WHICH PROCESSES OF PRIVATE INSTITUTIONS FOR TERTIARY EDUCATION DESERVE A KEY FIGURE?

Friedrich Stefan, Mag.rer.soc.oec. Ingenium Education, Austria

Abstract

The sector of private educational institutions in Austria is very young but crowing. Despite the urgent necessity of customized and directly applicable control mechanisms there are still little knowledge and experience due to the recentness of the sector. Controlling in educational institutions has rarely been explored to this day. Up until now only the sub-areas of controlling of educational processes have been researched. Institutions which are dealing with working students have to offer special service in terms of opening hours, service quality, lectures etc. which causes higher costs and requests a high budget liability.

In order to develop a customized controlling instrument for educational institutions in higher education an examination of the crucial influencing factors of private educational institutions is necessary. In further consequence, parameters, measuring criteria and key figures can be developed on this basis to create customized controlling. Aim of the following part is an intensive examination of the processes of private educational institutions. This will be used as a basis for a further evaluation of processes in order to determine the influence of particular processes in educational institutions. To reach this aim the necessary and trendsetting processes will be defined with regard to the exemplary institutions Ingenium Education and Studienzentrum Weiz.

Keywords: Education controlling, processes, private Institutions

Introduction

"Knowledge has doubled during 1800 (Napoleon) and 1900 (Wilhelm II) and it did so until 1950 (Adenauer). Then it only took 10 more years to double again. Today, this time span has decreased to a mere four years." ⁵⁶ Parts of our knowledge lose their value rather quickly -50 percent of EDP-related knowledge becomes outdated and obsolete only after two years, knowledge in technology loses half of its value during the first four years.⁵⁷ Due to this development the importance of lifelong learning has been increasing drastically during the past years.

More and more employers view tertiary education of their employees as an investment as well as a possibility of gaining a crucial increase in knowledge. A study conducted in 2008 by the Institute for Basic Research (Institut für Grundlagenforschung) showed that 64 percent of the companies surveyed would be willing to grant their employees further training during working hours, at least 59 percent would agree to support them financially as well.

In the area of tertiary education there is a clear trend towards academic tertiary education. "In Germany 13,000 beginning students took up correspondence courses in 2009, which is a plus of 18 percent."⁵⁸ Ingenium Education, one of the biggest private institutions for tertiary education in Austria, was able to record a massive trend towards tertiary education in recent

⁵⁶ Bartscher/ Huber 2007: p. 4

⁵⁷ Vahs/ Burmester 2002: p. 10

⁵⁸ http://www.tagesspiegel.de/wirtschaft/karriere/fernstudium-liegt-im-trend/1713450.html

years. From 2009 to 2012 1.500 professionals have taken up their studies with Ingenium, which is a plus of about 50 percent.⁵⁹

In the field of tertiary education only a small part of the courses of studies is being offered by public universities. It is only in the areas of medicine and natural sciences that public universities still have an accordingly higher market share.⁶⁰

For the largest part, lifelong learning can only be achieved through extra-occupational tertiary education offered by private educational institutions. It is of highest importance for the employees to be able to retain their jobs during their extra-occupational studies, which makes special solutions and flexible organization indispensable. Particular focus lies on a high degree of service orientation and on tailoring the education programs exactly to the wants and needs of the target group.

However, the work of privately financed educational institutions is subject to particular financial straits as they cannot draw on comprehensive public financing. Nevertheless, these institutions have to cope with students' high requirements for service and quality due to study fees. This paper will elaborate processes relevant for the installation of educational controlling, which will be evaluated on a qualitative as well as a quantitative level in order to identify the essential processes.

Statement of the problem & approach

As a result of the increasing shortage of public funds, the necessary educational mandate in the area of further education will, with an upward trend, continue to be fulfilled by privately financed educational institutions. In addition to the budgetary limits of publicly financed institutions the reasons for this development lie in necessary services, which are essential for working students to successfully complete their studies in tertiary education.

High service requirements for private institutions

Privately financed educational institutions are under high pressure. The expectations of the level of quality regarding fee-based programs are perceived as substantially higher than of those free of charge even though they have a disproportionately higher budget at their disposal due to government funding. Working students demand an appropriate degree of support in organizing and handling their studies as well as flexible study models.

