universities due to legal issues but instead, had to collect the data "on the street", using the paper-based version. In order to still receive something close to random samples, we followed the suggestion of Kromrey [26] and chose our respondents on the basis of a random-route algorithm. More than 50 % of the Korean population lives in and around Seoul. The city has more than 50 universities and a subway system, which links the suburbs and close cities with each other. Thus, we limited our investigation to this city. Due to permanent traffic jam and uncomfortable parking situations, Korean students usually and frequently use the subway. Because of these characteristics, we eventually decided to conduct our survey in the subway and predefined a fixed algorithm where to enter the subway and how to decide which persons were to be invited for participation: Go down the main entrance to the gate, take the first wagon entrance available on your right side and ask all people that appear to have an age between 18 and 30 (starting on your right side and going around in this wagon) if they currently are university students, at least have six further stations to go, and are willed to participate in our survey. After completion of one round, leave the subway on the next stop where another line crosses its way and change the subway line. If possible, follow the direction to the center. In order to involve a high number of subway lines (and thus, catch students on their way to different universities), we started with the only available round-line in the city and randomly changed the initial entry point each day. The condition regarding the six further stations was related to the average time required to complete the questionnaire. Most participants in the German sample (which ended before the Korean study) needed 11–15 min for the completion of the online questionnaire. The subway trains in Seoul take about three minutes from one to another station.

We calculated that 18 min should be enough to introduce how to proceed (no long considerations but intuitive and quick answering), hand out the material, let them complete the questionnaire, and collect the results; in most cases, this calculation worked. For most people, sitting in the subway is boring and so, we achieved a response rate of 50 % (counting just persons claiming to be university students). We had three weeks for the data collection, and received 286 fully completed paper-based questionnaires with a relationship between female and male students of 153/131 (two students selected "other"). 58 of the "delivered" questionnaires had to be rejected because relevant items were left unanswered. The students within the sample studied at 39 universities. From nine universities, we received nine and more completed questionnaires.

The received datasets with many sample elements per university from the German sample were predestined to drive an in-depth analysis by comparing the data not just on university but also on faculty level. The Korean sample, in contrast, was well suitable for a broad analysis on university level.

We were not yet able to determine if the found educational cultures from Higher Education would be transferable to other educational contexts. In the end of 2011, we conducted small-scale studies in five randomly selected enterprises for that purpose: We randomly chose them from the list of stock noted enterprises (DAX), which provide in-house training. Five enterprises eventually granted their participation. However, we were restricted to involve a maximum of 25 participants per enterprise. Apart of defining the condition that the selected employees should work in positions, in which they actually are meant to participate in the provided in-house trainings, we had no further influence on who exactly would be invited; this was an internal decision. As a result, we received seven and more responses just from two of the five enterprises. However, the results from these two enterprises eventually revealed sound because in relevant aspects, they reflected the specific characteristics of the enterprises' organizational cultures' and the age and positions of the participating employees. For this study, we slightly modified the used terminology in our questionnaire. As an example, we changed the term "professor/lecturer" to "instructor".

Between 2012 and 2013, we received further translations of the questionnaire to Bulgarian, Chinese (simplified and traditional), French, Greek, Japanese, Portuguese, Russian, and Turkish. With the support of guest students in Germany, we drove test studies in their home countries, which were Bulgaria (30 sample elements), Ukraine (53), Turkey (40), and British (30) and French (30) Cameroon. These results surely were not representative for each of the countries' contexts of Higher Education but provided first impressions of what we could expect in large-size investigations. In the summer of 2014, we completed another large-size study (online) at the university of Accra in Ghana with 306 fully completed questionnaires (response rate around 3 % and female/male relationship 126/177). In the end of the year, we started the implementation of the LCS online-survey in France. The study in France is on-going since we yet just managed to involve a single university with limited access to the students (so far, we received 75 fully completed responses).

Also in the end of 2014, we were able to repeat our investigation in one of the German universities, namely the University of Applied Sciences Bonn-Rhein-Sieg. The questionnaire, again, was implemented as online survey, and all registered students were

invited by the administration using the internal E-Mail distribution system. The investigation served two purposes, first, to find out if the educational culture in this university generally kept persistent over the past years, and second, if the immense logistic and personnel changes that had taken place in the meantime were reflected in the results. The University of Applied Sciences Bonn-Rhein-Sieg still is a quite young and relatively small university. It is constantly expanding on all levels, regarding offered subjects to study, employed professors and staff, and infrastructure. In order to achieve meaningful results with a repetitive investigation, we had to at least wait three years in order to ensure that the prior investigated generation of students (Bachelor and Master) were completely substituted through new students; else, we would have risked receiving data that reflected the memory of students instead of the status quo. In the repetitive study, we received 375 fully completed questionnaires, which is 6, 6 % of the whole student population (5621). The relationship between female and male respondents was 166/208 (one student decided for "other").

3 Findings on Learning and Educational Culture

With our data, we were able to answer most of our beforehand open general questions of educational culture. In the following, the findings are discussed in detail and separated by category.

We use net diagrams for the visualization of the results from two or more contexts. Each diagram is related to a thematic block, like for example "Tasks of the Lecturer". We consider all items within the same thematic block to being directly related amongst each other. In the diagrams, we only display the results according to the found percentage of positive answers. Since the option "Not applicable in my context" has really been used (below 1 %), the rest of the answers can be expected to be rejections.

