8th European Quality Assurance Forum

21 – 23 November 2013

University of Gothenburg, Sweden

Working together to take quality forward

Paper proposal form

Deadline 2 August 2013

Please note that all fields are obligatory. For a detailed description of the submission requirements and Frequently Asked Questions please consult the Call for Contributions.

Author(s)	
Name:	**Dr. Christine Sattler (Presenting Author)**
Position:	**Academic Assistant & Project Coordinator**
Organisation:	**Department of Industrial and Organizational Psychology, Heidelberg University**
Country:	**Germany**
E-mail address:	**christine.sattler@psychologie.uni-heidelberg.de**
Name:	**Katja Götzen**
Position:	**Research Assistant**
Organisation:	**Department of Industrial and Organizational Psychology, Heidelberg University**
Country:	**Germany**
E-mail address:	**katja.goetzen@psychologie.uni-heidelberg.de**
Name:	**Prof. Dr. Karlheinz Sonntag**
Position:	**Vice-rector for Quality Management & Project Manager**
Organisation:	**Department of Industrial and Organizational Psychology, Heidelberg University**
Country:	**Germany**
E-mail address:	**karlheinz.sonntag@psychologie.uni-heidelberg.de**

(If there are several authors, please copy and fill in the fields for each author. Please also indicate which author will be responsible for presenting the paper at the Forum.)
If you are submitting a paper or workshop proposal, please do not register for the event online until the results of the selection process have been announced. Each selected paper and workshop at EQAF 2013 will benefit from one reduced fee, which will be applied through a special registration process.

Proposal

Title:

Assessment of Quality Cultures in Higher Education Institutions
– First Results from the heiQUALITY Cultures Project –

Abstract (150 words max):
The implementation of quality assurance and quality development procedures constitutes one of the major challenges in the management of higher education institutions (HEIs). In this context the term *quality culture* has gained increasing attention. Quality culture refers to an organizational-psychological perspective, which focuses on shared values and commitment towards quality among HEI members. In spite of its ascribed significance, the empirical assessment of quality culture has hardly been addressed systematically so far.
This paper summarizes first results of the *heiQUALITY Cultures Project*, which aims at developing an empirical *Quality Culture Inventory*. First we provide the results of a systematic literature review concerning the assessment of quality culture. In a second step we present the results of 41 expert interviews on potential components of quality culture. Finally, the results are discussed and integrated into a comprehensive assessment model, which will be the basis for developing the actual Quality Culture Inventory.

Text of paper (3000 words max):

Introduction

An increasing number of higher education institutions (HEIs) recognizes the benefit of autonomous quality assurance and development. Whether the institution plans to start out with selective evaluation procedures or is in the progress of establishing a comprehensive quality management system – the implementation and successful application of such approaches is likely to require a *quality culture* which is shared by the HEI members.

The concept of quality culture goes far beyond traditional approaches of quality assurance and development as it emphasizes the importance of an organizational-psychological perspective in addition to the application of structural-formal quality assurance tools. Previous projects of the European University Association (EUA) dealt with the term quality culture, presenting the following definition:

> "Quality Culture refers to an organizational culture that intends to enhance quality permanently and is characterized by two distinct elements: on the one hand, a cultural/psychological element of shared values, beliefs, expectations and commitment towards quality and, on the other hand, a structural/managerial element with defined processes that enhance quality and aim at coordinating individual efforts" (Loukkola & Zhang, 2010).

According to this definition the structural-formal level mainly includes formal processes with respect to quality assurance and quality development, while the organizational-psychological level comprises informal elements such as shared values and commitment towards quality. Moreover, connecting elements – namely communication, participation, and trust – are hypothesized to significantly facilitate the successful implementation of quality assurance and quality development approaches (see figure 1).

