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## **Organizational Culture and Goal System in a German state University**

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### **Purpose:**

With the aspiration to create the European Higher Education Area (Bologna process) and with the amendment of the German university law, universities were asked to set own goals and to develop strategies for reaching these goals.

At universities, however, there are different personal groups (stakeholders) working on different tasks and goals: students, professors, research assistants as well as various groups of non-academic staff from study administration to cleaning and maintenance services.

This doctoral thesis raises the question of detecting both the system of goals and students' as well as staffs' perceptions of organizational culture at a German university for the first time. The differentiation between interest groups is limited due to data protection. For legal reasons only three groups can be distinguished: students, academic staff and non-academic staff.

### **Design:**

The author conducted a quantitative research designed to assess subcultures within a complex organization and their relation to the strategic goal system. The perception of organizational culture was measured with Hofstede's six Practices-Dimensions. The perceived goals were measured with newly developed, literature based, constructs.

Primary data analysis techniques employed by this study were descriptive statistics, analysis of variance (ANOVA) and correlation analysis. To test reliability Cronbach's alpha coefficients were computed for all scale data and compared with those reported by Bös (2009).

### **Major Findings:**

The quantitative feedback of 1,773 stakeholders of a German state University was analyzed. The different stakeholder groups, students, academic staff and non-academic staff have different perceptions of goals and different perceptions of organizational culture. There is a statistically verifiable link between perception of goals and perceived organizational culture.

### **Research limitations/implications:**

The goals are limited to the primary goals of university: research and education. It is important to note that this study involves only internal stakeholder groups in a single University.

### **Practical implications:**

This study provides practical information for professionals in higher education management and development. With replications one can study cultural effects and strategy change in the dynamically changing system of European higher education.

### **What is original/ what is the value of the paper?**

This study suggests a holistic approach when researching into higher education, and to investigate into the cultural effects at the group level.

### **Keywords:**

Organizational Culture, Subculture, Hofstede, strategic goals, Higher education

## **Introduction**

The cultural perspective in higher education and other knowledge creating institutions particularly in relation to goal-setting processes and strategy formation has been largely neglected. Although increasing attention devoted to these topics (Becher, 1981; Clark, 1983; Harman 1989; Hanft, 2000; Müller-Böling, 2007; Pellert, 1999; Sporn 1996), there is still a lack of empirically-based research work. During the literary research in a university context it was striking that ‘strategies’ and ‘organisational culture’ were hardly examined in the German specialist journals ‘Die Hochschule’, ‘DUZ Deutsche Universitätszeitung’ und ‘Hochschulwesen’ in contrast to journals in the Anglo-Saxon area, namely in ‘Journal of Higher Education’, ‘Higher Education’ and ‘Higher Education Quarterly’. The more ruling debate in German-language specialist journals is coined by topics in the field of ‘Hochschulreform’ (university reform). Literary research gives rise to the supposition that the relationship between organisational culture and goals has merely been explored but will increasingly gain relevance in scientific literature. This research paper aims at contributing to the closure of this gap in research.

Europeanization and internalization are important trends in German higher education. Since the amendment of the German university law ‘Hochschulfreiheitsgesetz’ and the introduction of the Bologna Process, universities are undergoing deep reforms to create a European area of higher education. Main goals are the achievement of more compatibility, comparability of the systems of higher education, mobility (students, academic staff and non-academic staff) and an increase in the international competitiveness of the European system of higher education. Historically, the competition perspective has played no role in German universities because the funding of research and teaching was paid by public taxes. The state provided the budgets through input orientation by the ‘Kameralistik-System’ and controlled by state bureaucracy. Now, the goals of budgeting have moved to output-oriented block grants by the ‘Globalhaushalt’, which is linked to mission-based goal agreements (e.g. number of students who completed their programme in minimum time, number of successfully completed doctoral thesis) and autonomous control by the university. Universities were asked to set own goals and derive goal-oriented strategies to deal with the challenges they face. Unfortunately, universities tend to neglect the cultural view and the inclusion of stakeholder group considerations in strategic formation processes. Cultural variety and the perceptions of strategic goals have received only minor attention in higher education yet.