Severe budget restrictions require specific controlling

According to the study "Education at a Glance" (2009) by the OECD, one student costs the country of Austria 14,000 dollars per year, which adds up to a total amount of 64,000 dollars for four years of studies. Private households, on the other hand, are rarely willing to spend money on education. On average, Europeans invest only 20 euro per month in their (further) education.⁶¹ Extrapolated to a 4-year-education this means that only 960 euro are being spent on education in total. A survey among high-school graduates in East Austria conducted by the Institute for Basic Research in 2008 showed their willingness to invest about 6,000 euro in their own education.

This scarcity of resources of the privately financed educational institutions compared to government funded educational institutions forces them to economize on their resources.

Controlling in educational institutions – a blank spot on the educational map

The sector of private educational institutions is very young. Despite the urgent necessity of customized and directly applicable control mechanisms there are still little knowledge and experience due to the recentness of the sector. Controlling in educational

⁵⁹ Data provided by the Management of Ingenium Education per 27 July 2013

⁶⁰ Cf. Schaeper /Schramm/ Weiland/ Kraft 2006

⁶¹ Cf. OECD study, Education at a Glance, 2008

institutions has rarely been explored to this day. Up until now only the sub-areas of controlling of educational processes have been researched. In order to develop a customized controlling instrument for educational institutions in higher education an examination of the crucial influencing factors of private educational institutions is necessary. In further consequence, parameters, measuring criteria and key figures are being developed on this basis to create customized controlling.

Methodology & approach

The subsequent approach consists of different steps. In a first step, a process tableau of the exemplary institutions is being created. These steps are based on extensive literature research as well as raw data supplied by the exemplary institutions. This is the result of a separately conducted research paper. On the basis of an analysis of the exemplary institutions "Studienzentrum Weiz" and "Ingenium Education" the major processes and thus main influences on private educational institutions will be determined.

Afterwards, the previously defined processes will be evaluated and the relations of the processes will be depicted, respectively. In order to do so, a point awarding system has been introduced. Furthermore, interviews with employees and management were conducted and evaluated.

Process analysis of tertiary education institutions

Aim of the following part is an intensive examination of the processes of private educational institutions. This will be used as a basis for a further evaluation of processes in order to determine the influence of particular processes in educational institutions.

To reach this aim the necessary and trend-setting processes will be defined with regard to the exemplary institutions Ingenium Education and Studienzentrum Weiz. In the following chapter these two institutions will be described briefly.

Moreover, the processes have been determined with the help of the respective institutions. The principles of process management are being discussed in an excursus.

Display of the exemplary institutions

This part of the paper will provide information about the Austria-based exemplary educational institutions Ingenium Education (short: Ingenium) and "Studien- und Technologie Transfer Zentrum Weiz" (short: Studienzentrum Weiz). The two institutions have approximately 1,800 students and about 400 graduates per year and are thus market leader in the field of private higher education in Austria.

Since the end of the 1990s Ingenium Education and Studienzentrum Weiz have been organizing extra-occupational studies in cooperation with the University of Applied Sciences Mittweida and the Leipzig University of Applied Sciences. Nationwide there are 14 different locations with 16 employees (12 full-time employees), 22 study program leaders and 120 lecturers who supervise 1,800 students. The institutions offer technical diploma studies in the areas of Information and Communication Science, Engineering, Industrial Engineering and Civil Engineering as well as a bachelor study program in Business Administration and an MBA in Industrial Management. The target group consists of employed graduates from BHS, who want to educate themselves further in their occupational field. Within the framework of the combination of on-site study courses and correspondence courses it is possible to accredit professional experience and previous education in order to customize and reduce the duration of the studies.⁶²

⁶² Ingenium Education 2010

Process analysis of the exemplary institutions

"Process management includes every planning, organizational and controlling measure for the target-oriented regulation of a company's value chain regarding its objectives, costs, time, quality, innovation capacity and customer satisfaction."⁶³ This definition from 1994 shows the importance of process management for the creation of a controlling system and therefore, from the author's point of view, an indispensable need for an elaborate analysis of the value chain of an enterprise prior to the implementation of controlling.