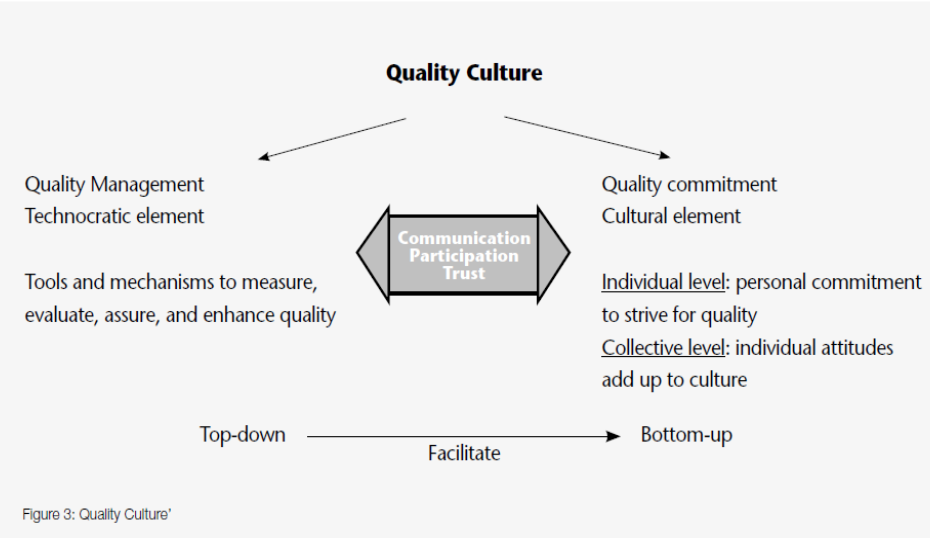

Figure 1: Elements of quality culture (EUA, 2006, p.20)

Despite the increasing awareness of the importance of promoting and developing a quality culture in HEIs, only a small number of empirical studies has dealt with the operationalization of this construct so far. Thus the *heiQUALITY Cultures Project* pursues the objective to contribute to this highly relevant research field by developing an empirical *Quality Culture Inventory*.

The heiQUALITY Cultures Project

The *heiQUALITY Cultures Project* ("Development and Testing of an Instrument for the Description and Assessment of **Quality Cultures** at **H**igher **E**ducation **I**nstitutions") was launched in mid-2012. It is designed as a multidisciplinary cooperation project between three German HEIs, namely Heidelberg University, the University of Applied Sciences Mannheim (Hochschule Mannheim) and the Baden-Württemberg Cooperative State University DHBW (Duale Hochschule Baden-Württemberg). By including one traditional university and two HEIs of applied sciences the project aims at considering multiple professional perspectives as well as analyzing HEI-specific quality cultures.

The main objectives of the project are

1. to develop a comprehensive and practical *definition* of the term quality culture
2. to develop a *viable and valid Quality Culture Inventory* which is able to collect and describe both structural-formal *and* organizational-psychological elements

By fulfilling these objectives, the Quality Culture Inventory will not only be able to answer a large variety of scientific questions, but also allow for the practical assessment of the current quality culture status of HEIs including an analysis of strengths and weaknesses. The respective results will represent a substantial basis to derive recommendations for quality development and justify quality actions based on empirical evidence. Eventually the Quality Culture Inventory aims at being a useful tool to support the autonomy of HEIs with respect to the empirical self-assessment of quality requirements and performance. The main challenge of the project will be to identify and disclose the effects of organizational-psychological elements such as shared values and commitment which represent non-formal components of quality culture.

The main steps of the heiQUALITY Cultures Project are provided in figure 2. In the following we will present our results concerning the first three steps, which comprise a systematic literature review, expert interviews as well as the development of an empirical assessment model of the quality culture construct.

