Trnavská univerzita v Trnave

Fakulta zdravotníctva a sociálnej práce

Jazyková kompetencia ako súčasť celoživotného vzdelávania
Sprachkompetenz als Bestandteil des lebenslangen Lernens
Language Competence as Part of Lifelong Learning

IV. ročník

Zborník príspevkov (CD ROM)

Medzinárodná konferencia so zameraním na prezentáciu výsledkov prác doktorandského štúdia v nemeckom a anglickom jazyku, organizovaná Katedrou sociálnej práce Fakulty zdravotníctva a sociálnej práce Trnavskej univerzity Trnave

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Zborník príspevkov „Jazyková kompetencia ako súčasť celoživotného vzdelávania“ prezentuje čiastkové výsledky dizertačných prác interných i externých študentov doktorandského štúdia rôznych študijných programov. Zborník je špecifický skutočnosťou, že doktorandi uverejnili svoje príspevky v dvoch svetových jazykoch. Cudzojazyčné znalosti ako kľúčové kompetencie sa dostávajú na rovnakú úroveň ako odborné znalosti, čím spoluvytvárajú profil absolventa vysokej školy ako i mladého vedeckého pracovníka. Prezentovať svoje práce v cudzích jazykoch by malo byť v súčasnom multikultúrnom svete pre každého mladého človeka samozrejmosťou i preto, aby svoje vedomosti a skúsenosti dokázal predniesť i na zahraničných fórach. Ďakujem všetkým autorom príspevkov, recenzentom a všetkým tým, ktorí spolupracovali na zostavení tohto zborníka.

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INFORMATION AS A FACTOR OF PRODUCTION: A PERSPECTIVE FOR INTERDISCIPLINARY RESEARCH OF BUSINESS AND INFORMATICS?

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Abstract

The combination of business and informatics is the mission of the German scientific subject "Wirtschaftsinformatik". As a young field of research it has actually no scientific identity. Instruments and methods, even generally accepted definitions are missing.

Consensuses are two objects of research, "Information & Communication Systems" and information as a factor of production.

This paper discusses the contribution of information to develop the identity of the "Wirtschaftsinformatik" as a field of research.

Showing the effect on information for business and informatics, a model for systematic research on information and communication systems – as the contribution to company´s value - will be developed.

Outcome of the research: information is not limited on support activities, information can also have primary value. This is demonstrated by information driven business models and the fundamental influence for the identity of the "Wirtschaftsinformatik.

Keywords:

Information, factor of production, Business and Information Systems Engineering, information value

Abbreviations and explanation:

AIS = Association for information systems, based in the USA

BICS = Business Information and Communication Systems, part of the BISE-Model

BISE = Business and Information Systems Engineering; translation of the German word "Wirtschaftsinformatik" (Heinrich, 2012, 314)

GPRS = General Packet Radio Service

ICS = Information and Communication System

ISR = Information Systems Research; equivalent to the German word Wirtschaftsinformatik, the German expression has a stronger business view (Stahl, 2009, 115).

TbCM = Type-based Customer Management

TICS = Technical Information and Communication Systems, part of the BISE-Model

Wirtschaftsinformatik = German word for the focus on information & communication systems and "information" as the factor of production

German „Wirtschaftsinformatik" on search for identity

Only incomplete answers are given to the question of the identity of the „Wirtschaftsinformatik" in Germany, as the combined research of business and informatics (Strangmeier, 2008, 447). "Wirtschaftsinformatik" is not established at present, but possibly on its way (Heinrich, 2012, 314-415).[45] The missing identity includes also the future orientation of the research.

The view of the "Wirtschaftsinformatik" in Germany is basically different to the North American Information Systems Research (ISR). For this reason the discussion about the positioning and identity is necessary (Schauer, 2008, 1).

This paper deals with the question, if information as a factor of production can contribute to increase the identity of the "Wirtschaftsinformatik" as a autonomous scientific subject.

Is information able to achieve primary value of Porter's chain? Will information remain as a support function on a low value level? Are business models, driven by information, able to increase the acceptance"? Will "Wirtschaftsinformatik" have its own objects, differentiating from the subjects of business administration or informatics? In which direction shall the German research proceed, following its own way or changing to the American way?

[45] The book of Heinrich reports about the history of Wirtschaftsinformatik. A couple of German speaking professors entitle the scientific process of Wirtschaftsinformatik as completed (e.g. Griese). The common opinion of these professors is, the identity is a general problem of Wirtschaftsinformatik, especially within the international context.

