

# Balanced Scorecard – a strategic management system of the higher education institution

Balanced  
Scorecard

167

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## Abstract

**Purpose** – The purpose of this paper is to focus on the comparative analysis of the Balanced Scorecards of four higher education institutions and aims to define the general framework of the Balanced Scorecard for the higher education institution which concerns: the structure and elements of the Balanced Scorecard; development of the Balanced Scorecards on the different levels of the management system of the higher education institution; definition of the main functions of the Balanced Scorecard which it performs in the process of the strategic management of the German higher education institutions. Balanced Scorecard is analyzed as a strategic management system that translates a higher education institution's strategy into a comprehensive set of performance measures that provides a framework for a strategic measurement and management system.

**Design/methodology/approach** – The comparative content analysis of the Balanced Scorecards of one Austrian and three German higher education institutions – Johannes Gutenberg University Mainz, Münster University of Applied Sciences (Fachhochschule Münster), Cologne University of Applied Sciences (Fachhochschule Köln), Montan University Leoben.

**Findings** – Using a comparative analysis of the Balanced Scorecards of four higher education institutions this paper argues that Balanced Scorecard provides a systemic view of the strategy of a higher education institution. It ensures a full complex framework for implementation and controlling of the strategy and sets a basis for further learning in the process of the strategic management of the higher education institution according to the scheme “plan-do-check-act”.

**Research limitations/implications** – This paper provides a basis for the substantial further work on the development of the general framework of the Balanced Scorecard for the higher education institution.

**Practical implications** – The framework presented in this paper can be used as the basis for the development of general framework of the Balanced Scorecard of the higher education institution.

**Social implications** – The framework presented in this paper can be used as the basis for the development of general framework of the Balanced Scorecard of the higher education institution.

**Originality/value** – This paper indicates the particularities of the structure and elements of the Balanced Scorecard, its development in the different levels of the management system of the higher education institution.

**Keywords** Indicators, Measures, Balanced Scorecard, Projects, Parameters, Academic Scorecard, Perspectives

**Paper type** Research paper

## Introduction

Balanced Scorecard is a strategic management system that translates a higher education institution's mission and strategy into a comprehensive set of performance measures that provides a framework for a strategic measurement and management system (Kaplan and Norton, 1996, p. 10). Proving its efficiency in business Balanced Scorecard is used in a process of strategic management of higher education institutions. In light of the current and future expectation, higher education organizations require examples of successful implementation and adaptation of management strategies that address the need to become more productive, accountable and efficient. The Balanced



Scorecard, which utilizes measures beyond financial performance, is a tool that can assist higher education organizations to become more efficient and accountable (Rollings, 2011).

It has become common practice worldwide for universities to prepare strategic development plans that are accompanied by monitoring system, such as scorecard (Martin and Sauvageot, 2011, p. 44) which is regarded as a tool for better educational planning (Kaplan and Miyake, 2010).

The application of the Balanced Scorecard in the process of strategic management is aimed:

- to clarify and translate vision and strategy;
- to communicate and link strategic objectives and measures;
- to plan, set targets, and align strategic initiatives; and
- to enhance strategic feedback and learning (Kaplan and Norton, 1996).

The Balanced Scorecard contributes to the implementation of the goals of the organization in multidimensional system of indicators and parameters that measure the performance of the organization on the base of perspectives (Kaplan and Norton, 1997, p. 9). The Balanced Scorecard differentiates between four central and important perspectives regarding strategic development:

- The financial perspective (Which material results should be achieved?).
- The customer perspective (What qualitative and quantitative performance is expected by the stakeholders?).
- The internal process perspective (Which work processes are important for the organization's success?).
- The learning and development perspective (What activities will be necessary to develop the organization and its personnel further in order to guarantee the success of the organization? What can be learned from failures for the future?) (Nickel, 2011, p. 23).

The Balanced Scorecard approach provides a general framework for understanding the casual chains between the strategic objectives placed in the perspectives (Kettunen, 2009). In higher education Balanced Scorecard emphasizes academic measures, rather than financial performance of higher education institution and presents the strategic goals of the university and opportunities for implementation from different perspectives (Martin and Sauvageot, 2011). The approach of the Balanced Scorecard supports the implementation of the strategy through the performance-oriented management (Kohlstock, 2009, p. 22). Balanced Scorecard can be described as a carefully selected set of quantifiable measures derived from an organization's strategy (Niven, 2003, p. 14).