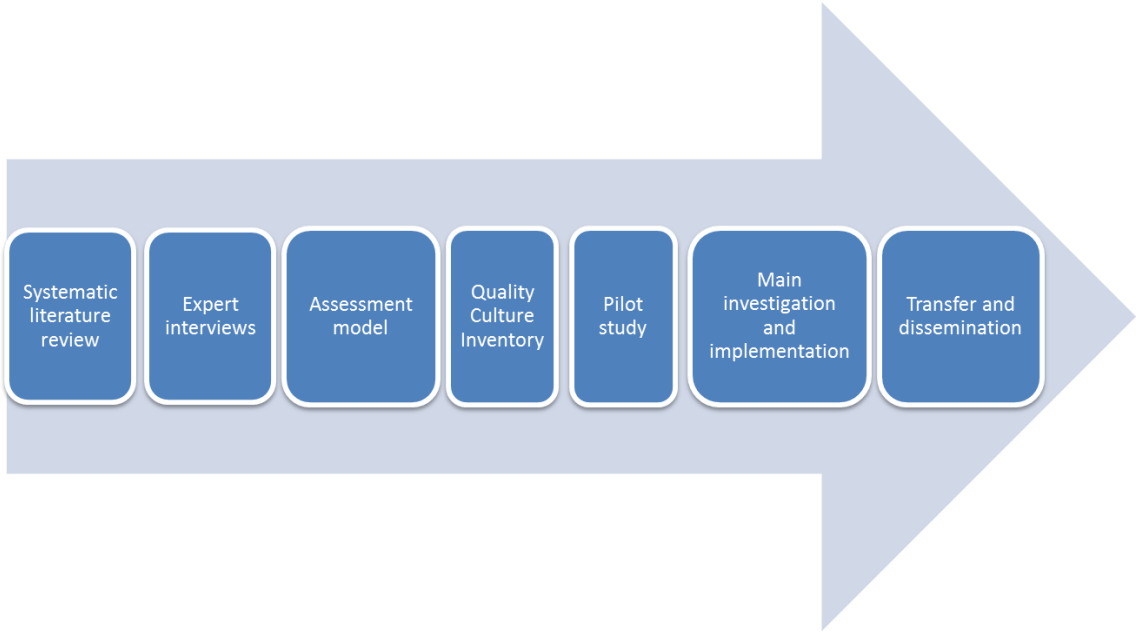

Figure 2: Main steps of the heiQUALITY Cultures Project

Systematic Literature Review

In order to identify previous studies concerning the operationalization of quality culture a systematic literature review was performed. The systematic review included three literature databases: HEIDI (interdisciplinary database of Heidelberg University), PSYNDEX, and PsycINFO. In a first step we searched for the term "quality culture" and its German equivalent ("Qualitätskultur"). In a second step we entered a combination of the terms "quality" and "higher education" or "quality" and "dimension" (and their German equivalents) into the databases. The search was limited to peer-reviewed journals and included all publication dates until December 2012.

Our search strategy identified a total number of 786 publications. After a careful screening of every corresponding abstract, 605 publications were excluded from further analyses as a result of lacking relevance with respect to our research questions. Of the remaining 181 publications, we identified 21 studies which directly focused on the operationalization and assessment of quality (culture). After extensively reading each of these papers 4 studies were excluded subsequently due to insufficient relevance. Consequently a total number of 17 empirical studies was considered appropriate for further evaluation (see tables 1 and 2).

Table 1: Results of the systematic literature review (part 1)

Authors (Year)	Country	Sample				Construct			Results
		N	S	M	L	Q-Culture	Quality	Service-Q.	
Abdullah (2005)	Malaysia	381	√	-	-	-	-	√	• Psychometric properties of 2 questionnaires concerning service quality • HedPERF > SERVPERF
Abdullah (2006)	Malaysia	409	√	-	-	-	-	√	• 6 service quality dimensions • Most important dimension: Access
Ali & Musah (2012)	Malaysia	267	-	√	-	√	-	-	• 9 quality culture dimensions • quality culture*workforce performance
Ardi et al. (2012)	Indonesia	251	√	-	-	-	√	-	• 6 quality dimensions • Student satisfaction *commitment
Brochado (2009)	Portugal	360	√	-	-	-	-	√	• Psychometric properties of 3 questionnaires concerning service quality • HedPERF & SERVPERF > SERVQUAL
De Jager & Gbadamosi (2010)	South Africa	391	√	-	-	-	-	√	• 13 service quality dimensions • Service quality*intention to leave • Service quality*trust
Gallifa & Battallé (2010)	Spain	1880	√	-	-	-	-	√	• 5 service quality dimensions • Comparison of different faculty profiles with the profile of the whole HEI
Gonzalez-Lopez (2006)	Spain	1167	√	-	-	-	√	-	• 14 quality dimensions • Most important criterion: student satisfaction
Iacovidou et al. (2009)	Cyprus	532 63	√	√	-	-	√	-	• 7 quality dimensions • Comparision of most important dimensions from the student's / teacher's point of view