Please note that displaying the data in this way is meant to facilitate the recognition of differences between contexts, to some extent, eye-candy, but only the crossing points on each of the axes of the diagrams actually represent defined values.

3.1 Learning Culture in Faculties

The German samples were large enough to analyze the data on faculty level. In Fig. 1, we exemplarily display the results of the University of Cologne regarding the thematic block "Tasks of the Lecturer".

On faculty level, we found deviations in the answers of the students regarding all thematic blocks and between each of the faculties within all three universities. The general characteristics of the found patterns were similar across faculties and items. The displayed thematic block "Tasks of the Lecturer" was the one with the highest level of diversity. Regarding this thematic block, the expectations of the students generally were higher in faculties with low numbers of students than in larger faculties.

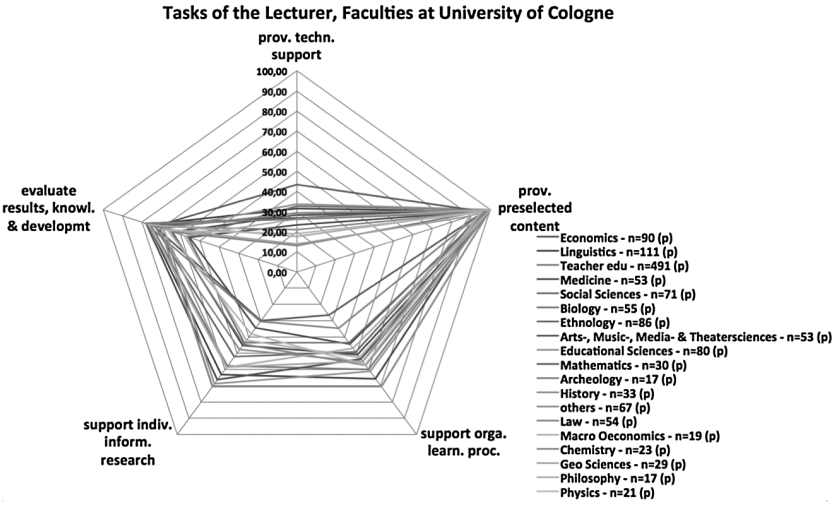

Fig. 1. "Tasks of the Lecturer": Faculties (Cologne).

3.2 Educational Culture in Universities

For the comparison of the educational cultures on university levels, we calculated the positive percentage values over the whole datasets (not about the averages of the faculties) from each of the German universities. Figure 2 displays the results regarding the thematic block "Group work efficiency".

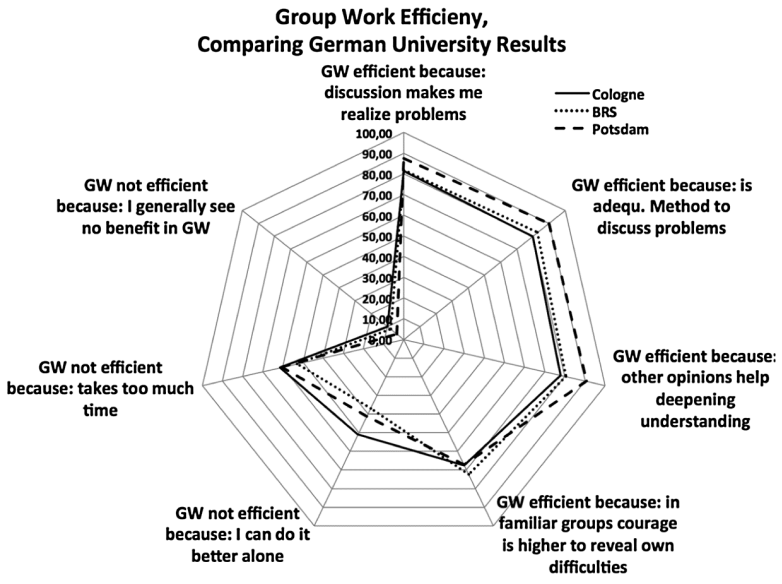

Fig. 2. "Group Work Efficiency": German Universities.

After having built the averages of each university, patterns resulted which were very similar to each other. We yet had to find out if the data of the South Korean sample would lead to a similar effect. Figure 3 displays the results from the thematic block "Group Work – Evaluate Statements", considering only the South Korean universities, where at least nine sample elements were available.

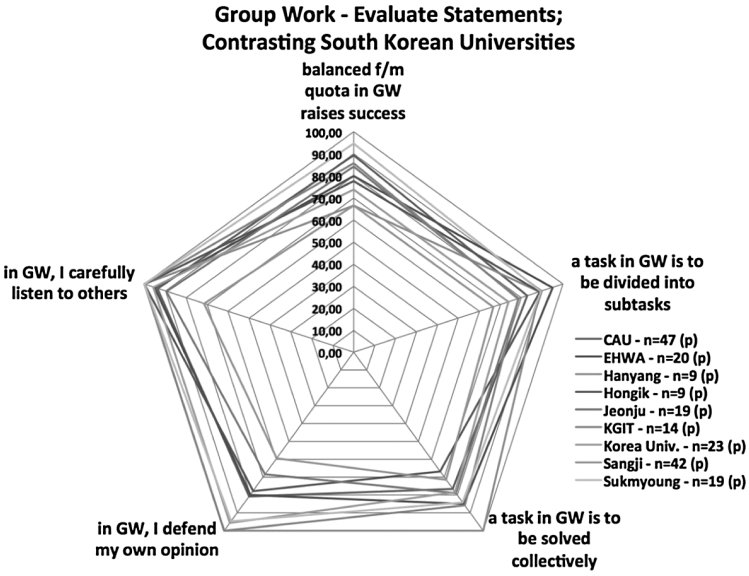

Fig. 3. "Group Work - Evaluate Statements": South Korean Universities.