Factor of production as an object of research

Definition of „Wirtschaftsinformatik“

The German word „Wirtschaftsinformatik“ does not have an identical translation in the English language. The word by word translation comes to “business informatics” (Stahl, 115). This translation is not used in the field of research.

The dominating field with similar objects is named “information systems research” (ISR) within the American science. This term was defined by the community “Association for Information Systems (AIS)”. Both, the German „Wirtschaftsinformatik“ and the American ISR, are focusing on information systems, but from different views (Steininger, 2009, 411).

Behavioural science and design science have different views. “The behavioural-science paradigm seeks to develop and verify theories that explain or predict human or organizational behaviour. The design-science paradigm seeks to extend the boundaries of human and organizational capabilities by creating new and innovative artefacts” (Hevner, 2004, 75)

For this reason the American “Information Systems Research” cannot be used as a translation of the German „Wirtschaftsinformatik”. The solution can be the translation “Business and Information Systems Engineering”. This is the title of the German journal as the 1:1 translation from “Wirtschaftsinformatik” to “Business Information & Systems Engineering” (Heinrich, 2012, 314). Therefore the term „Business & Information Systems Engineering“ (BISE) will be used in this paper.

Information as subject of research

Objective of BISE are information and communication systems (ICS) in private and public enterprises” (Mertens, 2009, 1). The word “Information“ describes the most important task, to provide information for steering processes and decision making. Central issue is the management of “information” as the factor of production (Mertens, 2009, 1).

BISE understands itself as an interdisciplinary subject, combining business and informatics. Additionally, BISE has the task to extend this knowledge (Mertens, 2009, 4). Achieving this objective is an indication for the autonomous identity of the subject.

The American driven AIS community entitles “information” as a general task of the Information Systems Research.

Definition and content of information

The word „information“ is often used, but not clearly defined. (Krcmar, 2003, 17). Originally it comes from the Latin word “informatio” and means, „concept”, “idea”, “advice” or “instruction”. Within the subject “business administration” a definition was initiated many years ago: “information is defined as knowledge with special intention”. This leads to an increasing importance of the word “information” quoted according to Krcmar, 2017, 17). Characteristics are the ability to be easily carried, easily copied and easily transferred from one information carrier to another person or system (Thome, 2006, 53).

The value of information is based on the support of the core business of companies, e.g. for decision making. (Schwarze, 1998, 30). Another option is information as a good with own value for the company’s success. (Bode, 1993, 61 ff, quoted according to Krcmar, 2003, 19).

The factor of production shows deep differences to material goods.

Comparison of material goods and information as a good		
Type of good / Criteria	Material good	Information as a good
Costs for production	High: by production (in most cases)	Low: copy of digital data
Loss by usage	by use	no loss
Ownership	one owner	multiple owner of same good
Divisiblity	no diversability or loss of diversibility	no loss of diversibility
Protection	physical protection (electronic possible)	data security and protection (electronic mostly)
Logistics	complex	easy by disc or data transfer
Market Price	market price by search engine	market price difficult to evaluate (mostly)
Definition of use	Use is obious and visible	use depends on situative tasks (mostly)
Life Cycle	elimination requires logictical tasks (mostly)	elimination by "deletion" of data
Storage/warehouse costs	depends on the size, quality, ...	unregulated explosion of data possible
Logistics of order/delivery	Order and delivery with time lag	order and delivery without timelag possible

According to Krcmar (Krcmar, 2003, 19)

Information and material goods require different handling. While information can be easily transferred or copied, the material good needs to be carried physically. For companies the value of information needs to be protected and saved by reasonable instruments and tools. This is a growing challenge for competitiveness.

The meaning of information and related tasks shows the development of job offers. The employment rate increases much stronger than in other branches (McNurlin, B., Sprague, R.-H. jr., 2006, 4). Kondratieff entitles the current period of time “information age” (Kondratieff, 2006, 13). Information is overall driver for developments within business, society, way of shopping, globalization and many other areas.

The economic view is titled as “information society” from the beginning of the 21st century (Laudon, 2006, 11). Technical innovations such as smart phones or global communication

like GPRS have caused a permanent availability of the employees, changing the way of working dramatically.