Abbreviations: S = students; M = members / staff of HEI; L = leaders; Q = quality

The selected studies apply different approaches to answer the question of how the constructs of quality and/or quality culture may be operationalized. Only 3 out of 17 studies focus on the operationalization of "quality culture" directly, while 8 studies develop rather general "quality dimensions". The remaining 6 studies lay their emphasis on the assessment of "service quality" (e.g. campus facilities) in HEIs.

Table 2: Results of the systematic literature review (part 2)

Authors (Year)	Country	Sample				Construct			Results
		N	S	M	L	Q-Culture	Quality	Service-Q.	
Lagrosen et al. (2004)	Austria/ Sweden	448	√	-	-	-	√	-	• 11 quality dimensions • High congruence with studies on service quality
Murias et al. (2008)	Spain	43	-	-	-	-	√	-	• 6 quality dimensions • 9 objective quality indicators
Mustafa & Chiang (2006)	(USA/Canada)	485	√	-	-	-	√	-	• 4 quality dimensions (exclusively with respect to teaching)
Telford & Masson (2005)	Great Britain	441 64 7	√	√	√	-	√	-	• 9 quality dimensions • Most important dimensions from all stakeholder's poing of view: Commitment & qualification
Trivellas & Dargenidou (2009)	Greece	134	-	√	-	√	-	√	• 4 organizational culture dimensions • 2 job satisfaction dimensions • 6 service quality dimensions
Tsinidou et al. (2010)	Greece	264	√	-	-	-	-	√	• 7 service quality dimensions • Most important dimensions: Information & facilities
Zeitz et al. (1997)	(USA)	886	-	√	-	√	-	-	• 7 TQM dimensions • 5 cultural dimensions
Zineldin et al. (2011)	Turkey	1641	√	-	-	-	√	-	• 7 quality dimensions • Most important dimension: quality of atmosphere

Abbreviations: S = students; M = members / staff of HEI; L = leaders; Q = quality

While most studies select student samples (N=13), we identified noticeably few publications that consider employees (N=5) and/or the university management level (N=1). All studies share the commonality that they either adopt a previously developed survey or create and validate a new questionnaire in order to assess various quality dimensions. The study of Murias, de Miguel, and Rodriguez (2008) represents an exception, as it is exclusively based on objective indicators to measure the quality of HEIs (e.g. staff/student ratio).

A publication which needs to be pointed out is the paper by Ali & Musah (2012), who are the only authors specifically referring to the operationalization of quality culture within the higher education context. The author's quality culture scale comprises 61 items representing 9 quality culture dimensions (e.g. *top management support for quality*, *recognition*, and *quality assurance*), with an excellent overall reliability of .97. Accordingly the study by Ali & Musah (2012) certainly provides valuable indications concerning the operationalization of the quality culture construct.

In summary, our systematic literature review yielded 17 studies with respect to the assessment and operationalization of quality dimensions in HEIs. The identified studies (including their scales and items) represent a sound empirical basis for the development of our Quality Culture Inventory. Strikingly, only 3 papers focused directly on the operationalization of the quality culture construct so far. This fact surely underlines the importance and relevance of additional research in this field.

Explorative Expert Interviews

In order to further explore the field of quality culture we decided to carry out qualitative expert interviews. These interviews served the function of validating our theoretical assumptions derived from the systematic literature review. A main objective was to gather additional information about potential dimensions and constituents of quality culture with respect to the higher education context. Moreover we were interested in the experts' practical experiences concerning the development and furtherance of quality culture as well as potentially associated hindrances.