Once again, we find very similar patterns when comparing the results of the South Korean universities. In the South Korean sample, we found extreme outliers regarding some thematic blocks, mainly from universities with very small numbers of sample elements and particularly from the KGIT, which just provides extra occupational programs.

3.3 Educational Culture: National Level

In order to evidently conclude that our findings actually had something to do with culture on a national level and not just with university traditions, which, by coincidence, were found to be similar, we needed to find clear differences between the averages of the German and the South Korean universities. We did not expect to find such differences regarding all thematic blocks but surely regarding the thematic blocks "Tasks of the Lecturer" and "Role of the Lecturer". South Korean universities, by law, must employ one professor per each 10 registered students. In Germany, no such regulation is defined which often results in very crowded classes and rather anonymous students who do not expect any services from their professors apart of being responsible for a lecture and providing evaluations. Thus, the expectations, which South Korean students assign to

their lecturers, are far higher, and the student-lecturer relationship is much closer. Further on, South Korean students would never question their lecturers but instead expect them to always provide the best possible solution for a specific problem. German students, in contrast, explicitly learn from the very beginning to put everything into question. Figure 4 displays both national university averages regarding the thematic block "Role of the Lecturer".

Figure 5 displays the average of both national datasets regarding the thematic block "Tasks of the Lecturer". As expected, regarding the items "technical support", "support for the individual literature research", and "support for the organization of the individual learning process", the expectations of the students were very different between both national contexts. While the responses of the German students were indifferent towards all three items (results between 40 and 60 %), the Korean students did very clearly demand related services.

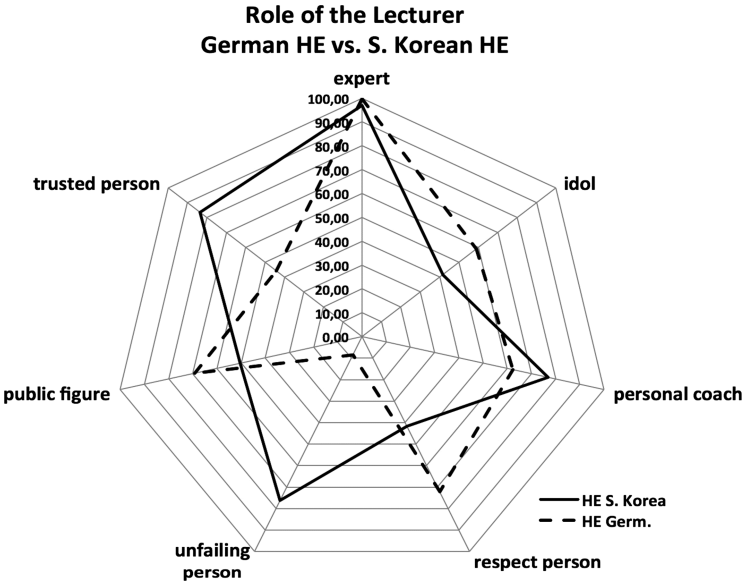

Fig. 4. "Role of the Lecturer": Comparing German with South Korean HE-results.

The results of both national contexts fully confirmed what we expected to find from our experiences. Regarding other thematic blocks, prior known differences also were mostly reflected. Where we actually found amazing results in the South Korean context was regarding the thematic block "Feedback". Because of the Asian concept of shame, we had expected that criticism generally would be a tough issue for the South Korean students. Instead, the students reported to actually perceiving (constructive) critique towards their work results and study progress as motivating. They even reported to feel confused if critical feedback would be missing in the end.

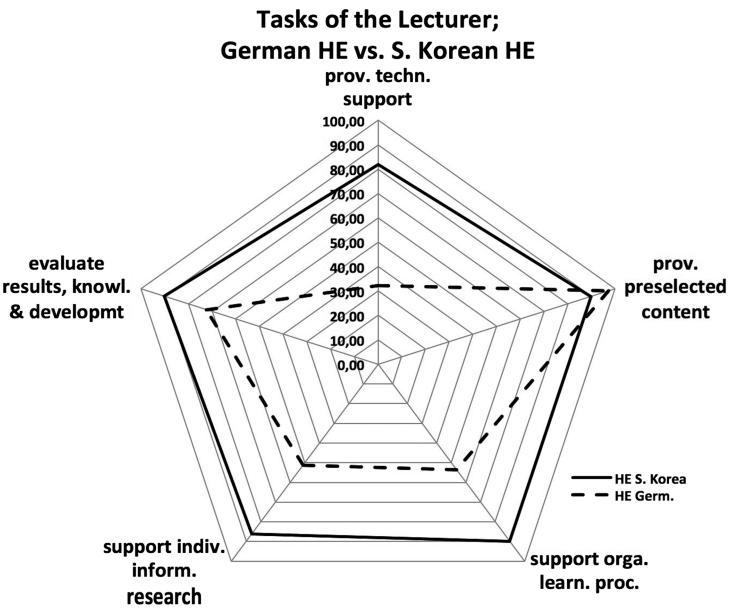

Fig. 5. "Tasks of the Lecturer": Comparing German with South Korean HE-results.