The balance between different perspectives ensures that all options are used for the implementation of the strategy. One danger of the Balanced Scorecard is the over-modulation. A higher education institution that cannot limit its goals and indicators as recommended by Kaplan/Norton to five or seven per strategic perspective but engages in an overflowing and detailed collection of objectives will surely create a close-meshed control net which hinders the process of self-organization and supports a tendency to bureaucratize (Nickel, 2011, p. 24).

Regarding the higher education institution as a non-profit organization and its product is intangible the financial indicators are insufficient to measure the performance

of higher education institution. That is why the concept of Balanced Scorecard is appropriate for the particularities of activity of higher education institutions but it must take into consideration the special characteristics of the activity of certain university (Ruf, 2008, p. 5). The successful implementation of the strategic goals on the basis of the measures requires the transformation of the strategy into some decentralized Balanced Scorecards. It means that every structural unit of the university must develop its own Balanced Scorecard using the prospective defined for the whole university (Ruf, 2008, p. 8). The Balanced Scorecard approach provides a framework for real conversation about the values and objectives of the institution and the contributions of individual units to those objectives (Stewart and Carpenter-Hubin, 2000).

In higher education Balanced Scorecard emphasizes academic measures, rather than financial performance of higher education institution. The measures developed in Balanced Scorecard are usually build on and around such aspects as faculty/student number (ratios), demographics; student pass percentages and dispersion of scores; class rank, percentile scores; graduation rates; percentage graduates employed on graduation; faculty teaching load/ faculty research/publications; statistics on physical resources (Pingle and Natashaa, 2011, p. 3).

The Balanced Scorecard in management of higher education can resolve such problems as: formation of the actions on the basis of the strategic goals, coordination of the goals on different levels and implementation of the mission statement. Besides the Balanced Scorecard is aimed to stabilize the strategic process and define the indicators of performance of higher education institution which are not connected with finance (Ziegele, 2005).

### **The results of the research**

#### *Way of presenting the Balanced Scorecard of the higher education institution*

Balanced Scorecard can be presented as a separate document (Cologne University of Applied Sciences) or in strategic plan of the higher education institution (Johanes Gutenberg University Mainz, Münster University of Applied Sciences). Balanced Scorecards of Cologne University of Applied Sciences and Münster University of Applied Sciences are called Academic Scorecards. Academic Scorecard represents an option of the Balanced Scorecard which is developed according to the needs of the higher education institution. Both approaches assume that a particular institution must be viewed from different perspectives to reflect the organization. According to the classical approach the success of any enterprise depends on the satisfaction of the clients which is connected with the quality of the internal processes, motivation and qualification of the personnel (Fachhochschule Münster, 2010, p. 24).

#### *Purpose of the Balanced Scorecard of the higher education institution*

Balanced Scorecard has multiply functions and can be regarded as a strategic instrument aimed at the implementation and operationalization, controlling and communication of the strategy. German higher education institutions regard that Balanced Scorecard:

- A basis for quality management (Fachhochschule Münster, 2010, p. 24).
- Represents, concretizes and operationalizes the strategic goals which can be achieved on the base of central measures (Fachhochschule Münster, 2010, p. 24).

- Translates the content of the mission statement into specific strategic goals and does so within an action framework with different perspectives; strives to achieve a balance in the target perspectives (University Mainz, 2011, p. 6).
- Ensures effective achievement of the strategic goals in area of learning and teaching (Fachhochschule Köln, 2011, p. 2).
- Presentation of multidimensional process of planning, management and controlling in knowledge organization and contribution to the communication and implementation of the strategy (Montanuniversität Leoben, 2012, p. 8).

#### *Process of the development of the Balanced Scorecard*

Creation of the strategic plan part of which is Balanced Scorecard should be done in participative consensus-oriented process of the strategic management. That is why the Balanced Scorecard is also developed in highly participative process in which members of the university are involved in consultations with Presidium, the deans, the QM-representatives from all departments as well as representatives from QM-team and service structures (Fachhochschule Münster, 2010, p. 25).

The process of development of the Balanced Scorecard is rather difficult and time-consuming and requires the planners of the university to have special skill. That is why the Johannes Gutenberg University Mainz while developing Balanced Scorecard was consulted by Horvath & Patners – an independent internationally operating management consulting company.