The expert interviews followed a semi-standardized interview guideline with an open-question format. The development of the guideline and its questions was mainly based on the previously developed expert interview guideline of the "Learning Culture" project by Sonntag et al. (Sonntag, Schaper, & Friebe, 2005; Sonntag, Stegmaier, Schaper, & Friebe, 2004). Sample topics and questions are provided in table 3.

Table 3: Expert interviews: Sample topics and sample questions

Sample Topics	Sample Questions
Professional Background	Could you please briefly elaborate on current core areas of your work? In which regard do you deal with the topic of quality in your occupation?
Quality Culture: Theoretical considerations	What do you associate with the term „quality culture“? What constitutes a quality culture at universities in your opinion? In your opinion, which elements are especially important and why? In what ways do the terms of „quality culture“ and „quality assurance“ differ in your opinion? Where do you see overlapping areas?
Quality culture in practice	From your point of view, how can a quality culture be furthered sustainably? Which areas should one begin with in order to effectively further quality culture? Which hindrances or resistances can you think of when trying to further quality culture?

Expert Sample

Our international experts were selected and recruited from different occupational backgrounds and positions within the higher education context. Every expert met at least one of the following inclusion criteria:

1. High level of practical experience concerning quality assurance in HEIs
2. High level of practical experience based on working for an accredited quality assurance agency (e. g. ACQUIN, evalag)[1]
3. High level of theoretical and practical experience based on working for an independent higher education organization (e. g. ESU, EUA, HRK[2])
4. Highly relevant research publications concerning quality culture in HEIs

In total N=41 expert interviews were carried out between March and May 2013. The expert sample consisted of N=15 females (37 %) and N=26 males (63 %) representing a large variety of occupational backgrounds (see figure 3). Altogether we interviewed N=7 international (17 %) and N=34 national experts (83 %).

[1] Full member agencies of ENQA
[2] German Rectors' Conference

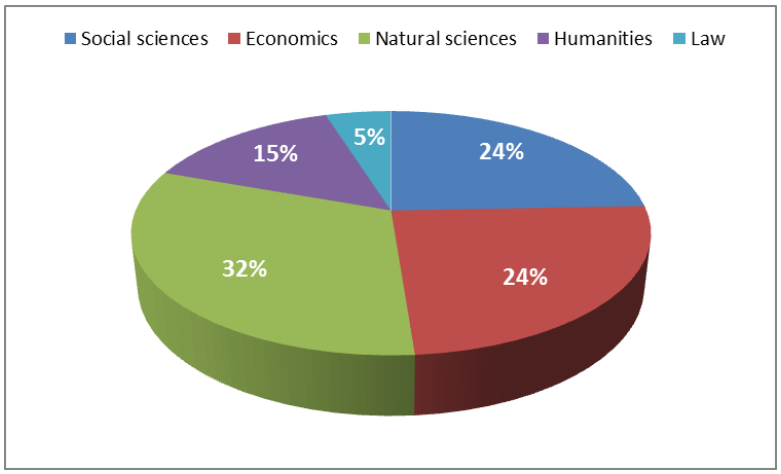

Figure 3: Expert interviews: Occupational backgrounds

Methods

A total number of N=35 interviews was carried out as face-to-face interviews. The remaining N=6 interviews were conducted via telephone. In case of consent the conversations were audiotaped (N=40). The total duration of all interviews was 41 hours, with a mean duration of approximately 1 hour per interview. The expert interviews were conducted by trained interviewers, who were accompanied by a graduate assistant who took notes during the conversation and prepared a summary of the interview.

In order to obtain preliminary results, the summary of each interview was analyzed by two independent raters, following a thoroughly designed evaluation scheme. Incongruent ratings were discussed between the raters in order to reach consent. Finally the results were clustered and summarized. In the following we will limit the presentation of our interview results to potential components of quality culture as this topic represents the main focus of this paper.

Results

When asked to elaborate on the general constituents of quality culture in HEIs 95.1 % of our experts referred to *leadership* and *communication* respectively (see table 4). *Participation, objectives,* and *commitment* were considered relevant by more than 70 % of the experts. Moreover *values, trust, responsibility, recognition,* and *information* ranked among the top-10 dimensions indicated by our experts.