3.4 Findings Regarding Educational Culture in Professional Training

We evaluated the results of the two enterprises that provided seven and 14 sample elements. We found significant differences between the learning cultures of each of the groups of employees, which were in line with the basically different organizational cultures of the enterprises. As displayed in Fig. 6, the results additionally differed a lot from the results from the German universities. For example, instructors in Adult Education (AE) are expected to provide a higher level of leaner-support than in the context of Higher Education (HE).

Another example for such differences we found was related to the role of the instructor/professor in both contexts: Different to professors in Higher Education, instructors in professional training were not perceived as respect persons but just as experts in their field. Both results fully reflect the different situations between higher education and professional training: While learning is expected to be a full-time job for university students, professionals often must manage their training besides their regular work. Thus, efficiency of time usage plays a far higher role for the professionals than it does for the students. Another significant example was found in the context of group work: Different to the context of Higher Education, group work in professional training generally was perceived as difficult, and learning tasks were reported to rarely being completed in time [27].

3.5 Persistence of Learning Culture

From our repetitive study, which took place in the Winter 2014/15 at the University of Applied Sciences Bonn-Rhein-Sieg, we learned that Learning Culture appears to slightly

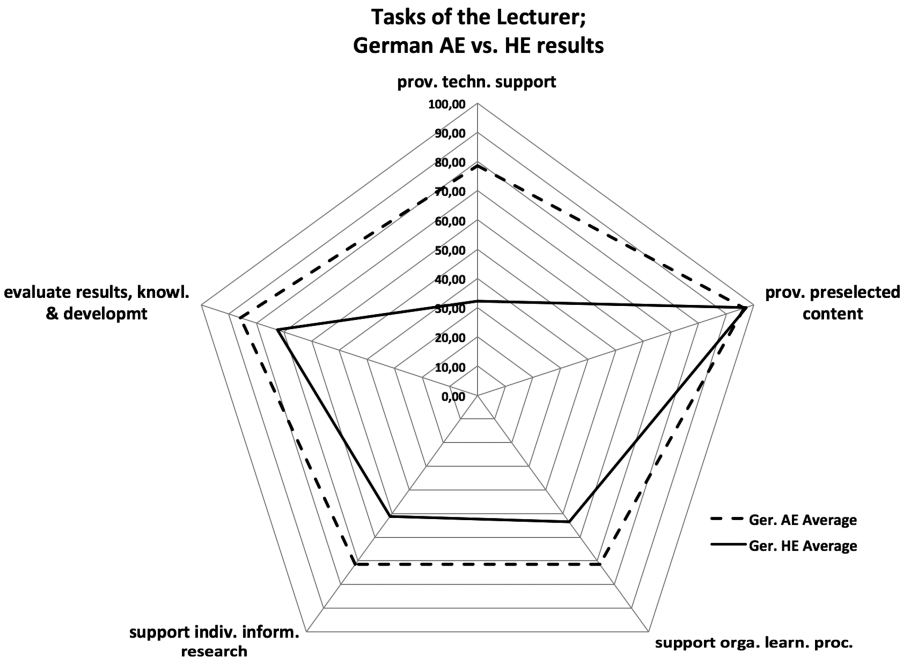

Fig. 6. "Tasks of the Lecturer": German Enterprises (AE) vs. Higher Education (HE).

change in accordance with changes of educational practices on faculty level while the average university results kept almost the same. For example, in 2010, the department of Forensic Sciences had recently started with just a very small number of students. In that time, we found the students perceiving their lecturers much more as coaches than in 2014, when the number of students studying Forensic Sciences was much higher (see Fig. 7).

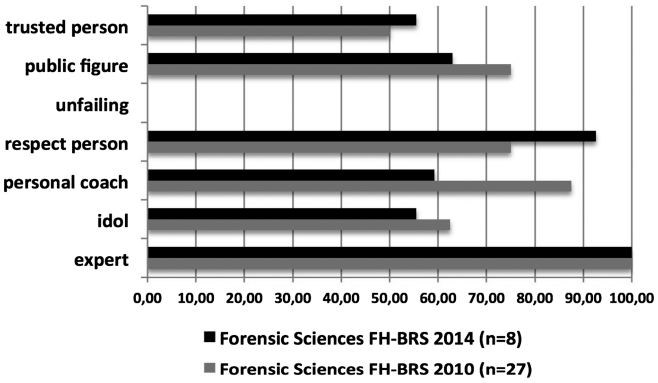

Fig. 7. "Role of the Lecturer": Learning Culture between 2010 and 2014 (Forensic Sciences).