#### *Structure of the Balanced Scorecard*

The core elements of the Balanced Scorecard are perspectives. The traditional approach suggests four perspectives: customers, internal process, learning and development, finance. German higher education institutions created different perspectives for their Balanced Scorecards, but common for all of them including classical approach is the financial perspective which also can be presented as a sub-perspective of the resource perspective, that also contains such sub-perspectives as personnel, infrastructure and management (Fachhochschule Münster, 2010) (Table I).

Academic Scorecard of Johannes Gutenberg University Mainz is focussed on four perspectives. According to the service perspective university understands itself as a service provider not only for its members (students, researchers and lectures) but also for employees of authorities, businesses and those who are interested in continuing education (University Mainz, 2011, p. 17).

Classical approach to Balanced Scorecard	Münster University of Applied Sciences	Johanes Gutenberg University Mainz	Cologne University of Applied Sciences	Montan University Leoben
Customers	Education	Aspects of the task	Process perspective	Performance perspective
Internal process	Research	Service perspective	Customer perspective	Process perspective
Learning and development	Resources (personnel, finance, infrastructure, management)	Potential perspective	Potential perspective	Stakeholders perspective
Finance		Financial perspective	Resources perspective	Potential perspective
				Financial perspective

**Table I.**  
The structure of the Balanced Scorecards

Potential perspective is focussed on activities which are aimed to ensure the competitiveness of the higher education institution. University declares itself as a learning organization and its personnel must continuously develop in order to cope with the challenges and to improve the quality (University Mainz, 2011, p. 22).

Financial perspective pays great attention to the acquisition of the third-party funding taking into consideration the scarcity of public resources (University Mainz, 2011, p. 27) (Table II).

According to the customer perspective the customers of Cologne University of Applied Sciences are not only the external stakeholders in society and professional world but also the students who have the corresponding demands to the results of the learning process.

Resources perspective of Cologne University of Applied Sciences declares that development of quality in education and research can contribute to acquisition of the external funding which can be done if university will be regarded attractive for scientists (Fachhochschule Köln, 2011, p. 7).

Process perspective states that efficiency and attractiveness of the university is primarily determined by the process which is based on the quality standards and the strategic goals. The analyses and optimization of the process must be done in cooperation with the staff which ensures their acceptance. All participants of the process must cooperate, for example representatives of the faculty and central administration. The successful optimization of the process must be reflected in high level of user and job satisfaction (Fachhochschule Köln, 2011, p. 9) (Table III).

The Academic Scorecard of the University of Applied Sciences Munster contains three perspectives: education, research and resources, which is divided into sub-perspectives. These perspectives in clearly way show that the main components of the mission of the higher education institution – research and education but be developed in balance with resources.

First of all, Academic Scorecard is focussed on the formulation of such goals which can be achieved by the central measures and it is also focussed on the scorecards of the faculties. Academic Scorecard must prove that all the strategic goals are developed in

The perspective "aspects of the task"	Service perspective	Potential perspective	Financial perspective
Promotion Development and quality of research The course structure Improvement of the teaching quality and learning conditions Strengthening of internationalization Expansion of continuing academic education alongside research and teaching	Improvement of the services Usage of new information and communication technologies more consistently Maintenance and improvement the university image	Maintain and expand special university qualities and framework conditions Maintain diversity of subjects offered while taking into account quantitative and qualitative standards Enhance management and decision-making structures in academia and administration Strengthen individual leadership skills and enhance staff development Intensify the promotion of women in academia and administration	Efficient use, service- and requirements- oriented assessment of resources Expansion of the sources of finance

**Table II.**  
The strategic goals  
presented in the  
perspectives of the  
Balanced Scorecard  
of Johannes  
Gutenberg  
University Mainz

connection with the mission statement and the principles of the university and that the goals of the structural units of the university are compatible with each other and with the goals of the management of the university (Fachhochschule Münster, 2010, p. 24) (Table IV).