## **Organizational Culture**

The realm of organizational culture is an interdisciplinary research field and has its roots in anthropology. Anthropology, psychology, economic sciences and sociology are among the scientific disciplines (Denison and Mishra, 1995). The term ‘organizational culture’ was first mentioned in the US-journal *Administrative Science Quarterly* (Pettigrew in 1979) and found its way into management literature. There has been an intense debate ever since the early 1980s. (Deal and Kennedy 1982; Hofstede, 1980; Ouchi, 1981, Pascale and Athos, 1981; Peters and Watermann, 1982, Schein, 1983) that can be explained by the success of Japanese companies over US-companies. Cultures manifest themselves, from superficial to deep, in symbols, heroes, rituals and values. Values and norms are the invisible manifestations of culture (Denison and Mishra, 1995; Schein 1985). Practices are visible part of culture (Cooke and Laferty, 1989; Hofstede et al., 1990), the symbolic role of organizational behavior as behaviour-influencing symbols. (Peters, 1978; Dandridge, Mitroff and Joyce, 1980; Pondy 1978). Approaches to organizational culture can be classified (Dauber, Fink and Yolles, 2012) into dimensions approaches (Hofstede et al. 1980, 1990, 1998; Sagiv and Schwartz 2007), interrelated approaches (Schein 1985; Hatch 1993) and typology approaches (Cartwright and Cooper, 1993). The dimensions approach, which is the basis of this study, is one of the most prominent approaches to cultural constructs and based on the quantitative measurement of organizational culture.

Cultural differences refer to several levels of analysis: nations, industries, organizations, groups etc. (Fink and Mayrhofer, 2009). The most popular dimensional studies in the field of organizational culture are those of Hofstede et al. (1980, 2001), Hofstede et al. (1990, 1998), House et al. (2004) and Sagiv and Schwartz (2007). Hofstede et al. (1990) found significant differences between organizational culture and national culture. This model is one of the most cited models in organizational culture literature. The model of organizational culture is based on Hofstede’s first study

on cross-national culture differences (Hofstede 1980, 2001). He identifies different national cultures in one company across many countries. He found that differences in values results from nationality, but the study does not reveal anything about the company's corporate culture. The dimensions of national culture (power distance, individualism, masculinity vs. femininity, uncertainty avoidance, long-term vs. short-term orientation) proved to be not suitable for comparing organizations within the same country.

The model of cross-organizational culture, which is the basis of this study, was developed by Hofstede, Neuijen, Ohayv and Sanders (1990). The research was carried out under the auspices of the Institute for Research on Intercultural Corporation (IRIC) and took place from 1985 – 1987. Based on the cross-national study data Denmark and the Netherlands show similar results regarding on the national culture dimensions and were chosen for the study on organizational culture. The major outcome of their study was a six bipolar dimensional model of organizational culture of perceived practices based on underlying nation-related values. The dimensions were derived from a large set of interviews and were tested by questionnaire ('P' stands for practices): 'P1 process-oriented versus results-oriented' opposes a concern with means (process-oriented) to a concern with goals (result-oriented), 'P2 employee-oriented versus job-oriented' opposes a concern for people (employee-oriented) to a concern for getting the job done (job-oriented), 'P3 parochial versus professional' opposes units whose members derive their identity largely from the organization (parochial) to units in which people identify with their type of jobs (professional), 'P4 open system versus closed system' describes the communication climate, 'P5 loose versus tight control' refers to the degree of internal structuring which affects behaviour and 'P6 normative versus pragmatic' deals with aspects of customer orientation. They concluded that organizational culture differs at the level of practices, whereas national culture differs mainly at the deeper level of values. The differences between national culture and organizational culture can be explained by the different places of socialization. While values are acquired in early youth, the practices are learned through socialization at the workplace which people enter as adults. By contrast of Peters and Waterman (1982) which found the values as the core of organizational culture, the IRIC study proposes the perceived practices as the core of organizational culture. Sagiv and Schwartz' (2007) model of culture is based on theoretical considerations. They argue that organizational culture is influenced by the 'surrounding society', 'personal value priorities of organizational members' and 'the nature of the organization's primary tasks'. The model has only three dimensions which explain the influence of national values of organizations: 'Hierarchy vs. Egalitarianism', 'Mastery vs. Harmony' and 'Embeddedness vs. autonomy (intellectual and affective autonomy)'. They emphasize the embeddedness of organizations within societies. Hofstede et al. (1990) emphasize the national influence on behaviour within organizations. Both models have great impact on cultural research and are the basis of many other studies (e.g. House et al., 2004). Based on the findings of Sagiv and Schwartz (2007) Germany belongs to the west European cultural region. The culture of these countries emphasizes 'Intellectual autonomy', 'Egalitarianism' and 'Harmony' more than any other world cultural region. It is the region lowest on 'Hierarchy' and 'Embeddedness' (2007, p. 180).

