Change Management of Innovation

Strategic – Design – Implementation

Eastern Institute for Integrated Learning in Management University
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Change Management as an Integrated Solution Approach for Medical Practices

1. Introduction

Few economic sectors in Germany are subject to numerous reforms and dynamics as much as the health economy. Due to governmental interventions in the health care system, insured persons and service providers alike need to continually adapt to new framework conditions (Verbraucherportal 2015). In 2003, major changes took place in the entire medical landscape. Based on the 1992 Health Care Structure Reform Act, the principle of cost coverage was abolished. From then on, physicians were no longer able to recover the costs incurred from statutory health insurance companies. Due to further state-initiated health care reforms in 2004, 2007, and 2011 and the creation of additional drastic measures associated with it, physicians were forced to fully rethink their role. As a result, physicians, to this day, have been increasingly facing the challenge of acting economically and entrepreneurially in order to still manage to generate profits and thus maintain their practices based on the legally specified remuneration (Reuschl 2011, p. 2). On the other hand, physicians must also come up to the ethical responsibility of their profession, without allowing themselves to be made ‘the henchmen of society’ (Dinkel 1991, p. 456).

Within such a complex and dynamic environment, sustainable success can be ensured only if the above-mentioned changes will be encountered with an appropriate management system. A possible solution approach is given by an

1 ‘Handlanger der Gesellschaft’
integrated change management system for medical practices which allows to prepare the medical as well as non-medical staff for the introduction and long-term implementation of new processes, and to promote the readiness and ability for changes (Schwenk 2013, p. 24). The present paper, first of all, endeavors to define the concept of change management, to justify the use of change management at medical practices, and to display the course of change management processes. Afterwards, selected solution approaches for using change management at medical practices are presented and discussed. Finally, the results of this investigation are summarized.

2. Change Management at Medical Practices

This chapter, in a first step, deals with briefly explaining the general concept of change management, and justifying why change management needs to be implemented at medical practices. In a second step, the requirements and course of change management processes at medical practices are presented.

2.1. What is Change Management?

Change management is defined by the planning and implementation of adaptive and innovative organizational changes. It is the process that makes a company achieve its target state and thereby materialize its vision. While conventional planning considers the steps to be taken to bring about a change, change management is about making the change happen. Thus, change management can be referred to as a tool for planning, initiating, implementig, controlling, and stabilizing change processes (Schloss Akademie für Medizin & Management 2014, pp. 4–6).
2.2. Why Use Change Management at Medical Practices?

As outlined in the introduction, the need for implementing various change processes at medical practices arises from the currently existing sociopolitical change. They have political, social, economical, and innovational misfits. In addition, further determinants have to be coped with as well. They concern the competition among physicians, changing values, demographic developments, technological innovations, legal changes, and the labor market (Schloss Akademie für Medizin & Management 2014, pp. 10–11). Without taking account of these aspects, the performance of medical practices would decrease more and more as time passes by. Maintaining and improving performance can only be achieved through consistent change management (Schloss Akademie für Medizin & Management 2014, p. 18).

2.3. Requirements and Course of Change Management Processes at Medical Practices

To implement change management processes successfully, four major requirements must be met (Kern 2002):

1) There must be the explicit will to change things on the part of all actors involved at a medical practice, i.e. not only on the part of employees but also on the part of physicians. It is required for physicians to set an example as regards representing and living the will to change.

2) There must be the will for continuous change. No change is permanent. Change processes, therefore, must not be evaluated in terms of being an adaptation process.

3) The success of change management processes depends on its planning and implementation. Ready-made solution approaches which have not yet been implemented do not constitute successful change management.
4) Change processes can only be successful if all parties involved contribute their knowledge and commitment in full. This implies that the entire change process must be increasingly characterized by self-control and a feedback mechanism. The consistent implementation of ongoing change management necessarily involves occasional structural changes within the entire organization of medical practices.

In principle, change processes in people invariably occur in the same manner. They always involve four stages at different intervals. The communication of the change project is always followed by a state of shock, i.e. the project is met with disbelief and doubt. The second stage is referred to as identity crisis; it is characterized by anger over the situation as it is. Only at the fourth and final stage are people willing to develop and foster innovative solutions (Schwenk 2013, p. 25). The figure below depicts the change process in people within the scope of change management processes.

![Figure 1: The Four-Stage Change Management Process in People](Source: author's own illustration based on Schwenk 2013, p. 25.)

The change management process as such is conducted in three stages, each of which is characterized by activity. The first stage – the so-called unfreezing stage – involves eliminating old knowledge and the activities associated with it from
processes. This is when people enter the above-mentioned stage of shock and confusion, which is also characterized by resistance and fighting spirit. The second stage pertains to the change process itself, where new knowledge is taught and new processes initiated. Here, people begin to reflect, ask questions, and gradually try out the new things. At the third and final stage (the refreezing stage), all new change management elements are strengthened; people have fully and successfully internalized and accepted the new elements (Schloss Akademie für Medizin & Management 2014, pp. 20–21, p. 23). Figure 2 illustrates the three stages of change management processes in relation to learning processes in people.