Principles of process management

"A process is a chain of coherent actions which jointly create a customer benefit."⁶⁴ Main factors of processes are, on the one hand, the fact that a process consists of more than one action and that, on the other hand, these coherent actions yield a profit for external as well as for internal customers. An external customer is, for instance, the end-consumer. Regarding this paper, the end-consumer can be a participant of the courses of further training or a student. Follow-up processes or an internal department which delivers legwork can be seen as internal customers.⁶⁵

The definition of processes begins with the examination of actions. The incidental actions of a company are being assorted, arranged and made comprehensible. Processes will be created from this value chain when they become structured, hence divided into sub-processes and assigned to the respective customers.⁶⁶ There are various approaches in literature on how to conduct this structuring – the following section will show the criteria most used in literature and considered most helpful.

"Processes occur on at least two levels, namely as a type and as an implementation.

The process type is obtained by a generic description of a process. The implementation is the realization of a process within the scope of an application."⁶⁷ "The process type is defined by its input and output, functions that have to be executed and rules of synchronization. There is a relation between input and output and material and immaterial things. A function depicts the transformation from input to output. Different <u>functions are connected through priority relations</u>, which limit the order in which functions can be executed. Before the execution of a function preconditions are fulfilled."⁶⁸ "A <u>typology of processes can be conducted on the basis of different implementations or features</u>."⁶⁹ <u>Klaus Schuderer (1996)</u>, who has often been quoted in this context, differentiates between the following features and implementations:

⁶³ Gaitanides/ Scholz/ Vrohlinger 1994: p. 3

⁶⁴ Feldbrügge/ Brecht-Hadraschek 2008: p. 15

⁶⁵ Cf. Feldbrügge/ Brecht-Hadraschek 2008: p. 15 - p. 17

⁶⁶ Cf. Hirzel/ Kühn/ Gaid/ Gabler 2008: p. 25 - p. 30

⁶⁷ Schmidt 2002: p. 1

⁶⁸ Schmidt 2002: p. 176

⁶⁹ Gronau 2006

| Feature | Implementation | | | | |
|--|---|--|--|--|--|
| | corporate process - overall process - sub-process | | | | |
| level of resolution/ cf. Schuderer 1996, p. 64 | - | | | | |
| | process chain – process – procedure – activity | | | | |
| added value/ cf. Schuderer 1996, p. 64 | immediate - mediate - conditional - non-value added | | | | |
| object/ cf. Schuderer 1996, p. 64, Schmidt 1997, p. | idea – information – material | | | | |
| 11, Schwickert 1996, p. 13 et al. | | | | | |
| chronology/ cf. Schuderer 1996, p. 64 | sequential – parallel – optional | | | | |
| determination/ cf. Schuderer 1996, p. 64, Schwickert | determined – variable | | | | |
| 1996, p. 11, Riekhof 1996, p. 17 | | | | | |
| frequency of execution/ cf. Schuderer 1996, p. 64, | repetitive – innovative | | | | |
| Schmidt 1997, p. 11 | | | | | |
| structure/ cf. Schmidt 1997, p. 12 | analytic – synthetic | | | | |
| complexity/ cf. Schwickert 1996, p. 11, Riekhof | low high | | | | |
| 1996, p. 17 | low – high | | | | |
| range/ cf. Schwickert 1996, p. 13 | cross-company – company-wide – cross-functional | | | | |
| task complex/ cf. Kobler 2010, p. 36 | core, management and support process | | | | |

 Table 1: Source – based on: features and implementations of processes (Merkmale und Ausprägungen zur Typologie von Prozessen)/ cf. Schuderer 1996: p. 64

"Therefore, processes can be characterized vertically according to their level of resolution and their share in the added value, respectively. Vertical criteria are used to identify different perceptions and viewpoints. Additionally, a large number of other criteria can be stated, which either refer to the process as a whole or to specific actions, which occur in the course of the process."⁷⁰

Another dimension in the description of processes results from basic features of processes which offer the possibility of grouping and attributing them.