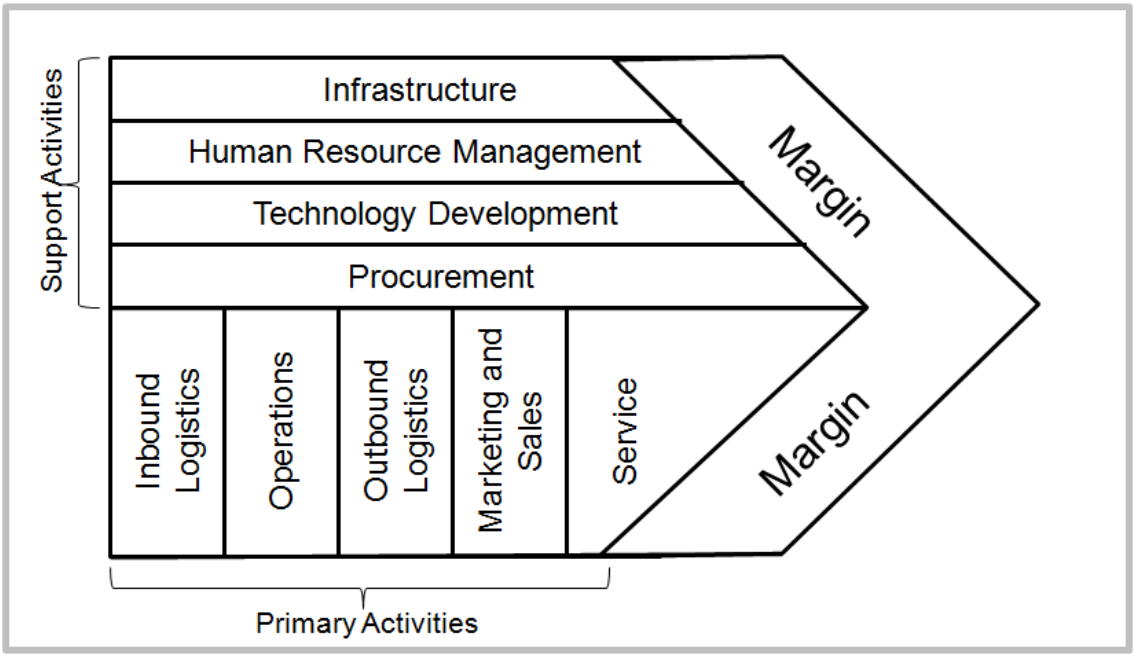
This does change the lives of individuals and society, even the priorities of business models. BISE is able to research on this development, initiating innovative concepts for better handling of information as an appropriate integration of business´ and informatics´ view.

Value added by information

The difference between material goods and information requires new perspectives to evaluate the value added of information. What is the outcome of these new perspectives? Are new ideas necessary to assess information?

Within the widely spread book „does IT Matter“, Nicolas G. Carr asked, in which cases information technology can create value add to companies. He comes to the conclusion, that information plays the role of a support function. The value of information and the related technology is entitled as to be at its end. Value of information – from technical point of view – is “limited” (Carr, 2004).

Besides technique, business is the second view. Is this view able to create additional value from information? The discussion shall be based on Michael Porter´s idea of the value chain (Porter 1985).



Information is not explicitly named within the value chain model, but it shall be part of primary or support activities. There is no indication for an important value.

Is the revision of the model necessary to integrate “information” as an autonomous task? Can the value of information be evaluated as part of the current functions?

For this reason the view will focus on the primary activities of the value chain. Primary value is given, when the factor causes a direct effect for the company (Amberg, M., Bodendorf, F., Möslein, Kathrin M., 2011, 140). So far, for “Inbound logistics”, “Operations”, “Marketing- and Sales” and “Service”, information are necessary to enable these processes, e.g. scheduling, just in time delivery and customer orientation.

Primary value is given, when information comes to a business effect, e.g. information as the result of inbound, logistics, operations or service. Outcome of operations are material goods or services. Can information also be a good?

Bode entitles information as good “by adding features” (quoted according to Krcmar, 2003, 18). This describes the support function. On the other hand information shall have an identity as “good”. As an electronic good, it can be a digital like e-books, e-learning, mp3-songs or downloads of movies. This kind of information creates a major business impact as primary value. These goods can be distributed in an electronic way, even the whole payment-process; the supply chain management and the service can be fully automated. Digital goods are defined as immaterial goods developed, spread or applied (Stelzer, 2006, 835).

Another example for direct value of information is marketing research. This information is measurable and the value of the company’s outcome can be qualified and quantified, even as a market price.

The digital goods as the outcome of the primary activity “operations” have a direct value to the companys´ outcome. The value chain of Porter doesn´t need to be extended, it is the output of the operations. This is an indication for information as primary value. Information as output causes direct value for the company and shall be used as a material good.