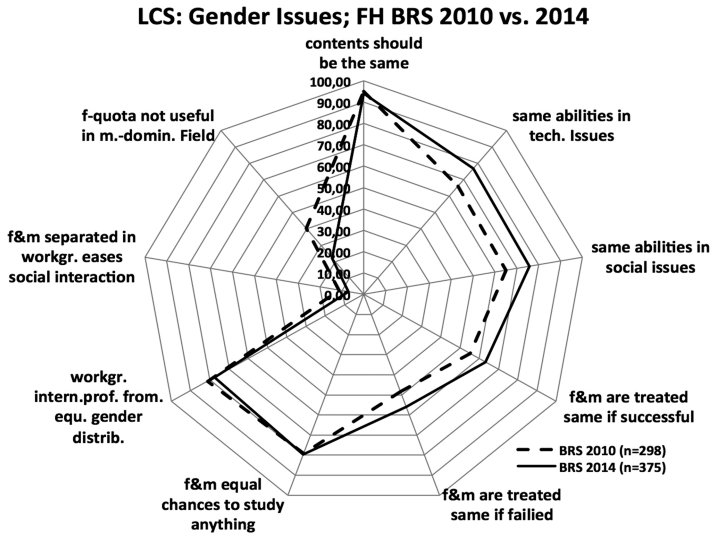

Fig. 8. "Gender Issues": Learning Culture between 2010 and 2014.

Almost no deviations larger than 10 % were found between the average results from both studies on university level. Figure 8 shows the thematic block "Gender Issues" with the highest found level of deviation.

The changes fully reflected the German "Zeitgeist": Currently, an intensive public discussion started regarding the legal enforcement of a female quota for Top-Management positions.

3.6 Limitations

Besides the fact that educational culture varies between academic and professional education and thus, the results of the LCS are not transferable across educational contexts, we found significant deviations between our test studies from British and French Cameroon. Table 1 shows the results of an a-prori/posteriori analysis. From the each 30 sample elements, just a single one was wrongly assigned to the characteristics of the other context (see also Fig. 9).

Table 1. "Motivation": A priori/posteriori classification from HE in British & French Cameroon.

From/to	British	French	Total	% correct
British	29	1	30	96.67
French	1	29	30	96.67
Total	30	30	60	96.67

Note. $N_{total} = 60$; $N_{British} = 30$; $N_{French} = 30$

Our results from the context of education clearly show that we cannot generally assume Learning Culture as a national phenomenon and thus, being homogenous across different societies within nations.

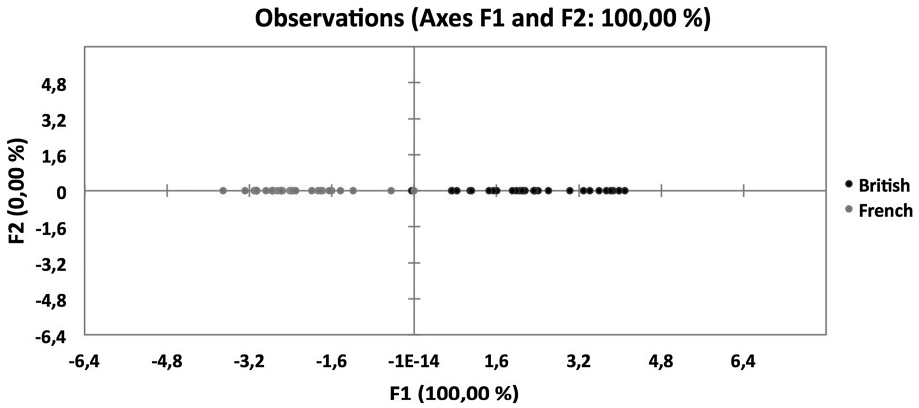

Fig. 9. "Motivation": A-priori & posteriori classification (British & French Cameroon).

We much more expect that found examples of nations that show such a homogenous educational culture must rather be perceived as very rare and exceptional cases.

4 Determining Conflicts in Education

Being able to recognize cultural differences regarding selected issues across educational contexts is not yet sufficient for understanding or even determining at which level a particular cultural distance could eventually lead to a conflict situation and maybe become a threat for the motivation of learners. Cultural distance has been a subject of discussion since some decades. A clear definition of the term does not exist but it originally was used in the context of etic culture research in which the cultures of whole societies were quantified and compared according to a small number of key values (such as provided by the dimensions model of Hofstede et al. [12]). Shenkar [28] criticized the general concept of cultural distance as creating the illusion of an easy way to measure something, as complex as culture that actually is not fully comprehensible at all. Chen [29] and Hatakka [30] argued if quantifying cultural barriers generally would make sense. They claimed that reasons for such barriers and related conflicts might not be limited to isolated culture-specific aspects, but rather base result from a whole set of characteristics including ones' individual ability to deal with unexpected situations. In the field of Technology Enhanced Learning, Pirkkalainen et al. [31] revived the term "cultural distance" with the meaning to determining individual reasons for selected culture-specific barriers against the production, usage, and/or repurposing of Open Educational Resources.

The whole discussion on how to quantify culturally relevant aspects through key-values for whatever purpose appeared like circling around and did not lead us to a

solution in terms of finding measures for conflict detection and prevention. What if the concept of quantification itself simply is not adequate for our purpose? Pless and Maak [32] suggested generally not to understand culture as static set of variables, but as a measure to which extent people within a society tend to accept deviations from what they would consider to be appropriate. This understanding of culture appeared promising for our purposes.