Features can be multi-layered; therefore, there is no universally valid definition of potential features. However, a structuring into <u>core</u>, <u>management and support processes</u> can be regarded as <u>a common option</u>.⁷¹

After the analysis of actions and structuring these into processes and sub-processes according to the shown criteria, processes can be evaluated. <u>This evaluation of processes and tasks</u> can be quite challenging, especially the handling of costs that include features of opportunity costs. Therefore, temporal factors are often taken into consideration as they are easier to determine.⁷²

Günter Schmidt mentions various important factors regarding time: The end of processing, the processing time, the waiting period, schedule variances, delay, the setup time, the capacity load and the idle time of processors and tasks.

With regard to these temporal factors a multitude of individual measuring parameters can be deduced. These parameters correlate with the respective process or task and contribute to the transparent display of the evaluated procedures.

After these factors have been successfully assigned, concrete costs can be determined so that the result will give a clear overview of the use of resources and hence about especially important processes in the framework of the cost analysis.

Analysis and formation of core, management and support processes

According to the observations under 3.2.1., the processes and actions of the exemplary institutions Ingenium Education and Studienzentrum Weiz will be analyzed. It was tried to compile a complete list of the company's actions through interviews with employees and the management.

⁷⁰ Gronau 2006: p. 93

⁷¹ Cf. Kobler 2010: p. 36 et seq.

⁷² Cf. Schmidt 2002: p. 7 et seq.

According to the criteria elaborated in section 3.2.1., more than 100 actions in the exemplary institution were grouped into processes or supplemented with processes that had not been taken into account during the previous observation.

For the purposes of typing, an allocation process according to task complexes will be used, which means a <u>classification into core</u>, <u>management and support processes</u>. The outcome will be presented in the following table:

| Core Processes |
|---|
| C1 Industry analysis |
| C2 Development of educational programs |
| C3 Planning and preparation of educational programs |
| C5 Public relations |
| C4 Organization of educational programs |
| C3 Management of educational partners |
| C4 Organization of educational programs |
| C6 Support |
| C7 Evaluation and examination |
| C8 Evaluation and improvement of results |
| C9 Research und development |
| Management Processes |
| M1 Strategy and corporate development |
| M2 Financing |
| M3 Human resource management & development |
| M4 Selection und evaluation of teachers |
| Support Processes |
| S1 Corporate controlling |
| S2 Internal communication |
| S3 Support of graduates |
| S4 Quality management |
| S5 Organization of EDP & IT |
| S6 Office administration |

Table 2: Process table for institutions for further education, in-house production (2011)

Assessment of processes

The result should provide a basis for the determination of the processes with the highest influence on the success of the educational institution. In order to reach this aim the aspects elaborated in section 3 will be examined in a multilevel test process. It is the basic goal to include objective and measurable as well as subjective criteria into the decision-making process. It is being examined which processes in the educational institution tie up the most personnel resources quantity-wise and to which extent they have budget responsibilities. In the framework of a qualitative examination it is to be determined which processes successfully influence other processes.

In a first quantitative evaluation process, the different processes are being evaluated on the basis of a survey among the employees regarding resource consumption/personnel expenses.

Second, a three class categorization will be used by the management to assess to what extent the particular processes carry "budget responsibilities" and thus have an increased necessity for controlling.

The concluding process then examines if and in how far an individual process has influence on another process, which would determine if there are processes in particular need of controlling. This examination is based on the creation of an evaluation matrix analyzed and completed by the management.

The following questions are to be answered in the course of the examination process:

- Which processes consume which amount of internal resources?
- Which budget responsibilities do the processes carry?
- How do the processes influence each other?

After the completion of the particular evaluation steps, a total score is being calculated and evaluated subjectively according to the company's perspective. The result consists of a list of the most important processes according to objective as well as subjective aspects.

All other steps of the analysis have been rated according to a three points system. Every process will be given one to three points: "3": overproportional importance/alteration; "2": proportional importance/alteration; "1": underproportional importance/alteration; "0": no relationship/minor importance in the context.

Quantitative assessment: resource consumption

Regarding the evaluation of the resource consumption of the educational institution the main focus lies on the factor "labor", which means human resources.

In order to gain insight into the most labor-intensive processes the management and the employees of the institutions were requested to subjectively rate the over 100 actions that had been determined beforehand. Every employee has tried to evaluate the effort necessary for each process in relation to the relative share of the work availability in total.