The Balanced Scorecard of the Montan University Leoben contains five perspectives (Table I), and four of them for exception the financial perspective (Table V) are divided

**Table III.**  
The strategic goals presented in the perspectives of the Academic Scorecard of Cologne University of Applied Sciences

Customer perspective	Potential perspective	Resource perspective	Process perspective
Attractive academic qualification Development of the potential of the students Attractive continuing education	Development of the personnel	Active promotion of task-specific funding in teaching and learning Positioning of the university as attractive and innovative employer for scientists Continuous further development of the IT infrastructure in order to support the implementation of the goals which concern the quality of education and research	Everyday activity of the staff is determined by the continuously evolving service and quality culture The university designs its process in such a way as its diverse and valuable courses to be the basis for scientific education Quality management system is the basis of the ongoing assessment of the process according to the achievement of the goals

**Table IV.**  
The goals presented in perspectives of the Academic Scorecard of University of Applied Sciences Munster

Education	Research	Resources
Optimization of the transition to the study Optimization of the results of the education Support the transition into profession Competitive education	Strengthening of the research Strengthening of the research transfer	Sub-perspective personnel Optimization of the use of the personnel Sub-perspective infrastructure Ensurance of modern conditions Sub-perspective finance Increase inflow of the resources Allocation of the resources according to the goals Sustainably manage the resources Sub-perspective management Make management more professional Increase transparency

**Table V.**  
Strategic areas presented in perspectives of Balanced Scorecard of Montan University Leoben

Performance perspective	Stakeholders perspective	Potential perspective	Process perspective
Research profile Postgraduate programs Education Continuing education	Scientific community Economy Labor market Society Economy and science of the region	Scientific staff Personnel in technical-administrative service Students Structural capital (infrastructure) Relationship capital	Education Research Transfer Management

into strategic areas in which the strategic goals are defined. Performance and process perspectives are focussed on education, research and their contribution to the development of society – knowledge transfer. According to the stakeholders perspective Montan University Leoben positions itself as competent partner which takes into account the interests of different groups of stakeholders – alumni, labor market, economy, industry, city and the region. University as an expert organization in which the most valuable resources are personnel connects its potential perspective not only with scientific staff but also with students and supportive personnel. University understands that potential of the university depends on the results of work of scientific staff and satisfaction of the students with educational services and considers as an important requirement to create all necessary infrastructure for them. As university does not function in vacuum its relationship capital which concerns the partnership with scientific community, society, alumni significantly contributes to the development (Entwicklungsplan der Montanuniversität Leoben, 2012).

#### *Elements of the perspectives of the Balanced Scorecard*

The elements of the perspectives of the Balanced Scorecard according to the classical approach are objectives, measures, targets and initiatives (Kaplan and Norton, 1996).

The analysis of the Balanced Scorecards of the higher education institutions shows differences in the way how they define elements of the perspectives (Table VI).

For example, the Balanced Scorecard of the Mainz University of Applied Sciences operationalizes the strategic goals with the help of strategic projects which processed centrally at the level of the university management board. Strategic projects usually have to be allocated to specific personnel and finance budget. Implementation of the strategic projects has the highest priority for the achievement of the strategic goals (University Mainz, 2011, p. 6).

In contrast to the projects, strategic measures are one-off or ongoing tasks that are not carried out by a specifically assigned project team but instead are performed by the respective academic or administrative establishment alongside the other ongoing tasks and they do not usually require any additional resources (University Mainz, 2011, p. 6).

Parameters are to be clearly checkable, unambiguous, and, as a rule, easily collectable as well as generally traceable. Some are components that orientate themselves on German federal recommendations, such as the parameters developed by the Center for Higher Education Development. Additional indicators, in particular for specialist subject areas, are to be developed for describing the quality of research and teaching – not in the sense of monitoring but in the sense of a meaningful documentation of success and depiction of achievements that can be understood outside the university (University Mainz, 2011, p. 7).

The Balanced Scorecards of other two universities regard the parameter as indicators. Indicators provide the basis for the continuing process of monitoring of the

Classical approach	Münster University of Applied Sciences	Johanes Gutenberg University Mainz	Cologne University of Applied Sciences	Montan University Leoben
Objectives – measures – targets – initiatives	Strategic goals – concrete (specified) goals – measures	Strategic goals – projects – measures – parameters	Goals – indicators – goal value	Strategic goals – strategic measures – operational parameters – operational measures

**Table VI.**  
Elements of the perspectives of the Balanced Scorecards

level of achievement of the strategic goals (Koln p. 2). The Academic Scorecard of the university and the Scorecards of its structural units contain indicators which allow to monitor the achievement of the strategic goals (Fachhochschule Münster, 2010, p. 25).