Organizations have cultures but parts of organizations may have distinct subcultures (Hofstede, 1998, p.1). Subcultures can be studied at the level of entire organization, a functional unit (such as marketing, finance, etc), a hierarchical level (such as management, middle-management, workers) or a work group. Van Maanen and Barley (1985, p. 35) define subcultures as 'a subset of an organization's members who interact regularly with one another, identify themselves as a distinct group within the organization, share a set of problems commonly defined to be the problems of all, and routinely take action on the basis of collective understandings unique to the group'. In a later research study on organizational subcultures in a Danish insurance company (3,400 employees from all levels) with professional support from IRIC Hofstede (1998) identifies three subcultures: professional subculture, administrative subculture and customer interface subculture. On the 'P1 process vs. result oriented' dimension the customer interface subculture scores to the results oriented side; the administrative subculture scores to the process oriented side; the professional subculture is in the middle. On the 'P2 employee-oriented vs. job-oriented' dimension all three subcultures score employee-oriented, but the customer interface subculture scores most and the professional subculture least employee-oriented. On 'P3 parochial vs. professional', all three score parochial, but the professional subculture obviously

scores the least parochial. On 'P4 open system vs. closed system' dimension all three subcultures score quite open but the customer-interface culture scores less open than the two others. On 'P5 loose control vs. tight control' dimension all three subcultures score very loose. On 'P6 normative vs. Pragmatic' all three score to the pragmatic side but the professional subculture is the most pragmatic (Hofstede 1998, p. 8 – 9).

### **The cultural view in context of higher education**

The cultural analysis in context of higher education began in the 1960s (Clark and Trow, 1966). However, the cultural perspective in higher education research expanded in the 1980s (Allaire and Firsirotu 1984; Denison 1990; Weick 1976). The organizational culture of universities is shaped by different influences. Within universities culture is influenced by its history (Clark 1970), its leadership (Schein 1983, 1985, 1990) and its subcultures (Hofstede 1990, 1998, Van Maanen and Barley, 1985). Faculties and administration units can be interpreted as subcultures (Tierney, 1988). Conflicting orientations of faculty and administration subculture were analyzed in a professional bureaucracy (Etzioni, 1964; Mintzberg, 1980). Faculty cultures are shaped by disciplinary identities as cultural groupings (Becher 1981; Becher and Trowler, 2001). In a three-nation study Henkel (2000, p. 23 – 24) analyzes how reform policies and structural changes affect the working lives, values and identities of higher education institutions from the perspective of academics of different disciplines. Sporn (1996, p.43) states that 'universities are a conglomerate of autonomous subunits with loose links and a high degree of specialism in the disciplines'. The hierarchical positions within universities, professors, assistant-professors, and administrators form subcultures (ibid, 1996, p. 51). Silver (2007) analyzes the perception of 'cultural reality' in five universities from the perspective of academic staff. He finds it more difficult to apply the concept of organizational culture to universities 'than applying it to more 'closed' or 'total' institutions whose population may be relatively more homogeneous' (2007, p. 166). Academic staff are more committed to their discipline. Following Clark (1983) Harman (1989) analyzes 'the different cultural worlds of senior members of the academic staff' and detects clusters of subcultures. Taylor (1999, p.77) agrees with McNay's (1995) 'university culture' (Collegial, Enterprising, Bureaucratic, Corporate), that universities are not mono-cultural.

Based on this brief overview of literature on organizational culture and organizational culture in context of higher education it is supposed that university culture is not unitary. It is assumed that universities are composed of multiple subcultures that co-exist and interact with each other, while each subculture has its distinct set of values, norms and work practices. These assumptions are supported by the interpretation of universities' organizational structure.

### *Organizational structure*

The organizational structure in universities can be interpreted as 'Loosely coupled systems' (Weick, 1976), 'Organized Anarchy' (Cohen, March and Olsen 1972), 'Professional Bureaucracy (1980)'. In addition, Harman (1989) identifies universities 'as normative organizations', 'as Establishment', Weick (1976) develops the model of 'loosely coupled systems' in his research on education systems and intends to 'convey the image that coupled events are responsive, but that each event also preserves its own identity and some evidence of its physical or logical separateness.' He emphasizes fragmentation of heterogeneous organizational subunits which are somehow attached. The manifestations of 'Loosely coupled systems' are a relative lack of coordination, relative absence of regulation and highly connected networks with very slow feedback times. Mintzberg (1980) suggests a typology of five basic configurations: simple structure, machine bureaucracy, professional bureaucracy, divisionalized form, and adhocracy. The elements of organizational structuring include five basic parts of the organization: 1. operating core, 2. strategic apex, 3. middle line, 4. techno-structure, and 5. support staff. The structure 'professional bureaucracy' is typically found in complex but stable environments (e.g. universities, insurance companies). The key characteristic is a highly decentralized structure, both in the vertical and the horizontal, but minimally formalized and with a thin middle-line. 'The organization hires highly trained specialists –called professionals– in its operating core and then gives them considerable autonomy in their work. In other words, they work relatively freely not only of the administrative hierarchy but also of their own colleagues.' Professionals in the large operating units, which are the key component of this structure, tend to defend their autonomy how to carry out the task related to research and teaching against the strategic