After the completion of the employees' and the management's evaluation, the outcome presents itself as follows: resource consumption of labor apportioned to the previously determined processes, listed according to importance and already supplemented with the assigned evaluation points:

| Туре | 1 st degree process | Weighted effort/ human resources unit | Points |
|------------|--|--|--------|
| C3 | Management of educational partners | 9.11% | 3 |
| C6 | Support | 31.01% | 3 |
| S5 | Organization of EDP & IT | 11.83% | 3 |
| M2 | Financing | 6.75% | 2 |
| C2 | Development of educational programs | 4.02% | 2 |
| C4 | Organization of educational programs | 5.92% | 2 |
| C5 | Public relations | 6.27% | 2 |
| S2 | Internal communication | 4.62% | 2 |
| S6 | Office administration | 6.98% | 2 |
| M1 | Strategy and corporate development | 2.37% | 1 |
| M3 | Human resource management & development | 1.07% | 1 |
| M4 | Selection und evaluation of the teachers | 1.54% | 1 |
| C7 | Evaluation and examination | 1.78% | 1 |
| S 1 | Corporate controlling | 3.43% | 1 |
| S 3 | Support of graduates | 1.54% | 1 |
| C1 | Industry analysis | 0.71% | 0 |
| C8 | Research & development | 0.24% | 0 |
| S4 | Quality management | 0.24% | 0 |

Table 3: Process evaluation of Ingenium Education; source: Ingenium Education (2011)

Quantitative assessment: budget consumption

The second step consists of the evaluation of the processes in monetary terms. The different processes cannot be rated equally regarding the institution's budgetary distribution. The process of public relations, for instance, consumes only a small amount of human resources but 10 to 20 percent of the total turnover depending on corporate policy.

Therefore, the management was asked to distribute respective budget responsibilities among the processes in order to determine another source of information on the importance of particular processes. The processes were evaluated as follows:

- "0": little influence on budget
- "1": less budget consumption than human resource consumption
- "2": human resource consumption equivalent to budgetary responsibility
- "3": higher budget consumption than human resource consumption

| Туре | 1 st degree process | Human resource | Points |
|------------|--|----------------|--------|
| C4 | Organization of educational programs | 5.92% | 3 |
| C5 | Public relations | 6.27% | 3 |
| S 1 | Corporate controlling | 3.43% | 3 |
| M1 | Strategy and corporate development | 2.37% | 2 |
| S4 | Quality management | 0.24% | 2 |
| S6 | Office administration | 6.98% | 2 |
| M2 | Financing | 6.75% | 1 |
| M3 | Human resource management & development | 1.07% | 1 |
| C1 | Industry analysis | 0.71% | 1 |
| C2 | Development of educational opportunities | 4.02% | 1 |
| C3 | Management of educational partners | 9.11% | 1 |
| C6 | Support | 31.01% | 1 |
| S5 | Organization of EDP & IT | 11.83% | 1 |
| M4 | Selection und evaluation of teachers | 1.54% | 0 |
| C7 | Evaluation and examination | 1.78% | 0 |
| S2 | Internal communication | 4.62% | 0 |
| S3 | Support of graduates | 1.54% | 0 |

 Table 4: Evaluation of processes in relation to budgetary criteria; source: interviews with the management of

 Ingenium and Studienzentrum Weiz, April 2013

Qualitative assessment: impact matrix

In the third step, another qualitative evaluation method will be used, namely the elaboration of process relations. The evaluation process is concerned with in how far the processes have an influence on each other. With the help of interviews with the management of the representative educational institutions a process relationship matrix has been produced. The abovementioned criteria 0 to 3 were used for this production:

| Process relationship matrix | | | | ¥ | | | | | | 1 | | | | | | | | | | |
|--|----|------------------------------------|-------------|---|--|---------------------|---------------------------------------|--------------------------------------|--|--------------------|-----------|------------------------------|-------------------------|--------------------------------------|------------------------|----------------------|--|-------------------------|-----------|-------------------|
| Process influences | | Strategy and corporate development | K Financing | S Human resource management & development | Selection und evaluation of the teachers | 🖸 Industry analysis | O Development of educational programs | ට Management of educational partners | A Organization of educational programs | G Public relations | 9 Support | C Evaluation and examination | 位 Corporate controlling | ⁶⁰ Internal communication | 🛚 Support of graduates | A Quality management | ⁶⁰ Organization of EDP & IT | Ø Office administration | Influence | 0 |
| Strategy and corporate development | MI | IMI | 3 | 2 | 0 | 0 | 2 | 1 | 0 | 2 | 0 | 0 | 0 | 52 | 0 | 0 | 2 | 0 | 104 | Quotient 14144 |
| Financing | M2 | 3 | 3 | 2 | 0 | 0 | 3 | 1 | 2 | | 3 | 0 | 3 | 0 | 0 | 0 | - 1 | 1 | 200 | 27200 |
| Human resource management & development | M3 | - | | - | - | | - 3 | | | | | | | | | | - | | | |
| Selection und evaluation of the teachers | M4 | | 1 | | 0 | 0 | 1 | 3 | 2 | 2 | 3 | 1 | 0 | 2 | 0 | 0 | 1 | 2 | 190 | 25840 |
| Industry analysis | CI | 1 | 0 | 0 | | 0 | 0 | 1 | 1 | 2 | 1 | 2 | 3 | 0 | 1 | 0 | 0 | 0 | 72 | 9792 |
| Development of educational programs | C2 | 3 | 0 | 0 | 0 | | 2 | 2 | 0 | | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 44 | 5984 |
| Management of educational partners | C3 | 0 | 2 | 2 | 2 | 0 | | 3 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 1 | 0 | 120 | 16320 |
| Organization of educational programs | C4 | 1 | 0 | 2 | 1 | 0 | 3 | | 2 | 3 | 3 | 1 | 0 | 2 | 1 | 1 | 1 | 1 | 220 | 29920 |
| Public relations | C5 | 0 | 1 | 0 | 0 | 0 | 2 | 2 | | 1 | 2 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 80 | 10880 |
| Support | C6 | 0 | 2 | 2 | 0 | 0 | 0 | 1 | 1 | | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 100 | 13600 |
| Evaluation and examination | C7 | 3 | 3 | 2 | 0 | 0 | 0 | 3 | 1 | 1 | | 0 | 0 | 1 | 2 | 0 | 1 | 1 | 180 | 24480 |
| Corporate controlling | S1 | 1 | 0 | 1 | | 0 | 0 | 1 | 1 | | 3 | | 2 | 0 | 0 | 2 | 0 | 0 | 84 | 11424 |
| Internal communication | S2 | 2 | 3 | 0 | 2 | 2 | 0 | 1 | 0 | 3 | 1 | 1 | | 0 | 0 | 0 | 0 | 0 | 120 | 16320 |
| Support of graduates | 53 | 1 | 0 | 2 | 1 | 1 | 2 | 2 | 2 | 1 | 2 | 0 | 0 | 6 | 0 | 1 | 0 | 0 | 120 | 16320 |
| Quality management | S4 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 1 | | 1 | 0 | 0 | 0 | | 1 | 0 | 0 | 72 | 9792 |
| Organization of EDP & IT | S5 | 1 | 0 | 1 | 2 | 0 | 2 | 1 | 2 | | 2 | 2 | 2 | 1 | 0 | | 0 | 3 | 120 | 16320 |
| Office administration | S6 | 0 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 2 | 3 | 0 | 0 | 0 | 2 | | 3 | 112 | 15232 |
| Influenceability | 50 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 40.0 | 100 | 13600 |
| Quotient | | 136 | 190 | 190 | 84 | 24 | 152 | 240 | 144 | 190 | 260 | 60 | 88 | 88 | 48 | 60 | 63 | 120 | | |
| Second In the second seco | | 0.76 | 1.05 | 1 | 0.9 | 1.83 | 0.79 | 0.92 | 1.8 | 0.53 | 0.69 | 1.4 | 0.73 | 0.73 | 0.64 | 2 | 1.78 | 0.83 | | |

Figure 1: process relationship matrix Ingenium Education/Studienzentrum Weiz; source: interviews with the management of Ingenium, Studienzentrum Weiz, April 2013