#### *Balanced Scorecards of the faculties*

Successful implementation of the strategy requires its development not only on the central level but also on the level of faculties as it is done in the Academic Scorecard of Münster University of Applied Sciences.

The Academic Scorecard of the university and Academic Scorecards of the faculties include the key figures which allow the measurement of the achievement of the goals. In general, faculties structure their Academic Scorecards on the base of the perspectives presented in the Academic Scorecard of the university.

Creation of the Academic Scorecards of the faculties contributes to the development of the multidimensional Academic Scorecard system of the university on different decentralized levels. On the base of the Academic Scorecard of the faculty members of the university can clearly understand what are their functions and input in the achievement of the strategic goals of the whole university.

#### **Conclusions**

The results show that Balanced Scorecard provides a systemic view on the strategy of higher education institution. It ensures a full complex framework for implementation and controlling of the strategy and sets a basis for further learning in the process of the strategic management of the higher education institution according to the scheme "plan-do-check-act".

All the perspectives of the Balanced Scorecards developed by universities despite different headings are focussed on the development of the personnel, education and research, improvement of the quality according to the requirements of the external and internal stakeholders of the higher education institution. Achievements of these goals should ensure the competitiveness of the higher education institution and contribute to the acquisition of the third side funding (perspective finance) which is crucially important for universities taking into consideration the scarcity of public resources. Scorecard presents the balanced development of all activities of the higher education institution fulfillment of which should ensure its high level of performance of the higher education institution.

Balanced Scorecard provides an opportunity to split the strategy on different stages of implementation and controlling with the help of measures, projects and indicators. Development of the Balanced Scorecards of the faculties on the basis of the perspectives defined for the whole university makes it easier for the staff at the faculties to understand the strategic goals of the university. The Balanced Scorecards of the faculties help the staff to understand their role in process of the implementation of the strategy of the whole university. The formation of the Balanced Scorecard on different levels in the university allows the members of the university to see clearly their strategic goals and objectives which they should achieve in everyday activities.

The analysis of the content of the Balanced Scorecards of the universities proves that this instrument of the strategic management ensures successful implementation of the strategy, combines strategic and operational levels of the strategy, provides an effective measurement of organizational performance and forms the basis for the assessment of the achievement of the strategic goals of the university on the base of developed indicators. Balanced Scorecard as a communication tool helps not only the



staff and the students but also to the representatives of the external stakeholders (society, scientific community, labor market) clearly understand the strategic goals which university plans to achieve. Planners and other members of the university see the implementation of the strategy in progress as a gradual process which begins on the basis of the strategic goals and evolves into projects, measures and parameters.

Application of the Balanced Scorecard in the process of the strategic management of higher education institution contributes to transparency of the strategy implementation on different stages of the process (measures, projects) and on different levels of the organization (central level, faculty).

Despite all its advantages Balanced Scorecard is not so widely used in the process of strategic management of higher education institutions. The problem is that the managers of the universities lack experience and skills in development of this tool, which is very difficult in creation. Planners of the higher education institutions require seminars where universities that successfully use this tool can share their experience. Such colloquiums and seminars with the universities which have experience in development of Balanced Scorecard and organizations like Horvarth & Partner which can consult about development of Balanced Scorecard can help the senior managers in creation and implementation of the successful strategy of the higher education institution on the base of the Balanced Scorecard. Despite being difficult and time-consuming in development Balanced Scorecard is an efficient tool of strategic management which creates an alignment between all elements of the strategy of the higher education institution, makes the process of implementation easy for perception for the members of the university, transparent and measurable. Perspectives of the Balanced Scorecard give opportunity to develop a balance between all internal processes and external factors which are in the base of the strategy of the higher education institution.