Until some years ago, in Germany, the "Central Office for the Allocation of Places in High Education" ("Zentralstelle für die Vergabe von Studienplätzen") assigned students who wanted to study in a specific field to more or less random universities. This means that generally it was assumed that qualified enough German school leavers were capable to study in whichever university, independent of the institutional culture and local practices. Adopting the idea of Pless and Maak and combining it with the results from the Learning Culture Survey, this would mean that all characteristics provided by German universities would define something like a minimum area of acceptance, and in its' extremes, define the pain threshold. To which extent students can cope with even more extreme situations might differ on individual level.

Our samples included some faculties with extreme characteristics. We assumed these could be used to define the margins of the acceptance level. The investigated South Korean universities, in contrast, included extreme cases, from very small universities to large ones and even a university with exclusively extra occupational programs for adults. We again created net diagrams contrasting both contexts but this time, not according to the individual characteristics or average values, but the whole spectrum between found extreme values. The Figs. 10 and 11 show the results according to the thematic blocks "Time Management" and "Role of the Tutor".

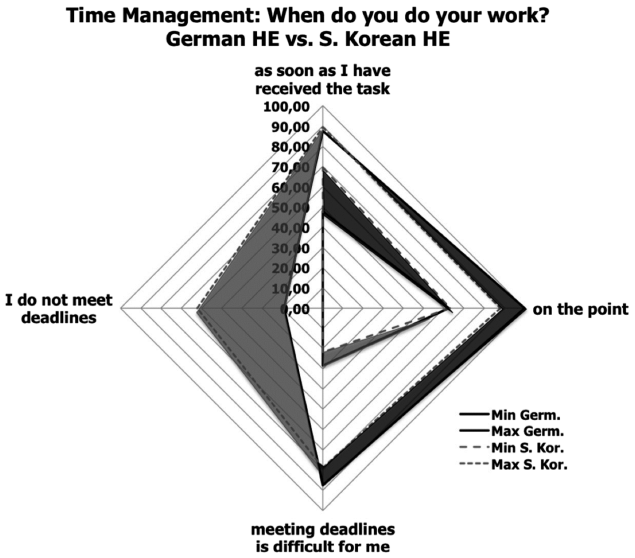

Fig. 10. "Time Management": Contrasting Areas of Acceptance to define Cultural Distance.

For better recognition, we filled the parts of the "acceptance areas" from each context if outside the defined area of the other one, dark for the German (not within the answer spectrum of the South Korean students) and grey for the South Korean.

Figure 10 (on the left side) shows that not meeting deadlines appears to be more accepted in the South Korean context than in the German context. In fact, in South Korean universities, students often get a second chance when they have reasonable excuses why they missed a deadline. Work results of the German students usually will not be accepted anymore after the deadline has expired.

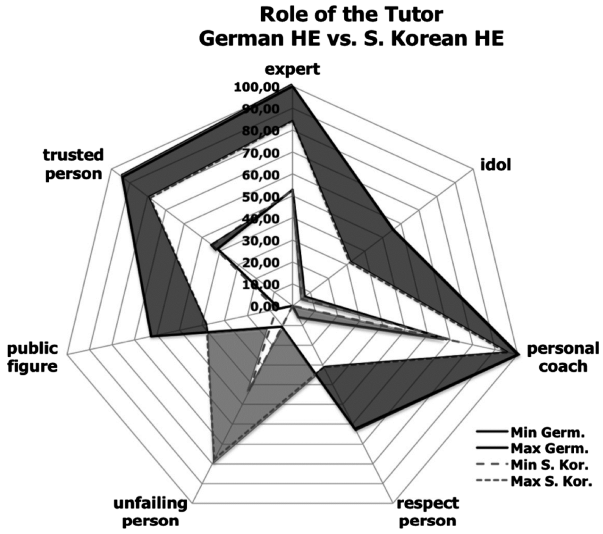

Fig. 11. "Role of the Tutor": Contrasting Areas of Acceptance to define Cultural Distance.

In Fig. 11, the spectra from the thematic block "Role of the Tutor" are contrasted: On the first sight, the result we found in the South Korean context was very surprising for us: The responses of the South Korean students were very similar regarding both of role of the lecturer and the role of the tutor. We particularly could not imagine that tutors (who in our experience are older students) could be considered to be unfailing. In later informal interviews with colleagues in Seoul, we found out that even though tutorials take place in a far more familiar environment than lectures, mostly, the professors themselves hold the tutorials. We do not know if the answers of learners in pure online environments would be the same in this (for us) very particular situation. Further (qualitative) investigations in the South Korean context are scheduled for 2016. This experience particularly showed us that involving native people is essential for the interpretation phase.

5 Learning Culture in the Practice and Best Practice Examples

In this section, practical scenarios are shown, in which the results from the Learning Culture Survey can directly lead or already led to improvements regarding the quality and/or effectiveness of education.