After the creation of the process relationship matrix, the accumulated influence of processes was calculated und multiplied by a special weighting factor elaborated with the institutions. The total of the awarded points is used as the basis for a final listing in order to gain a result from this examination step.

| Туре | Process relationship matrix | Influence | Weighting | Points in total | Points |
|------------|---|-----------|-----------|-----------------|--------|
| S4 | Quality management | 25 | 10 | 250 | 3 |
| M3 | Human resource management & development | 19 | 10 | 190 | 3 |
| C6 | Support | 18 | 10 | 180 | 3 |
| C3 | Management of educational partners | 22 | 8 | 176 | 3 |
| M2 | Financing | 20 | 8 | 160 | 3 |
| S1 | Corporate controlling | 15 | 10 | 150 | 2 |
| M1 | Strategy and corporate development | 13 | 10 | 130 | 2 |
| C2 | Development of educational programs | 15 | 8 | 120 | 2 |
| S2 | Internal communication | 15 | 8 | 120 | 2 |
| C5 | Public relations | 10 | 10 | 100 | 2 |
| M4 | Selection und evaluation of teachers | 12 | 8 | 96 | 1 |
| S 3 | Support of graduates | 12 | 8 | 96 | 1 |
| S5 | Organization of EDP & IT | 16 | 6 | 96 | 1 |
| C7 | Evaluation and examination | 14 | 6 | 84 | 1 |
| C1 | Industry analysis | 11 | 7 | 77 | 1 |
| S 6 | Office administration | 10 | 7 | 70 | 1 |
| C4 | Organization of educational programs | 10 | 4 | 40 | 1 |

Table 5: weighted and sorted process relationship matrix

Closing assessment

In the concluding step, the outcome of the previously conducted analyses will be put together, which results in a points-based ranking. The sum of the points of the individual processes is being multiplied by a weighting factor determined by the representative institutions.

With this weighting factor, a factor that is subjectively important to the company has crucial influence on the evaluation.

The weighting of the sum of the points leads to a concluding result and thus a finalized ranking of the processes according to their relevance to the corporate management of educational institutions:

| Type | 1ª degree process | Personnel expenditure | Budget responsibilities | Process relations | Total | Weighting | Result |
|------|---|--------------------------|----------------------------|----------------------|-------|-----------|--------|
| C5 | Public relations | 2 | 3 | 2 | 7 | 10 | 70 |
| C6 | Support | 3 | 1 | 3 | 7 | 10 | 70 |
| S1 | Corporate controlling | 1 | 3 | 2 | 6 | 10 | 60 |
| C3 | Management of educational partners | 3 | 1 | 3 | 7 | 8 | 56 |
| M1 | Strategy and corporate development | 1 | 2 | 2 | 5 | 10 | 50 |
| M3 | Human resource management & development | 1 | 1 | 3 | 5 | 10 | 50 |
| S4 | Quality management | 0 | 2 | 3 | 5 | 10 | 50 |
| M2 | Financing | 2 | 1 | 3 | 6 | 8 | 48 |
| C2 | Development of educational programs | 2 | 1 | 2 | 5 | 8 | 40 |
| S6 | Office administration | 2 | 2 | 1 | 5 | 7 | 35 |
| S2 | Internal communication | 2 | 0 | 2 | 4 | 8 | 32 |
| S5 | Organization of EDP & IT | 3 | 1 | 1 | 5 | 6 | 30 |
| C4 | Organization of educational programs | 2 | 3 | 1 | 6 | 4 | 24 |
| M4 | Selection und evaluation of teachers | 1 | 0 | 1 | 2 | 8 | 16 |
| S3 | Support of graduates | 1 | 0 | 1 | 2 | 8 | 16 |
| C1 | Industry analysis | 0 | 1 | 1 | 2 | 7 | 14 |
| C7 | Evaluation and examination | 1 | 0 | 1 | 2 | 6 | 12 |

Table 6: result of the process evaluation, finalized list

Summary

The purpose of this paper was to establish a process tableau for private educational institutions with the aid of representative exemplary institutions and to evaluate these processes through particular quantitative and qualitative evaluation methods. Objective criteria such as the consumption of personnel resources or budget as well as subjective criteria specified by the institutions had an influence on the evaluation process.