## References

- Fachhochschule Köln (2011), Academic Balanced Scorecard Fachhochschule Köln available at: [www.verwaltung.fh-koeln.de/organisation/dezernatesg/dezernat1/sg13/service/entwpl/u/03992.pphm](http://www.verwaltung.fh-koeln.de/organisation/dezernatesg/dezernat1/sg13/service/entwpl/u/03992.pphm) (accessed 22 April 2013).
- Montanuniversität Leoben (2012), Entwicklungsplan der Montanuniversität Leoben, available at: [www.unileoben.ac.at/component?option=com\\_wrapper/Itemid,717/lang/en/](http://www.unileoben.ac.at/component?option=com_wrapper/Itemid,717/lang/en/) (accessed 22 April 2013).
- Fachhochschule Münster (2010), Hochschulentwicklungsplan Fachhochschule Münster, available at: [www.fh-muenster.de/hochschule/organisation/hochschulentwicklungsplan.php](http://www.fh-muenster.de/hochschule/organisation/hochschulentwicklungsplan.php) (accessed 22 April 2013).
- Kaplan, R. and Norton, D. (1996), *Translating Strategy into the Balanced Scorecard*, Harvard Business School Press, Boston, MA.
- Kaplan, R. and Norton, D. (1997), *Balanced Scorecard, Strategien erfolgreich umsetzen*, Stuttgart.
- Kaplan, S.P. and Miyake, D.N. (2010), "The balanced scorecard", *The School Administrator*, Vol. 67 No. 2, pp. 10-15.
- Kettunen, J. (2009), "Essays on strategic management and quality assurance", available at: <http://herkules oulu.fi/isbn9789514291784/isbn9789514291784.pdf> (accessed 15 April 2013).
- Kohlstock, B. (2009), "Die balanced scorecard im bildungskontext", *Management*, No. 3, pp. 22-28.
- Martin, M. and Sauvageot, C. (2011), *Constructing an Indicator System or Scorecard for Higher Education*, UNESCO, International Institute for Educational Planning.
- Nickel, S. (2011), "Strategic management in higher education institutions – approaches, processes and tools", *Leadership and Governance in Higher Education*, No. 2, pp. 1-28.

- Niven, P. (2003), *Balanced Scorecard Step-by-Step for Government and Not-for-Profit Agencies*, John Wiley & Sons, Hoboken, NJ.
- Pingle, S. and Natashaa, K. (2011), "Performance management in institutes of higher education, through balanced scorecard", *GFJMR*, Vol. 2, pp. 1-20, available at: [http://sdsu-dspace.calstate.edu/bitstream/handle/10211.10/1382/Rollins\\_Andrea.pdf?sequence=1](http://sdsu-dspace.calstate.edu/bitstream/handle/10211.10/1382/Rollins_Andrea.pdf?sequence=1)
- Rollings, A.M. (2011), "A case study: application of the Balanced Scorecard in higher education" available at: [http://sdsu-dspace.calstate.edu/bitstream/handle/10211.10/1382/Rollins\\_Andrea.pdf?sequence=1](http://sdsu-dspace.calstate.edu/bitstream/handle/10211.10/1382/Rollins_Andrea.pdf?sequence=1) (accessed 20 April 2013).
- Ruf, M. (2008), "Die Balanced Scorecard als Controllinginstrument im Hochschulebereich", available at: [http://kops.ub.uni-konstanz.de/bitstream/handle/urn:nbn:de:bsz:352-opus55032/Publikation\\_BSC\\_als\\_Controllinginstrument.pdf?sequence=1](http://kops.ub.uni-konstanz.de/bitstream/handle/urn:nbn:de:bsz:352-opus55032/Publikation_BSC_als_Controllinginstrument.pdf?sequence=1) (accessed 21 April 2013).
- Stewart, A.C. and Carpenter-Hubin, J. (2000), "The Balanced Scorecard. Beyond reports and rankings", *Planning for Higher Education*, available at: <http://oaa.osu.edu/irp/balancedscorecard.pdf> (accessed 22 April 2013).
- University Mainz (2011), Strategy Concept Johannes Gutenberg, available at: [www.uni-mainz.de/universitaet/Dateien/JGU\\_strategy\\_concept.pdf](http://www.uni-mainz.de/universitaet/Dateien/JGU_strategy_concept.pdf) (accessed 22 April 2013).
- Ziegele, F. (2005), "Balanced Scorecard als Instrument der Hochschulentwicklung. – Osnabrücker Kolloquium zum Hochschul- und Wissenschaftsmanagement", available at: [www.wiso.hs-osnabrueck.de/fileadmin/groups/592/Tagungen/Beitraege\\_2005/Vortrag\\_Ziegele.pdf](http://www.wiso.hs-osnabrueck.de/fileadmin/groups/592/Tagungen/Beitraege_2005/Vortrag_Ziegele.pdf) (accessed 21 April 2013).

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