Focus within international research context

Development of BISE in Germany

For scientific research, the focus of BISE shall be analyzed. The demand was originally initiated by companies, when it technology started to influence the business. At the beginning of the 1950s computer technology became a unique success story. The work changed, starting with mainframe systems to personal computer systems and distributed client server systems. Technical knowledge on the one hand and the business integration on the other became high impact on the success of companies. Employees with business and technical skills were

required, Universities started to educate students with this knowledge. This is entitled as the initiation of BISE, as the scientific focus, in 1950s (Heinrich, 2012, 14).

From the end of the 1990s to the beginning of the 21st century, scientists argued the requirement for BISE and the scientific research by an increasing number of degree programs, institutes, number of students and degrees. As one of the first chairs Professor Mertens in Nuremberg (Germany) started to develop the research on BISE.

The identity of scientific research has just an slow progress. The main focus of BISE was the education of skills for the daily business and the huge demand of well skilled employees. Therefore this paper will focus on the lack of the identity of BISE.

Two directions: German BISE versus American ISR

To discuss the factor of production, an appropriate field of research needs to be selected. Two different ways are possible: the German "Business & Information Systems Engineering" (BISE) and the American "Information Systems Research" (ISR).

BISE is called a "design science". ISR as a "behaviour oriented science" is mostly based on explanations from empirical studies (Hevner, Chatterjee, 2012, 9f).

The North American behavioural science is focusing on theories. They shall be developed and proofed. The scientific objective is truth (Becker, 2006, 3).

The German design science is focusing on IT- artefacts. They will be constructed and proofed. The objective is the utility for the real-world settings (Becker, 2006,3)

Both directions carry huge lacks. ISR is rigorous in the scientific research, but has a lack of relevance. BISE will be relevant applied research close to consulting, but lack of methodical rigor (Buhl, Lehnert, 2012, 6).

The acknowledgement of the design orientation within the international scientific community is missing. This is the result of comparative literature analysis of international scientific journals (Hasenkamp, Stahlknecht, 2009, 23). English is the „lingua franca" of this scientific field, design oriented papers are not very much accepted.

The majority of the papers follow the approach of behaviourism, which is dominating the American research (Oesterle, 2010, 8).

As the answer to this dilemma, the German journal „Wirtschaftsinformatik" has been translated into English "BISE" journal, starting in 2009. Even with this strategy, the importance of the German research has not changed very much. Many papers are still not published in international journals, because of the design orientation. The dominating

behaviour orientation from North America will still be the challenge of the German BISE within the international research community.

Another answer to this dilemma is the discussion of the change of the German research to the behaviour orientation. Shall German speaking scientists follow the American way? Or shall they stick to the design theory? After a broad discussion German scientists published a memorandum about the future of the research. 111 scientists support this memorandum (Picot, 2010, 662).

Objective of the memorandum is the development of the future strategy of "Wirtschaftsinformatik". The basic question to be discussed: should the German research follow the American behaviour theory?

For this objective, the current innovative artefacts have to be cancelled and a complete new focus is necessary. The consequence includes the loss of the current orientation. Structure, modelling, relation to the needs of companies and the developed outcome will change the scientific research completely. The German researchers qualify this as a major problem of transforming the German BISE from innovation to a describing research. The memorandum has criticized this very much. If the previous outcome will be lost, the developed findings, e.g. modelling and instruments of the research have to be restructured. (Oesterle, 2010, 8f). This could end in the withdrawal of the basis of BISE, the value of the outcome will be destroyed.

The authors of the memorandum refuse this scientific switch, recommending the pluralism of methods, by the combination of design orientation with behaviour orientation as an extension. They support the rigorous research and the orientation in operations of the companies (Oesterle, 2010, 8). ISR and BISE shall be developed to a complementary orientation to benefit from each other. They develop the use of each strength to cover weaknesses and threats (Buhl, Lehnert, 2012, 3).

German journals, "Wirtschaftsinformatik" and BISE, have already started to open the design orientation to the behaviour orientation. Hevner, the American scientist, is already involved as editor. By opening the German research to the behaviour orientation, German speaking scientists hope to step to international recognition. This seems to be the silver bullet, but can this work? Or did German scientists just avoid a decision for the research view?

The opening of behaviour orientated research can extend the scientific field, but can also split up the scientists within Germany by focusing on them in two directions. The possibility of design and behaviour orientation prevents the straight development and a clear profile.

American ISR is not open to the design orientation so far. German community still needs to focus on behaviour-oriented research. This focuses on international acknowledgement.

As the conclusion, information as factor of production is relevant for both scientific directions. The discussion requires a systematic discussion to focus on research in combination with the value for companies.