apex. The strategies are mainly developed by the professionals. The coordinating mechanism is the standardization of skills. The complex work and output of the professionals cannot be formalized and standardized. That is the reason why the techno-structure is minimal in this configuration. The support staff, however, is elaborated. The tasks are simpler and more routine. Cohen and March (1972) base their 'garbage can of organizational choice' theory of organized anarchies on three key assumptions: problematic preferences, unclear technologies and fluid participation. 'One class of organization which faces decision situations involving unclear goals, unclear technology, and fluid participations is the modern college or university' (Cohen and March, 1972, p. 11). They emphasize that these key characteristics are conspicuous in public and educational organizations. A decision process often results in contradictions. These contradictions are, for example, central vs. decentral decision making, relative teaching priority vs. relative research priority, academic freedom vs. employability, institutional autonomy vs. state control, institutional autonomy vs. individual autonomy, etc.

The interpretations of organizational structure presented above illustrate the complexity of the organizational structure, unclear goals and goal preferences. The different structures giving rise to different cultural forms are those pertaining students, members of academic staff and members of non-academic staff. These different internal personnel groups, which are in the focus of this study, work with different tasks and goals in the organizational structure of universities.

### *Tasks and Goals*

Academic members conduct lectures and seminars, manage teaching and research, transfer knowledge into education and the scientific community, mentor students, conduct administrative functions (e.g. as deans, presidents), conduct consulting functions (e.g. advising government) etc. Non-academic members conduct administrative tasks, supporting tasks in research and education, maintenance services etc. Students participate in lectures and seminars, co-produce knowledge (e.g. as assistants in research projects), tutor, etc. The primary tasks 'research and education' are attained through the contribution of all related interest groups. Freeman (1984) defines an interest group as a stakeholder group which is "any group or individual who can affect or is affected by the achievement of the organization's purpose". Stakeholder groups can be distinguished in internal (e.g. students, academic and non-academic members) and external stakeholder groups (e.g. state, society, cooperating companies, alumni). Stakeholder groups achieve direct influence through formal hierarchy, authority of leadership, specialist knowledge etc. Indirect influence may be achieved through political status or informal influence through links with other groups. The level of importance, given by the university to the stakeholder group, needs and interests is a key to the success of long-term goals and goal-oriented strategies. Chandler (1962) defines strategy "as the determination of the basic long-term goals and objectives of an enterprise, and the adoption of courses of action and the allocation of resources necessary for carrying out the goals". Structure is 'the design of the organization through which the enterprise is administered' (ibid, 1962, p. 14). Strategy influences and is influenced by organizational structure. It is supposed that organizational culture specifies the universities goals and it is oriented to legitimating practices. A subcultural level of analysis was chosen because it is necessary to ascertain what sources of goal systems the three stakeholder groups perceive to be important when assessing goal-system-relevant issues.

In the current debate 'institutional profile' 'marketization' 'competition' are some of the most discussed terms in German higher education (Habicht, 2009; Hanft, 2000; Küpper, 2009; Müller-Böling, 2007; Pausits 2005; Pellert, 1999). Universities have to mobilize their own resources by imposing a certain degree of direction and purposiveness. They are asked to set own goals and to develop strategies for reaching these goals. It is questioned which goals should be set and what weight should be given to them as basis of a systematic goal-preference structure in a university goal-system.

Mertens (2010) argues possible goals of a university. In particular, he questions how a good university teacher should be assessed in the future. It is questioned which orientation (research or education or both?) is given a higher strategic status, while both aspects of the role of a university teacher are valuable. He presents ten criteria for assessing the skills of teachers and researchers at universities: 1. Teaching and supervising students, including obtaining traineeships at home and abroad, 2. Development of textbooks and other teaching materials, 3. Research and knowledge transfer into the