Table 4: Expert interviews: General constituents of quality culture in HEIs

Dimension	N (%)
Leadership	**39** (95.1)
Communication	**39** (95.1)
Participation	**32** (78.0)
Objectives	**30** (73.2)
Commitment	**29** (70.7)
Values	**28** (68.3)
Trust	**28** (68.3)
Responsibility	**27** (65.9)
Recognition	**27** (65.9)
Information	**27** (65.9)

When asked to name the **most important** element of quality culture more than half of the experts (58.5 %) referred to *communication* (see table 5). The second most important element was considered to be *leadership* (46.3 %) followed by *trust* between HEI members (29.3 %). Moreover at least 10 experts emphasized the importance of *information*, *commitment*, *responsibility*, and *participation*, respectively.

Table 5: Expert interviews: Most important constituents of quality culture in HEIs

Dimension	N (%)
Communication	**24** (58.5)
Leadership	**19** (46.3)
Trust	**12** (29.3)
Information	**11** (26.8)
Commitment	**10** (24.4)
Responsibility	**10** (24.4)
Participation	**10** (24.4)

In summary the statements of our experts represent important evidence concerning various dimensions, which should be considered in the assessment of quality culture. In this context the significance of *communication*, *leadership* and *trust*, as well as personal *commitment* and *participation* is especially emphasized.

Development of an assessment model

Following the systematic literature review as well as the results of our expert interviews we developed an empirically-based assessment model of quality culture in HEIs. First of all we decided to adopt the basic assumptions of the EUA, which hypothesizes two levels of quality culture: a structural-formal and an organizational-psychological level. At the same time we took the decision to extend the EUA model by utilizing our empirical evidence to further differentiate the hypothesized constituents of quality culture (see figure 4):

According to our assessment model the *structural-formal level* basically comprises multiple elements of quality assurance, which may be subdivided into *normative* (e.g. quality goals), *strategic* (e.g. governance structures) and *operative* levels (e.g. tools for evaluation).

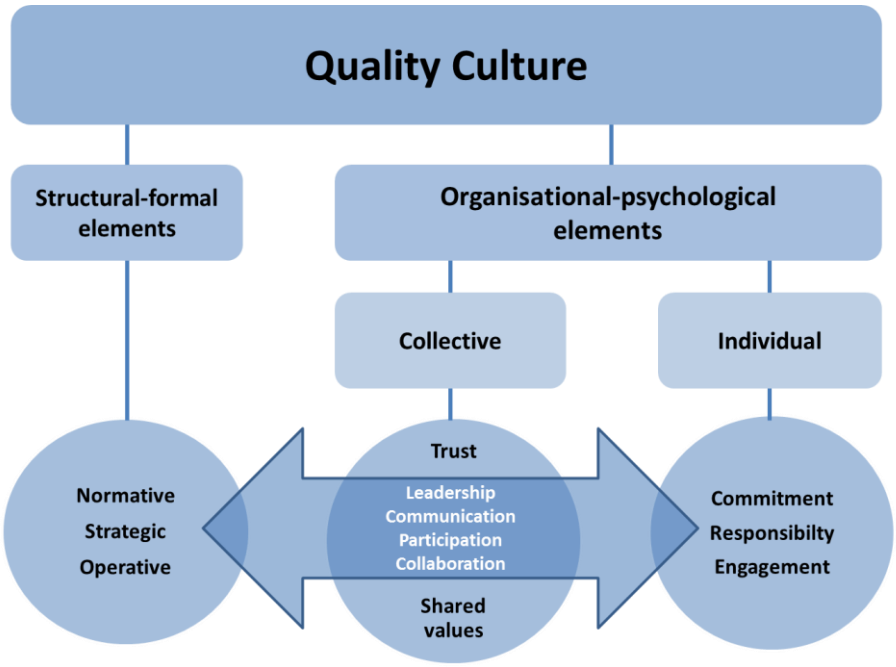

Figure 4: Assessment model of quality culture

On the *organizational-psychological level* we differentiate *collective* and *individual* criteria. *Commitment, responsibility,* and *engagement* represent individual attitudes towards quality, which are hypothesized to function as an important foundation of quality culture on the

individual level. In contrast to that, our collective criteria are characterized by interactions between HEI members. In this context *trust* and *shared values* are hypothesized to act as the mutual basis for successful *leadership*, *communication*, *participation*, and *collaboration*. The latter elements are illustrated as an arrow, representing a dynamic connection between the structural-formal and individual elements.