Analysis of the information driven value

Business models within BISE

Information will be discussed within this paper by the design orientated view. As a factor of production value added "information" will be analyzed within a model as the basis for analysis. Discussion of models is already part of scientific research within BISE. The objective is to describe, explain und create systems, discussion theory and practice. The focus on companies operations can be discussed by focusing on appropriate parts (Holl, Auerochs, 2004, 367). „Information" as part of the company's success shall be discussed. BISE´s task is to describe relationship and structure of this objective (Holl, Auerochs, 2004, 369). It is focussing on the value add of companies (Laudon, 2010, 612). Components of the model are the architecture for the production, the service and information flow. A description of the potential benefits of the various business actors are be possible and also a description of the revenues (Timmers, 1998, 4). Business Models are the basis to analyze the strategic orientation and to answer companies´ questions (Hess, 2012, 2).

Timmers proposes ten different kinds of electronic business models, e.g. e-shops, value chain integrators or information brokerage (Timmers, 1999, 31ff).

Information as production factor will be discussed according to the proposed e-model of information brokerage by Timmers. The overall view of the information driven business model will be split in the two views of the BISE, the business and the technical view.

Structure of the business model

As discussed before, the structure of the information driven model is based on business and the technical view as the focus of BISE.

Going into details, the influence on information to these two views shall be analyzed. The systematic approach for business models is based on identifying value chain elements and the integration of information. (Timmer, 1999, 33).

The value elements of Porter gives the opportunity to evaluate the value performance and the information processes within the company (Amberg, Bodendorf, Möslein, 2011, 139-40).

The three components of the model are:

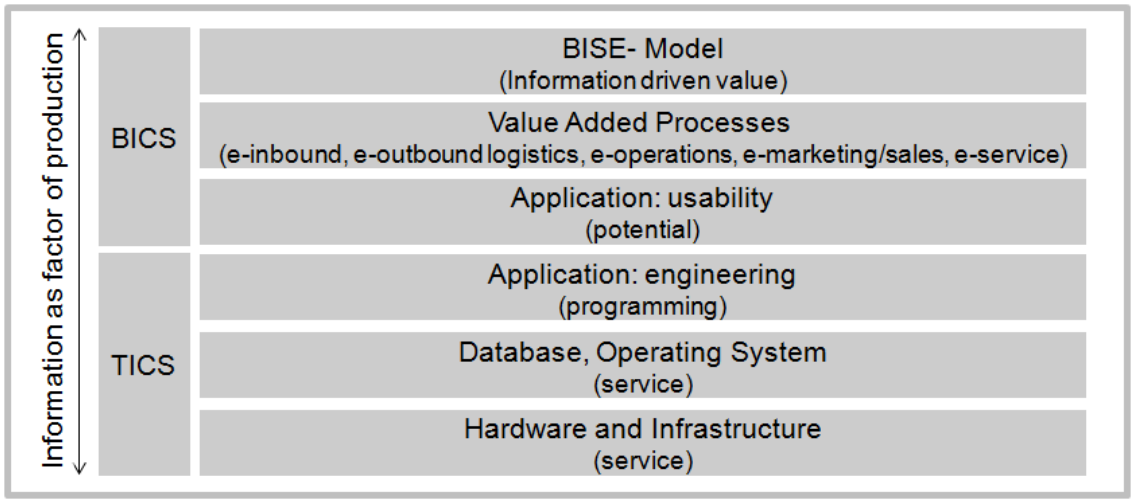
- business and technical view,
- information as the factor involved and

- evaluation of the outcome.

The components will be integrated to the information driven model as the research object of BISE. The business and the technical view will be discussed as information systems. This specifies the objective with the appropriate parts and helps for a better understanding (Alpar, Grob, Weimann, Winter, 2002, 21).

Finally the model will have three views:

- business View: Business Information and Communication Model
- technical View: Technical information and communication Model and
- information as factor of production: influencing part on every level.



Elements of the BISE-Model:

BICS (Business Information and Communication System); elements:

- Business Model: describes how organizations create, deliver and capture value (Osterwalder, Pigneur, 2010, 18). The overall value of the complete business model can be evaluated.
- Value Added Process: the primary value processes can be analyzed regarding the value added.
- Application, usability: the involved people can be analyzed regarding the value for the user. Usage, handling, operability, serviceability, price and costs will be analyzed in order to evaluate the value added of information.

TICS (Technical Information and Communication System); elements:

- Application, engineering: the efficiency of software- engineering and the quality of programming, servicing.