scientific community (through congress publications and journal publications), 4. Research and knowledge transfer into practice (through lectures, cooperation projects, patents, licences), 5. Research and knowledge transfer into politics and society (through participation in committees, political consulting, media coverage), 6. Location promotion, support in the formation of enterprises ('spin-offs') and its use for the education of students, 7. University self-administration, 8. Self-administration in the scientific committee (expert testimony, editors in journals), 9. Mentoring of young academics, 10. Acquisition of third-party funds. With regard to reward systems it is questionable what stress should be laid on each goal. Mertens (2010) concerns the status of teaching which higher education institutions give to teaching as an activity in view of reward programs and in hiring academic staff. The Bologna Declaration (1999) has an impact on universities' educational and teaching goals. Every second year, ministers responsible for higher education in the 46 Bologna countries meet to set priorities for action and measure progress (Prague, 2001; Berlin, 2003; Bergen, 2005; London, 2007 and Leuven/Louvain-La-Neuve, 2009). The ministers met in Budapest and Vienna (2010) to officially launch the European Higher Education Area. The main goals of this process were conducted in this study to derive a preference-goal-structure: 1. Comparability of the systems of higher education, 2. Mobility of students, academic staff and non-academic staff, 3. Broad participation of students in curriculum development, 4. Entrepreneurial activities, 5. Interdisciplinarity in research and education, 5. Social skills, 6. Cultural skills, 7. Mentoring of young academics, especially in doctoral programs, 9. Employability, 10. Partnership-based relationship between institution and students, 10. Innovative teaching and studying forms. Both the goals as presented by Mertens (2010) and the goals set in the Bologna process point out that the university goal-system is multi-faceted. There could no approach be identified by which current goals could be measured and set in relation to the perceived practices (Hofstede et al. 1990, 1998).

The brief review of literature shows differences in the methodologies to measure organizational culture. It reflects a lack of agreement in defining the phenomena. This problem of defining derives from the concept of organization culture itself, which is ambiguous. Organizational culture is often treated from a static point of view (Dauber, Fink, Yolles, 2012). Despite the absence of a common view, most researchers agree that organizational culture plays an essential role in analyzing organizations in various contexts. There has been no holistic approach traceable which sets the goal system in relation to organisational culture. To contextualize the empiric findings of this research paper the 'generic model of organizational culture' is suitable; this model has not been subject to detailed empiric research so far.

### **Generic Model of Organizational Culture**

Dauber, Fink and Yolles (2012) propose a dynamic model for analyzing organizational culture. The 'Configuration Model of Organizational Culture' explores the dynamic relationship between organizational culture, strategy, structure, and operations of an organization (internal environment) and maps interaction with the external environment (task and legitimization environment). The model distinguishes between 'domains' and 'processes'. Domains belong to certain constructs (e.g. organizational culture, strategy and operations). Processes link these elements of a model to each other and explain the relationship between them. The generic model of organizational culture is based on an extended literature review. The three-layered model (artifacts, espoused values and basic assumptions) of Schein (1985), which is extended by Hatch (1993) through adding a fourth domain called 'symbols' and linking the layers through processes, are the basis for this model. By conflating these approaches a more comprehensive model of organizational culture was achieved, which explains the dynamic relationships between the domains. These are the major features of this newly developed model. There is still fieldwork needed to evaluate the proposed relationships. This recently developed model is chosen as reference and will be adapted in this study because the model meets the conditions of representing a whole system in case of organizations. It can be used to compare different perceptions of academic staff (as a group), non-academic staff (as a group) and students (as a group) in a state university. The practices dimensions (Hofstede et al. 1990, 1998) represent the phenomenological domains 'structure' and 'operations' of the generic model of organizational culture. Operations are the observable manifestations of pre-defined strategies as regulated by organizational culture. Structures are the manifestation of strategic orientations and regulate patterns of behaviour. Level of hierarchy and control can be identified in this domain. Both domains refer to 'artifacts' (Schein, 1985). The

strategic goals refer to the 'strategy' domain. Schein (1983) concludes that 'espoused values' (e.g. strategy) have an impact on 'artifacts' which, in turn, influences 'espoused values'. This research paper closes a gap by investigating the goal system of an organization and explicitly setting it in relation to the practices (i.e. dimensions of Hofstede et al. 1990). It is presumed that subcultures exist within a university (students, academic staff, non-academic staff) and have their own autonomous identity-giving objective and perception of practices. Connections between goals and practices within the different groups are subject to assumption. The major assumptions in this study are:

A1: Students, Academic members and non-academic members show significant differences in organizational 'process orientation versus result orientation' at which the non academic members perceives the organizational culture more process oriented and the academic members and students to more result- oriented.

A2: Students, academic members and non-academic members show significant differences in organizational 'employee-orientation versus job-orientation' at which the non-academic members perceive the organizational culture more job-oriented and the academic members and students more employee-oriented.

A3: Students, academic members and non-academic members show significant differences in organizational 'parochial versus professional' at which the non-academic members perceive the organizational culture more parochial and the academic members and students more professional.