The assessment model accommodates the statements of our experts who explicitly emphasized the importance of almost all elements which can be found in the model (see tables 4 & 5). However, we decided to exclude *recognition* and *information* as these terms may be assigned to *leadership* and *communication* respectively. The same is true for the term *objectives*, which can be assigned to the *normative* level. On the other hand, we decided to add the terms *collaboration* and *engagement* to our model as the relevance of these elements was emphasized by several empirical as well as theoretically-based publications (e. g. Ali & Musah, 2012; Gvaramadze, 2008, Sandfuchs, 2008, Yorke, 2000).

In summary we created an empirically-based assessment model of quality culture which considers empirical evidence as well as the expertise of international HEI professionals. Accordingly, the reported elements are hypothesized to validly represent the quality culture construct within the higher education context.

Future Prospects

Based on the assessment model, the next step of our project will focus on designing a viable and valid inventory for the empirical assessment of quality culture in HEIs, which will be tested in the scope of a pilot study involving the three project institutions. At the same time our expert interviews will be transcribed and analyzed by applying MAXQDA software in order to validate our preliminary results.

Acknowledgements

The Quality Culture Project is funded by the "Innovation and Quality Fund (IQF) of the Ministry of Sciences, Research and Arts Baden-Württemberg, Germany" (Innovations- und Qualitätsfonds (IQF) des Ministeriums für Wissenschaft, Forschung und Kunst Baden-Württemberg, Deutschland). Term: 04/2012-03/2015.

References

Abdullah, F. (2005). HEdPERF versus SERVPERF: The quest for ideal measuring instrument of service quality in higher education sector. *Quality Assurance in Education, 13*(4), 305-328. doi: 10.1108/09684880510626584.

Abdullah, F. (2006). The development of HEdPERF: A new measuring instrument of service quality for the higher education sector. *International Journal of Consumer Studies, 30*(6), 569-581. doi: 10.1111/j.1470-6431.2005.00480.x.

Ali, H. M., & Musah, M. B. (2012). Investigation of Malaysian higher education quality culture and workforce performance. *Quality Assurance in Education, 20*(3), 289-309. doi: 10.1108/09684881211240330.

Ardi, R., Hidayatno, A., & Zagloel, T. Y. M. (2012). Investigating relationships among quality dimensions in higher education. *Quality Assurance in Education, 20*(4), 408-428. doi: 10.1108/09684881211264028.

Brochado, A. (2009). Comparing alternative instruments to measure service quality in higher education. *Quality Assurance in Education, 17*(2), 174-190. doi: 10.1108/09684880910951381.

de Jager, J., & Gbadamosi, G. (2010). Specific remedy for specific problem: Measuring service quality in South African higher education. *Higher Education, 60*(3), 251-267. doi: 10.1007/s10734-009-9298-6.

European University Association. (2006). *Quality culture in European universities: A bottom-up approach: Report on the three rounds of the quality culture project 2002-2006*. Brussels: European University Association. Retrieved from http://www.eua.be/eua/jsp/en/upload/Quality_Culture_2002_2003.1150459570109.pdf (23.10.2012).

Gallifa, J., & Batallé, P. (2010). Student perceptions of service quality in a multi-campus higher education system in Spain. *Quality Assurance in Education: An International Perspective, 18*(2), 156-170. doi: 10.1108/09684881011035367.

Gonzalez-Lopez, I. (2006). Dimensions for evaluating university quality in the European space for higher education. *Electronic Journal of Research in Educational Psychology, 4*(3), 445-468.