- Database, operating System: software, based on the data management (Data Mining, Business Intelligence).
- Hardware and Infrastructure: hardware components, networking and other parts.

Value added of information demonstrated on case studies

The value shall be discussed by four case studies from different branches. The influence of information will analyzed by the Business information & communication model (BICS) and the information technique business information & communication model (TICS). Combining the value of these two views shows the value of information for the BISE- Model. This procedure is based on the practice of BISE, case studies are the empirical prove within this field of research (Steininger, 2009, 412).

Content and procedure

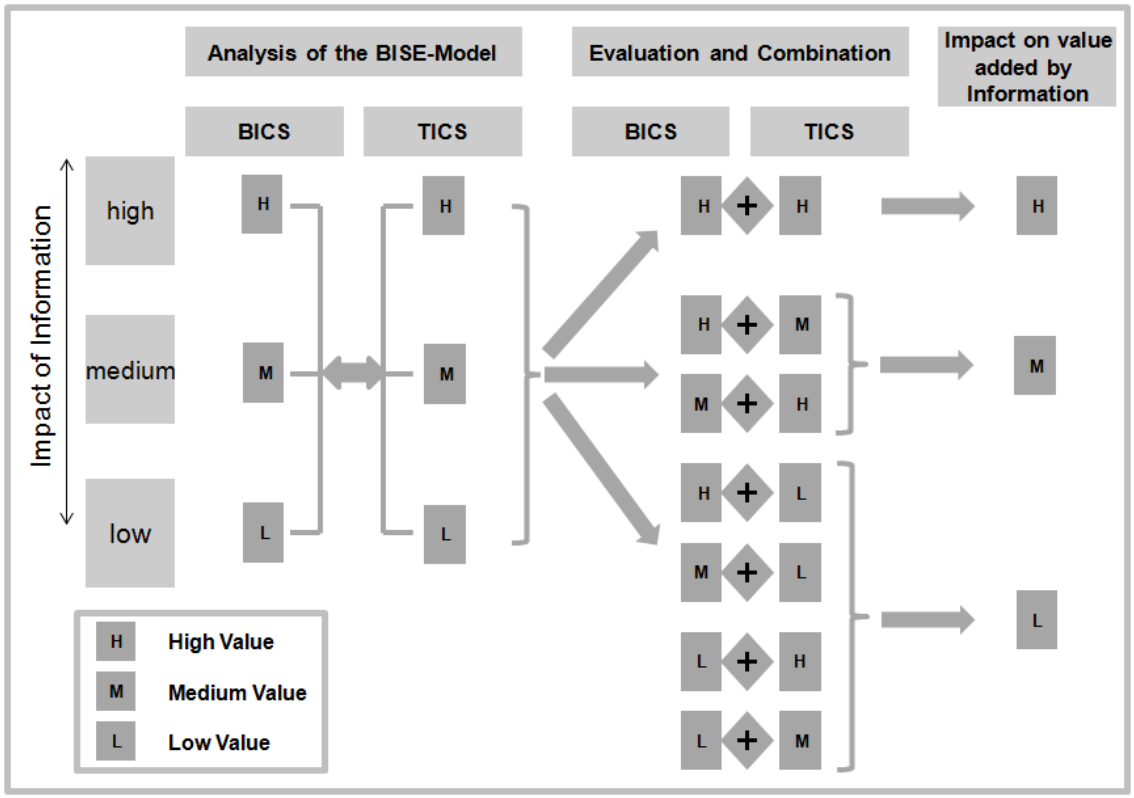
Evaluation step one: Value of information by operations as part of the value chain (case studies)

The influence on the BICS and TICS will be qualified by an ordinal scale. The ordinal scale will qualify the value of information by three different levels, high, medium and low. The value will be evaluated by the combination of BICS and TICS. The qualification will be done by the “simplex method”. The lowest level of qualification from TICS/BICS will determinate the overall assessment.

For example:

value of business information (BICS) is high; the value of (TICS) is low. The overall assessment is low.

Evaluation step two: value of information by innovative customer management



The highest overall impact of information will be reached, if information is provided in an electronic way and fully processed by technology without the influence of a human interface within the standard value process.

Overview of the procedure:

Step one: Evaluation of the value of the product by four different business models.

Outcome: level of BICS, level of TICS

Step two: Evaluation of the influence on the innovative Type-based Customer Management (innovative business concept).