A4: Students, academic members and non-academic members show significant differences in organizational 'open system versus closed system' at which the non-academic members perceive the organizational culture more closed system and the academic members and students as more open system.

A5: Students, academic members and non-academic members show significant differences in organizational 'loose control versus tight control' at which the non-academic members perceive the organizational culture more tight controlled and the academic members and students more Loose controlled.

A6: Students, academic members and non-academic members show significant differences in organizational 'normative versus pragmatic' at which the non-academic members perceive the organizational culture more normative and the academic members and students more pragmatic.

A7: Students, academic members and non-academic members show significant differences in perception of education goals at which the non-academic members perceive educational goals more important than academic members and students.

A8: Students, academic members and non-academic members show significant differences in perception of research goals at which the non-academic members perceive research goals more important than academic members and students.

A9: The stronger the organizational culture is perceived as result-oriented, the higher the importance of educational goals.

A10: The stronger the organizational culture is perceived as result-oriented, the higher the importance of research goals.

A11: The stronger the organizational culture is perceived as employee-oriented, the lower the importance of educational goals.

A12: The stronger the organizational culture is perceived as employee-oriented, the lower the importance of research goals.

A13: The stronger the organizational culture is perceived as closed system, the stronger the importance of educational goals.

A14: The stronger the organizational culture is perceived as closed system, the stronger the importance of research goals.

These assumptions were tested with the following research design.

## Method

In this study an empirical quantitative research was conducted at a German state university with 10,714 members. The empirical part in this study is based on an online (data collection tool: Evasys) and hard copy questionnaire, which was pre-tested before implementation. The hard copy version was used to avoid response bias. The Practices dimensions of organizational culture and the literature based newly developed constructs are the basis in this study. To measure the perception of practices the six bipolar dimensions of Hofstede et al. (1990) were applied (41 items): P1 process-oriented vs. result-oriented, P2 employee-oriented vs. job-oriented, P3 parochial vs. professional. P4 open system vs. closed system, P5 loose control s. tight control, P6 normative vs. pragmatic. To avoid cultural bias and item bias the translated practices questionnaire of Bös (2009) was adapted. The operationalization of the goal constructs ‘research-related goals’ (6 items) and ‘education-related goals’ (13 items) are based on Mertens (2010), Bologna-Declaration (1999), Communiqués of the Meetings of European Ministers in Prague, 2001; Berlin, 2003; Bergen, 2005; London, 2007 and Leuven/Louvain-La-Neuve, 2009. The answering possibilities on the 6-point Likert scale range from 1. ‘strongly disagree’, 2. ‘disagree’, 3. ‘slightly disagree’, 4. ‘slightly agree’, 5. ‘agree’, and 6. ‘strongly agree’. To avoid further response bias an anonymous responding was preferred.

## Data analysis and strategies

The data were analyzed on three levels: first to confirm the existence of the organizational subculture, second to identify the perception of organizational culture and importance of educational and research goals within each subculture; and third to analyze similarities and differences in organizational culture among the subculture in relation to their perception of educational and research goals (applied tool for analyzing data: SPSS, version 19). The primary data analysis techniques employed by this study are descriptive statistics, reliability test, analysis of variance (ANOVA) and correlation analysis. Descriptive analysis was used to gauge the consistency within the stakeholder groups. These statistics include the standard deviation and means. To test reliability of the data Cronbach’s Alpha coefficients (Cronbach 1951) were computed for all of the scale data and compared with those reported by Bös (2009). This statics provides an indication of the average correlation among all the items that make up a scale. Values range from 0 to 1. Higher values indicate greater reliability. In this study the minimum level of  $\alpha \geq .60$  is accepted. For further analysis only those constructs can be taken into consideration that are applicable to two of three groups ( $\alpha \geq .60$ ) and thus allow for comparison. Unfortunately, Cronbach’s Alpha values of the original IRIC-Study have never been published. One-way ANOVA is used to test for differences between several independent groups. Kruskal-Wallis analysis of variance is the nonparametric counterpart of ANOVA. If data violate the assumptions of ANOVA (e.g. heterogenic variances), then the Kruskal-Wallis test will be used to avoid the problem. The homogeneity of variances was tested by the Levene’s test. Normality was tested by Kolomogorov-Smirnov. To avoid further item bias the term ‘organization’ is replaced by ‘university’, ‘leader’ through by ‘professor’, ‘unit’ by ‘faculty’. To avoid method bias (Van de Vijver and Tanzer, 1997) clear instructions for answering the items are given to increase the familiarity with the used response procedure. This is particularly necessary for the bipolar practices items. The relationships between perceived practices and goal constructs were tested by using Pearson’s Correlation (1-tailed). The assumptions were tested at a significant level .05. The bipolar, interval-scaled practices dimensions were ‘poled to the right’. Higher scores indicating ‘P1 results-oriented’, ‘P2 job-oriented’, ‘P3 professional’, ‘P4 closed system’, ‘P5 tight control’ and ‘P6 pragmatic’.