5.1 Speeding Up the Social Integration of Refugees Through Language Lectures

The most current development in Europe and in the world shows the urgent necessity to better understand learning culture and focus on the development of culture-sensible education. The explicitly fostered migration across the European Union membership countries in the context of job-search led to highly international classrooms in schools, which far too often are perceived overburdening for the teachers. The European Commission observed that alongside with the increasing migration, also the number of early school leavers increased. As a reaction, the European Commission declared measures to intervene the early leaving of schools as one of the central aims of its programs educational Erasmus Plus and Horizon 2020. Nowadays, because of wars and discrimination, a very large number of refugees comes into Europe in search for physical but also economical security. They mainly come from Middle East and African, from countries like Syria, Afghanistan, Iraq, Eritrea, Pakistan, Nigeria, Senegal, and others. For the near future, we even expect far more refugees, particularly from such countries that have to deal with ecological catastrophes, which are the consequences of industrialism, amongst them, island states and which even might completely disappear with the ongoing sea level rise.

Germany currently is host for above 250.000 refugees. The number is constantly increasing and for the economy of Germany, these refugees even might actually solve a middle-term problem of negative demographic development and thus are understood as a (temporary) win-win situation; temporary just because their countries of origin might strongly need them back, when the wars are over. However, in order to fully integrate them as members of the German society and into the world of works, it is highly relevant to supporting them to quickly learn the German language. In such cases, it can be assumed that with the understanding and consideration of the refugees' culture-specific needs and peculiarities both will increase, the efficiency of teaching and the acceptance of the taken measures. Since the numbers of available and competent enough teachers who could manage this task also is quite limited, E-Learning might become a crucial supportive technology.

Our results from the Learning Culture Survey alongside with the evaluation of reports on experiences from related educators and learners could prove highly relevant as a supportive measure. We currently started related investigations within an asylum hostel in Bonn, Germany.

5.2 Imparting Cultural Competences to a Multinational ERP-Class

In our bachelor-course on Enterprise Resource Planning (ERP) we decided to move from teacher-centered cognitive design in a face-to-face scenario to a constructivist learner-focused design using a blended learning approach and the basic concept of students-teach-students. Instead of teaching contents that easily can be read in a book, we wanted to support our students to achieve competences, which are required for both their bachelor thesis and their future every day's professional life. Such competences were related to writing (authoring) skills, teamwork, English language skill, communication and collaboration skills, and group/project management.

121 students from different fields had registered for this particular course of which 13 already dropped out after the introduction. The course language was English. While usually providing twelve lecture units per semester in average, the educators held just a single one, which was the course introduction. For the rest of the time, the students were to research in groups of 8–10 and then teach their peers about the results. The educators took the roles as moderators and coaches.

The course consisted of 65 % German and 35 % foreign students, whereas we could not distinguish between guest students and first-/higher-generation immigrants. In order to ensure an intercultural setting for each group and foster the development of intercultural competences as a side-effect of our course, we randomly formed the groups whereas the foreign students were separately assigned in a way that no "national sub-groups" could be formed. Most of the foreign students came from Turkey, Ukraine and Bulgaria, countries in which we already had collected data. Three students came from Russia, two from Asian countries, and each one from Iran and USA.

Our own investigation during and after the course has shown that the found social/cultural conflicts that occurred during our course partly were explainable with the respective country profiles from the Learning Culture Survey (LCS). The culture-specific profiles defined from our results from the LCS further proved helpful in terms of an improved apprehension of particular conflict reasons and to decide about appropriate interventions. Regarding conflict prognostication, we experienced difficulties due several reasons when it comes to attitudes that might be expected from individuals: First, driving conclusions from country profiles to individuals is anyways problematic. Second, educational scenarios like the one we dealt with in our course belong into the context of urban education and not be- or multinational, which we consider to possibly differ from the "original country profiles. Third, it is yet unclear to which extent immigrants and guest-students adopt the local culture and if maybe completely new (fusion) cultures emerge. Last, the aim of intercultural work should lead to a reduction of prejudices. Precasting conflicts on this level would mean to agree with and constitute stereotypes. Further research is required in this field.

5.3 ERP4students

In 2006, the University of Duisburg-Essen implemented their first of the program "erp4students". Fully basing on E-Learning, this program provides opportunities to registered university students for tutor-supported professional training in addition to or even as integral part (accounting the supposed 180 working hours as six ECTS) of their full-time studies. While the first course of erp4students exclusively was available in German language and provided to German students in the field of Information Systems Research, nowadays, students from an increasing number of countries and arbitrary fields of study have access to 13 different SAP-specific courses in up to four languages, achieve the provided highly valued certifications of our university and can even participate in the official examinations of the SAP SE.

It is yet unclear to which extent the courses could profit from a more culture-sensible design. However, language issues actually are a barrier for participation regarding both the courses and the tutorials. It could prove beneficial if the 7/24 available tutor support

could be provided from persons who actually live in the same geographical regions as the students. A very different perception of time management could lead to complications in the course completion so that preventive measures appear necessary. We currently are evaluating collected data from the past years and focus our next research phase to this particular multinational E-Learning scenario.