Outcome: level of BICS

Step three: Combination of the Outcome step 1 and step 2

Application of the information system by case studies

Evaluation Step one: information value by primary chain

The following case studies are given:

- Health made Simple: „elektronische Geschäftsmodelle im Gesundheitswesen“ (electronic health services), (Lampert, Kowalewski, Feiler, Schatz, 2012)
- “Witt Weiden” Corporation, big German fashion distributor, subsidiary of the “otto” corporation, (Kiener, P., 2012)

- Narrow-gauge railway: “Dienstleistungen einer Non-Profit-Organisation” (services of a non-profit organization), Lampert, Dangl, Birner, Thi Nguyet, H-P., Wall, J, (2013)
- Veterinary consulting: „Beratungsleistungen für Tierarztpraxen“ (consulting services for veterinary practice), Reis (2013).

Case Study 1: Health made Simple, internet- business model

Health made simple is an innovative business model of the health business. Stressed people shall have the opportunity to get preventive health services by “app” or internet application. These services are provided by a health cockpit of the internet application.

The business model shall be evaluated by introducing the innovative approach “Type-based Customer Management” with the details product/service, customer, and communication. These factors refer to Porter´s value chain (Lampert, Kowalewski, Feiler, Schatz, 2012).

Case Study 2: Fashion distributor Witt Weiden (Germany), fashion distribution business (www.witt-weiden.com)

The company is a big fashion distributor in Germany. The business model shall be evaluated by introducing the new scientific approach “Type-based Customer Management “with the details product/service, customer, and communication. These factors refer to Porter´s value chain (representation according to Kiener, 2013).

Case Study 3: narrow-gauge railway, experimental Museum (www.feldbahn500.de)

The narrow-gauge railway is a non- profit organization located close to Nuremberg (Germany). The mission shows railway-technique to the public in a museum. The history is a live experience and adventure for the visitors.

The business model shall be evaluated by introducing the new customer management approach Type-based Customer with the details product/service, customer, and communication. These factors refer to Porter´s value chain. (Lampert, Dangl, Birner, Thi Nguyet, Wall, 2013).

Case Study 4: Veterinary Consulting

Veterinary Consulting is an innovative business model for veterinary doctors to improve their business success. The veterinary practices of many German veterinary do not work in the expected way. The demand for business consulting is given.

The business model shall be evaluated by introducing the new customer management approach “Type-based Customer” with the details product/service, customer, and communication. These factors refer to Porter´s value chain (Lampert, Reis, 2013).

Evaluation step two: value of information by innovative customer management

Objective of empirical search 1: for the case studies the value of information for the primary value chain “operations” will be evaluated. The influence of information for BICS and TICS will be checked. The combination of these two perspectives will end in the qualification for the impact of information. The level of „e“ will be qualified.

Objective of empirical search 2: for the case studies the value of information for the primary value chain “sales and marketing” will be evaluated. The „Type-based Customer Management“ (TbCM) will be evaluated. The influence of information for BICS and TICS will be checked. The combination of these two perspectives will bring an end to the qualification for the impact of information. The level of „electronic” process will be qualified.

Findings 1: value of information for value chain „operations“

Health made Simple (HmS): Health Services are provided by internet-platform. Videos and electronic check- list support of the client by improving the health. The value of information achieves the highest level of BICS und TICS and ends up in the highest level for BISE.

Fashion distribution: the operational distribution process is electronic, but the information value of the customer relation is directly influenced by the personal contact.

Veterinary consulting: consulting services are provided personally, supported by internet. The value of information starts by direct contact between consultant, client and the animal. The value processes are not standardized in general. The services shall be supported electronically by references and other information that need to be customized.

The technical support is limited by data storage and instruments of business intelligence. The potential value of TICS is high and the value of BICS is medium.

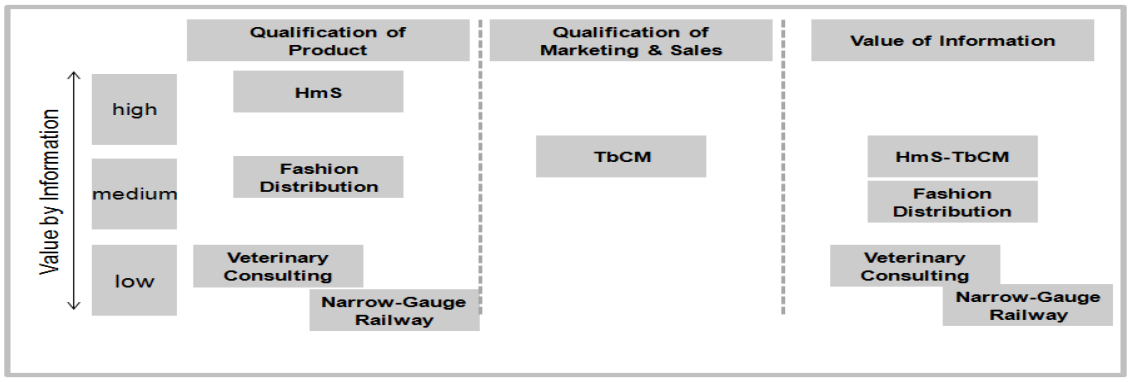
Narrow-gauge railway: The experiences within a museum are strongly related to the location. Information can be used to support the different exhibitions. The technical support is limited to data storage, addresses and information that will be presented to support the exhibition. The potential value of TICS is low; the value of BICS is low.