## Results

The main study was carried out from November 1<sup>st</sup> to December 15th 2010. The quantitative feedback of 1,773 members of a German state university was analyzed, 83.7 % preferred the hard copy version and 16.3% the online questionnaire.

**Table 1: Response rate**

	Members Total	Respondents	Respondents in %
Students	10,000	1,483	14.83
Academic Workers	436	139	31.88
Non-Academic Workers	278	102	36.69
Missing Values		49	2.76
<b>Total</b>	<b>10,714</b>	<b>1,773</b>	<b>16.55</b>

Three of six Hofstede practice dimensions could be replicated. Poor consistency was found on Hofstede's dimension 'P3 parochial vs. Professional', 'P5 loose control vs. tight control' and 'P6 normative vs. Pragmatic'. Good consistency was found on 'P1 process-oriented vs. result-oriented', 'P2 employee-oriented vs. job-oriented' and 'P4 open system vs. closed system'.

**Table 2: Cronbach's Alpha: Practices Dimensions and strategic Goal constructs**

Construct	Number of Items	Author (2010)	Bös (2009)
P1. process-oriented vs. result-oriented	12	.705	.867
P2. employee-oriented vs. job-oriented	9	.662	.794
P3. parochial vs. professional	5	.029	.290
P4. open system vs. closed system	6	.603	.624
P5. loose control vs. tight control	4	.381	.398
P6. normative vs. pragmatic	5	.209	.382
Z1. education related goals	13	.840	-
Z2. Research related goals	6	.797	-

Three of six of Hofstede et al. (1990, 1998) dimensions did not reach the pre-determined reliability perimeter of ( $\alpha \geq .60$ ) and were thus not suitable for the derivation of valid insights. Optimizing attempts to increase Cronbach's Alpha coefficients significantly by eliminating one or more items remained unsuccessful. Hence, these dimensions were no longer taken into consideration during further analysis. Therefore, the assumptions A3, A5 and A6 were not confirmed. The different perceptions of organizational culture and goals should be tested with ANOVA. Two assumptions have to be tested before conducting the ANOVA. The Levene's test was significant ( $p < .05$ ), indicating that the group variances are not equal. The Kolomogorov-Smirnov test was significant ( $p < .05$ ), indicating that the normality assumptions were violated. The null hypotheses were defensible.

**Table 3: Results of Levene's Test**

	Levene-Statistic	df1	Significance
<b>p1</b>	32,423	2	,000
<b>p2</b>	32,329	2	,000
<b>p4</b>	29,005	2	,000
<b>z1</b>	6,254	2	,002
<b>z2</b>	4,535	2	,011

Although these data were not normally distributed and the groups show heterogeneous variances, the admissibility of a comparison of the construct average value could be established by the Central Limit theorem ( $N > 30$ ). To substantiate this test without distribution assumptions the Kruskal-Wallis test was conducted with significant results ( $p < .01$ ).

**Table 4: Kruskal-Wallis Test**

	p1	p2	p4	z1	z2
Chi-Quadrat	53,404	54,103	51,025	64,579	68,327
Df	2	2	2	2	2
Asymp. Sig.	,000	,000	,000	,000	,000

a. Kruskal-Wallis-Test, b. Group variable: I am:

The different stakeholder groups, students, Academic members and Non-academic members have different perceptions of strategic goals and different perceptions of practices.

**Table 5: Assumptions and results of group perceptions of Practices and strategic Goals (Means)**

Assumptions	Students $\bar{X}_1$	Academic members $\bar{X}_2$	Non-Academic members $\bar{X}_3$
A1: Students, academic members and non-academic members show significant differences in organizational 'process orientation versus result orientation' at which the non-academic members perceive the organizational culture more process-oriented and the academic members and students more result-oriented. (supported)	3,90	4,22	3,68
A2: Students, academic members and non-academic members show significant differences in organizational 'employee orientation versus job orientation' at which the non-academic members perceive the organizational culture more job-oriented and the academic members and students more employee-oriented. (supported)	3,58	3,44	4,16
A4: Students, academic members and non-academic members show significant differences in organizational 'open system versus closed system' at which the non-academic members perceive the organizational culture as more closed system and the academic members and students more open system. (supported)	3,01	2,90	3,64
A7: Students, academic members and non-academic members show significant differences in perception of education goals at which the non-academic members perceive educational goals more important than academic members and students. (supported)	4,57	4,83	5,09
A8: Students, academic members and non-academic members show significant differences in perception of research goals at which the non-academic members perceive research goals more important than academic members and students. (supported)	4,12	4,44	4,68

There is a statistically verifiable link between perception of goals and perceived practices, which was tested with Pearson's correlation (1-tailed).