All of the analysis criteria were determined by the author in cooperation with the institutions. It is evident that these criteria could be amended by further aspects such as the influence of alterations and innovations on processes. All in all, an objective illustration of those processes in educational institutions that require special controlling has been presented and evaluated with regard to personnel and budget resource consumption as well as the influence of processes on each other.

The following core, support and management processes have been determined as the most important ones:

- core process public relations
- core process support
- core process management of educational partners
- support process corporate controlling
- support process quality management
- management process strategy and corporate development
- management process human resource management & development
- management process financing

This ranking can be viewed as a sole basis for the further elaboration of parameters, measuring criteria and key figures in order to establish customized educational controlling tableaus for private higher education institutions.

List of abbreviations

| AHS | allgemeinbildende höhere Schule (academic secondary school - upper cycle) |
|-------|--|
| BHS | berufsbildende höhere Schule (higher-level technical and vocational college) |
| CIPP | Context Input Process Product |
| e.V. | eingetragener Verein (registered society) |
| EDP | electronic data processing |
| FH | Fachhochschule (University of Applied Sciences) |
| HAK | Handelsakademie (commercial high school) |
| HTL | Höhere Technische Lehranstalt (secondary technical school) |
| HUM | Humanberufliche Schulen (college of social and services industries) |
| IGC | International Group of Controlling |
| ISO | International Organization for Standardization |
| IT | Information technology |
| Ltd. | limited company |
| PLC | public limited company |
| QSRG | Qualitätssicherungsrahmengesetz (law providing guidelines for quality |
| | management) |
| ROI | return on investment |
| SWO | Strengths Weaknesses Opportunities Threats |
| UniAk | kG Universitäts-Akkreditierungsgesetz (university accreditation law) |
| VOI | Value of Investment |

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References:

Bartscher/ Huber, Praktische Personalwirtschaft: Eine praxisorientierte Einführung, issue2, Verlag Gabler, 2007, ISBN 3834902330, 9783834902337

Brecht-Hadraschek/ Feldbrügge, Prozessmanagement leicht gemacht, 2nd edition, Finanz Buch Verlag, München, 2008

Burmester, Vahs, Innovationsmanagement.: Von der Produktidee zur erfolgreichen Vermarktung., *Praxisnahes Wirtschaftsstudium*, issue2, Verlage Schäffer-Poeschel, 2002, ISBN3791020080, 9783791020082

Burmester/ Vahs, von der Produktidee zur erfolgreichen Vermarktung, Schäfer-Poeschel Verlag, 2002

Friedrich, Qualitätsmanagement in der Hochschulbildung im Spannungsfeld Bildungswesen-Industrie, Masterthesis, Hochschule Mittweida, 2010

Gaida/ Hirzel/ Kühn, Prozessmanagement in der Praxis: Wertschöpfungsketten planen, optimieren und erfolgreich steuern, issue2, Verlag Gabler, 2008

Gaitanides / Scholz/ Vrohlinger, Prozessmanagement Grundlagen und Zielsetzungen, Carl Hanser Verlag, München/ Wien, 1994

Gronau, Wandlungsfähige Informationssystemarchitekturen – Nachhaltigkeit bei organisatorischem Wandel, 2nd edition, Gito Verlag, Berlin, 2006

Kobler, Qualität von Prozessmodellen, Kennzahlen zur analytischen Qualitätssicherung bei Prozessmodellierung, Logos Verlag, Berlin, 2010

Kraft/ Schaeper/ Schramm/ Weiland/ Wolter, International vergleichende Studie zur

Teilnahme an Hochschulweiterbildung, 2006, Hannover/ Bonn

Legat, Prozessmanagement anhand des Bildungsanbieters Ingenium Education,

Bachelorarbeit, 2010, Hochschule Mittweida

OECD-Studie, Education at a Glance 2008

Schmidt/ Prozessmanagement: Modelle und Methoden, 2nd edition, Springer Verlage, Berlin Heidelberg 2002

Internet Sources

http://www.tagesspiegel.de/wirtschaft/karriere/fernstudium-liegt-im-trend/1713450.html; "Fernstudium liegt im Trend" Die Zahl der Feierabend-Studenten wächst. Private Bildungsträger investieren kräftig in den Markt.

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