Findings 2: Value of information for „operations“ as the part of the value chain

Type-based Customer Management: the approach was built up business oriented. It is to be assigned to the BICS. Information has primary value on this view. The technical transfer is

not achieved. The electronic switch can be integrated by tools of data mining or business intelligence.

Step 3: overview of the results:



General interpretation for BISE

The general outcome can have three results. Value from the research of BISE, to BISE and the transformation from technical or business oriented systems, to additional value. Value from BISE creates innovations by BISE as part of its identity. Value from business and technique influences BISE. These two potentials will be discussed:

1. Value from BISE perspective:

The impact of information has the highest rate at a digital business model. As the full electronic business model this contributes to the identity of BISE.

Electronic businesses are able to develop innovations by using the combination of business and informatics. For example, e-shops with 7*24, no personal customer contact, fully pricing transparency require new strategies. It is not a people business anymore; it is an anonymous business with success factor “product/service, price, availability and the value of a search engine.

It shall be the start to evaluate electronic business within the information driven model (BISE) to innovate and individualize the customer relation in electronic view, differentiated from the personal customer relation of today to an electronic relation.

The value of information will have a major progress on higher level, creating new business models like “ebay”, “download center” of books and other information. The value of information will transform existing business models into the new world changing price models, distribution and the other parts of Porter´s value chain.

2. Value from business and technique to BISE

Innovations from the subject business administration can be adopted for new value. Technical innovations can also be adopted. The value of BISE is based in the combination of BICS and TICS.

3. Transformation by BISE

This ends in the end of encyclopedia/ newspaper like the “German Brockhaus”, the end of the print-version “newsweek”. It guides to electronic libraries with unlimited opening hours, worldwide access to Universities and educational facilities, virtual companies without borders and medical records. The human interface will be an electronic interface; the socio-technical systems will be driven by customer centred electronic relations.

1 Value of information as indication for identity

Information as factor of production can be a support function and a primary function as a contribution to the company´s value.

Reaching this goal the combination of business information and communication systems in combination with technical information and communication systems shall open new opportunities by innovations from BISE.

As shown at the example product or customer management, the highest level of benefit from BISE comes from the electronic business model, e.g. the internet-platform “Health made Simple”. These are indications for the growing importance of BISE and the developing identity. This develops with new instruments to support the customer relation and technical methods to analyze data.

Other business models like fashion distribution or railway will be supported by information. Information, which is involved in the value from elements of the primary value chain.

The share of German consumers, using online-shopping grew from 40% in 2004 to more than 60% in 2010. The share of the retail sector decreased from 36,5% in 1992 to 30,2% in 2010. The decrease is not very fast, but permanent (Dapp, 2011, 1-2).

The proposed BISE model provides the structure to analyze the value of information. The combination of business and technique becomes transparent, respecting both views to new findings. This offers the opportunity to evaluate the cause for innovation. BICS and TICS are the basis for further discussions.

Business Models with BISE are still a niche discussions within the scientific research. This shall change, when the BISE-Model is able to create information driven business models based on the technical oriented customer relation. The human interface is still individual, but supported electronically.

The problem of the design orientation of the design focus will stay as a major problem for German scientists. The information driven business model of this paper is based on thinking, but possibly not recognizing the behaviour focused research. Journals from AIS are not very interested in publishing these papers, but necessary for BISE to develop the research. The problem of internationalizing will remain till AIS will be open for design orientation.

BISE in German speaking countries by translation as an English journal will be able to expand in further European Countries, Asia or America. This shall bring much more value of within the academic world and a broader recognition of the research.

The demonstration of the German design oriented research for America will be a long term task; the first steps are done with the memorandum of the leading BISE-scientists in Germany. This finding is an contribution to take the next step.

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