**Table 6: Relationships between practices dimensions and goal constructs**

Assumptions	Students	Academic members	Non-Academic members
A9: The stronger the organizational culture is perceived as result-oriented, the higher the importance of educational goals. Org. Level (N=1.773) A9 is supported (r=.221, p<0,01).	Supported r=.275 p<0,01	Not supported r=.132 p>0,05 p=.062	Not supported r=-.172 p<0,05
A10: The stronger the organizational culture is perceived as result-oriented, the higher the importance of research goals. Org. Level (N=1.773) A10 is supported (r=.126, p<0,01).	Supported r=.149 p<0,01	Not supported r=.135, p>0,05 p=.058	Not supported r=.108 p>0,05 p=.140
A11: The stronger the organizational culture is perceived as employee-oriented, the lower the importance of educational goals. Org. Level (N=1.773) A11 is supported (r=.099, p<0,01).	Supported r=-.176 p<0,01	Supported r=-.209 p<0,01	Not supported r=.426 p<0,01
A12: The stronger the organizational culture is perceived as employee-oriented, the lower the importance of research goals. Org. Level (N=1.773) A12 is supported (r=-.095, p<0,01).	Supported r=-.139 p<0,01	Supported r=-.219 p<0,01	Not supported r=.098 p>0,05 p=.164
A13: The stronger the organizational culture is perceived as closed system, the stronger the importance of educational goals. Org. Level (N=1.773) A13 is supported (r=-.135, p<0,01).	Not supported r=-.222 p<0,01	Not supported r=-.226 p<0,01	Supported r=.444 P<0,01
A14: The stronger the organizational culture is perceived as closed system, the stronger the importance of research goals. Org. Level (N=1.773) A14 is supported (r=-.104, p<0,01).	Not supported r=-.148 p<0,01	Not supported r=-.243 p<0,01	Not supported r=-.152 p>0,05 p=.063

In the current status of the research work the first results indicate a statistical relation of Hofstede et al. (1990, 1998) practice dimension with the newly developed goal constructs.

### **Limitation**

Although this is a study of a single German state university which limits the results' generalizability, it makes several contributions by shedding light on the complexity of culture. It is important to note that this study involves only internal stakeholder groups of a single university. The integration of external stakeholder groups and comparable further universities would put further importance to this topic. A further limitation of this study is that the reference to possible national values that can influence the organization and its members will not be investigated. This remains a task for future research. The limitation suggests that the statements which can be made in this paper may not necessarily be valid for universities in the USA which are higher in 'mastery'. The analysis of Sagiv and Schwartz (2007) allow the conclusion that, for example, the results of surveys on the role of goal systems carried out in the USA are not necessarily valid for Germany. In the US culture 'mastery' rates high; this might hint at the importance of formalized goals. In Germany, 'Intellectual autonomy' plays an important part. Objectives that might challenge this 'intellectual autonomy' are most probably condemned to failure.

### **Discussion**

This study indicates that three stakeholder groups have significant differences in the manner in which they experience strategic goals and practices. The goals were perceived and weighed differently by students, academic members and non-academic members. Academic members and non-academic members ascribe more importance to the educational goals and the research goals than the students. The academic members are possibly measured against these goals; this might be the reason why they give more weight to these goals than the students. Hofstede et al (1990, 1998) practices were also perceived differently by students, academic members and non-academic members. Students and academic members score more employee-oriented, results-oriented and perceive organizational practices as open system. Non-academic members score more process-oriented, job-oriented and perceive practices as closed system. The dimensions 'P3 parochial vs. Professional', 'P5 loose control vs. tight control' and 'P6 normative vs. Pragmatic' could not be replicated. The cause might possibly be the sample, sample size, cultural limitation and the point in time of the implementation. Possibly, these dimensions are no longer contemporary and indicators should be used which can meet the perceived requirements of the practices of today's working world. In the current status of the research work the first results indicate a statistical relation of Hofstede et al. (1990, 1998) practice dimension with the newly developed goal constructs. Different subcultural orientation gives insight on the impact of the shaping of the goal perceptions which are influenced by the perceived practices and vice versa (Dauber, Fink and Yolles, 2012). The derivation of a long-term strategy resulting from multiply goals will possibly be influenced by different cultures of perception.

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