Gvaramadze, I. (2008). From quality assurance to quality enhancement in the European higher education area. *European Journal of Education, 43*(4), 443–455.

Iacovidou, M., Gibbs, P., & Zopiatis, A. (2009). An exploratory use of the stakeholder approach to defining and measuring quality: The case of a Cypriot higher education institution. *Quality in Higher Education, 15*(2), 147-165. doi: 10.1080/13538320902995774.

Lagrosen, S., Seyyed-Hashemi, R., & Leitner, M. (2004). Examination of the dimensions of quality in higher education. *Quality Assurance in Education, 12*(2), 61-69. doi: 10.1108/09684880410536431.

Loukkola, T., & Zhang, T. (2010). *Examining quality culture: Part 1-Quality assurance processes in higher education institutions*. Brussels: European University Association. Retrieved from http://www.eua.be/pubs/examining_quality_culture_part_1.pdf (26.10.2012).

Murias, P., de Miguel, J. C., & Rodríguez, D. (2008). A composite indicator for university quality assesment: The case of spanish higher education system. *Social Indicators Research, 89*(1), 189-146. doi: 10.1007/s11205-007-9226-z.

Mustafa, S. T., & Chiang, D. (2006). Dimensions of quality in higher education: How academic performance affects university students' teacher evaluations. *Journal of American Academy of Business, Cambridge, 8*(1), 294-303.

Sandfuchs, G. (2008). Qualitätskultur und Qualitätsmanagement im Rahmen des Bologna-Prozesses am Beispiel der Universität Bayreuth. *Beiträge zur Hochschulforschung, 30*(4), 60-80.

Sonntag, K., Schaper, N., & Friebe, J. (2005). Erfassung und Bewertung von Merkmalen unternehmensbezogener Lernkulturen. In Arbeitsgemeinschaft Betriebliche Weiterbildungsforschung (Hrsg.), *Kompetenzmessung im Unternehmen* (Vol. 18, S. 19–340). Münster: Waxmann.

Sonntag, K., Stegmaier, R., Schaper, N., & Friebe, J. (2004). Dem Lernen im Unternehmen auf Spur: Operationalisierung von Lernkultur. *Zeitschrift für Lernforschung, 32*(2), 104–125.

Telford, R., & Masson, R. (2005). The congruence of quality values in higher education. *Quality Assurance in Education: An International Perspective, 13*(2), 107-119.

Trivellas, P., & Dargenidou, D. (2009). Organisational culture, job satisfaction and higher education service quality: The case of Technological Educational Institute of Larissa. *The TQM Journal, 21*(4), 382-399. doi: 10.1108/17542730910965083.

Tsinidou, M., Gerogiannis, V., & Fitsilis, P. (2010). Evaluation of the factors that determine quality in higher education: An empirical study. *Quality Assurance in Education, 18*(3), 227-244. doi: 10.1108/09684881011058669.

Yorke, M. (2000). Developing a quality culture in higher education. *Tertiary Education and Management, 6*(1), 19–36. doi: 10.1080/13583883.2000.9967008.

Zeitz, G., Johannesson, R., & Ritchie, J. E. (1997). An employee survey measuring total quality management practices and culture: Development and validation. *Group & Organization Management, 22*(4), 414-444. doi: 10.1177/1059601197224002.

Zineldin, M., Akdag, H. C., & Vasicheva, V. (2011). Assessing quality in higher education: New criteria for evaluating students' satisfaction. *Quality in Higher Education, 17*(2), 231-243. doi: 10.1080/13538322.2011.582796.

Questions for discussion:

1. Is it possible to operationalize the construct of quality culture based on our assessment model?

2. What kind of information is especially relevant from the practitioner's point of view when assessing quality culture?

3. How can we use the information assessed by the Quality Culture Inventory in order to encourage quality culture?

Please submit your proposal by sending this form, in Word format, by 2 August 2013 to Ivana Juraga (Ivana.Juraga@eua.be). Please do not send a hard copy or a PDF file.