5.4 Open Discovery Space

With 51 partners from 20 European countries and a budget of 15.3 Million Euro, Open Discovery Space is the largest e-Learning project ever launched by the European Commission. The Open Discovery Space project started in April 2012 and is scheduled to end in September 2015. Open Discovery Space focuses on the school sector and aims to design and develop innovative learning methodologies and instruments by promoting and realizing open education. ODS opens up content by centralizing the access to different, mainly European learning content repositories, opens up learning by extending the repositories' functionalities through an own toolset that bases on self-developed solutions on teacher/school level, and additionally, opens up collaboration amongst the diverse stakeholders in the school sector through fostering the open exchange of knowledge, experiences, and educational activities. In order to achieve this goal, a central community platform has been developed and launched, which hitherto focuses and is implemented on the European level, but also can individually be implemented on school, regional, and/or national level and accessed from anywhere in the world.

Open Discovery Space clearly must be understood as a best practice example for an environment supporting culture sensible education because

- it provides an multilingual interface;
- the implemented keyword-based search functionality does uses a LOM-compatible international dictionary for key-terms and recommends educational resources in any stored language additionally to the one originally used in the search query;
- it supports group formation of virtual groups and communication on freely definable levels, locally, nationally, or across countries in any constellations of role bearers.

These features and others empower educators particularly in scenarios like school classes with extreme international character to better support their learners because in case of need, they easily can find and provide supplementary learning resources in the languages of their learners dealing with the same or similar contents like the own ones taught. This approach already works perfectly in an inclusive reference school in Germany where children with very individual special needs are to be supplied with specific learning resources. In cases of trouble on the social level and others, educators can easily get in touch with colleagues from their learners' original context through the social platform and ask for support, e.g. for sharing educational strategies. We think that the results from the Learning Culture Survey can additionally enrich the portfolio of opportunities in order to support the educators' but also the learners' understanding of cultural diversity.

6 Conclusions

Culture often is promoted as something that easily can be reduced to a small number of dimensions and basic values. As such, it is understood as a set of characteristics that apply to all people within nations in the same measure without regard of their particular life situations. Our research on educational culture of the past years revealed fundamental restrictions against such a generalization and transferability of results across educational contexts (school education, higher education, professional training). Against common practice, we additionally found that age and language influenced the culture-related perceptions of our investigated learners.

After we found that this commonly promoted concept of culture does at least not apply to the context of education [27], we had to reconstruct our understanding of culture before starting further investigations. Our currently completed longitudinal study in the context of the Learning Culture Survey provided the last missing evidence that educational culture is persistent enough on university level so that initializing an international collection of related data on a large scale actually makes sense. Further on, our quantitative results from the Learning Culture Survey questionnaire revealed appropriate to recognize, measure, and understand cultural differences in the context of education.

While we currently collect our data just in the context of traditional (face-to-face) education, we assume that the results are fully transferable to Technology Enhanced Learning; at least for learners and educators who are used to traditional forms of education and newly enter such a scenario. An extension of our studies to educational programs that exclusively offer online access is planned for the next years.

The datasets from the Learning Culture Survey enable learners and educators who are going to study and/or teach in other cultural contexts (online or offline) to start their efforts with a better understanding of the expectable peculiarities. In terms of conflict prevention, learners can adjust their initial expectations and find out about commonly accepted behavior in the targeted context (e.g., higher education in a specific country). Educators get an impression of the reasons for particular attitudes of their future learners and can develop a better understanding of their needs in terms of adopting their own accustomed teaching design (and practices) to the new conditions.

The data can also be used in the retrospective, in order to find the origins of repeatedly occurring culture-related conflicts in distinguished educational settings (possibly even resulting in higher dropout rates): On the basis of the issues considered in the Learning Culture Survey, monitored events and situations can systematically be analyzed for possible reasons (see e.g., [33]), improvement potential can be determined, and the next generation of learning design can be defined accordingly.

As for forecasting of possible educational conflicts, the approach to define cultural distance and related conflict potential on the basis of the level of acceptance is demanding but the results appear promising. However, even if one day, we will be able to determine conflict potential in specific educational settings, we will never be able to generally prevent all possible culture-related conflicts in education. We have too little understanding of additional influences and particularly, cross effects between different influence factors. Anyways, for specific situations and constellations, we eventually

are/will be able to estimate where culture-related conflicts are likely to emerge. Further research is required on this issue and planned for the next years.

The results of our longitudinal study indicate that, on faculty level, the LCS reflects the students' reaction on changes in their own learning environments. We have the intention to investigate to which extent this finding could reveal helpful in the context of impact management and quality management.

7 Next Steps and Call for Contribution

With our questionnaire our and hitherto achieved understanding of educational culture, we are able to conduct standardized investigations regarding particular issues in different national and educational contexts and compare found results across contexts. We yet lack the understanding to explain (in detail) the reasons for found results. For this purpose, additional qualitative investigations need be implemented as follow-ups. We are currently developing standardized methods that enable us not only to pointedly investigate reasons for certain cultural perceptions and attitudes of learners but which additionally are similar enough to lead to results that eventually are comparable across contexts.

We are constantly extending our database and looking for opportunities to conduct the LCS in further educational contexts. Our long-term aim is to develop and provide an open database on educational culture. This database shall support both educators and learners all over the world to better understand other contexts' educational cultures. Such an understanding is essential, particularly when having to cope with the demands of culture-sensible education in international classrooms or with too highly or wrongly set expectations.

However, for that purpose we need a lot more reliable data from all over the world. Hence, we would like to invite other researchers and educational institutions to take part and contribute to the Learning Culture Survey.

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