Figure 2: The Three Stages of Change Management Processes in Learning Processes
Source: author’s own illustration based on Schloss Akademie für Medizin & Management 2014, pp. 20–21.
3. Selected Solution Approaches for Change Management at Medical Practices

Change management controls various change processes at medical practices. Since those changes particularly affect both structures and processes as well as practice owners and employees, solution approaches can only lie in process management and its actors. With this in mind, the ensuing section focuses on presenting and discussing the following solution approaches for change management at medical practices: business process optimization and business reengineering, employee management, and self-management.

3.1. Business Process Optimization and Business Reengineering

One major solution approach for change management at medical practices is business process optimization and business reengineering. While business process optimization sets out with optimizing existing organizational structures, business reengineering brings about a radical change of the existing organizational structure. That means that in business process optimization change processes remain very stable. Integrating the medical staff in the change process right at the outset of the project minimizes the emergence of resistance. However, structures are usually changed only slightly, rather than being optimized in the best-possible way. In business reengineering, on the other hand, all structures and processes are changed and revised significantly. The implementation stage is likely to be characterized by a high degree of instability as not all staff members will immediately comply with the changes made (Reuschl 2011, p. 25). Figure 3 compares the characteristics of the two approaches.
<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Business Process Optimization</th>
<th>Business Reengineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effects on medical practice</td>
<td>• Improvement of the existing medical practice</td>
<td>• Replacement of the practice’s old organization</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Complete reengineering</td>
</tr>
<tr>
<td>Change of the practice’s organization</td>
<td>• Organizational development in small steps</td>
<td>• Radical change of the practice’s organization</td>
</tr>
<tr>
<td>Procedure</td>
<td>• Starting point: current processes</td>
<td>• Starting point: ideal processes</td>
</tr>
<tr>
<td></td>
<td>• Making the individuals involved become participants</td>
<td>• Keeping the solution secret</td>
</tr>
<tr>
<td></td>
<td>• Participation (conflict management)</td>
<td>• Exclusion of employees (conflict avoidance)</td>
</tr>
<tr>
<td></td>
<td>• Diverse self-regulation</td>
<td>• Sudden implementation of all new processes</td>
</tr>
<tr>
<td>Opportunities</td>
<td>• Learning process for all participants</td>
<td>• Radical changes overcome entrenched structures</td>
</tr>
<tr>
<td></td>
<td>• Employee expertise</td>
<td>• Concepts and solutions can be developed rather quickly</td>
</tr>
<tr>
<td></td>
<td>• Minor or no inconsistencies</td>
<td>• Time advantage in crisis situations</td>
</tr>
<tr>
<td></td>
<td>• Few subsequent improvements necessary</td>
<td>• Clearly definable stages</td>
</tr>
<tr>
<td></td>
<td>• Development of change-related know-how at all levels</td>
<td></td>
</tr>
<tr>
<td>Risks</td>
<td>• High expenditure of time at high environmental dynamics</td>
<td>• Acceptance problems and resistance</td>
</tr>
<tr>
<td></td>
<td>• Unrest due to incremental changes</td>
<td>• Friction losses due to frequent additional improvements</td>
</tr>
<tr>
<td></td>
<td>• Overcoming entrenched structures is difficult</td>
<td>• A high degree of instability at the implementation stage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• No learning processes for staff</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Short-term improvement at the expense of a long-term development</td>
</tr>
</tbody>
</table>

Figure 3: Comparing the Characteristics of Business Process Optimization and Business Reengineering in Change Management at Medical Practices
Source: author’s own illustration based on Reuschl 2011, p. 25.
3.2. Employee Management

Given the above-mentioned risks business process optimization and business reengineering respectively entail with respect to employees, employee management proves to be another major solution approach of change management at medical practices. This is due to the fact that change management processes invariably involve the occurrence of resistance on the part of employees (Schwenk 2013, p. 25). Such resistance arises from the lack of transparent objectives. Employees often do not know what is expected of them. They miss clear criteria or indicators for orientation. Moreover, employees are frequently assigned with independent tasks only or the sake of appearance, with the practice owner inquiring about the project’s progress at regular brief intervals while making various changes himself. This procedure increasingly changes the initially delegated task into instructions. As a result, employees again work according to regulation in that they are denied the possibility of working on their own initiative. In this context, physicians see their view confirmed that they have to do everything all by themselves. Another phenomenon is that there are barely any target agreements made between the practice owner and employees. Meetings often take place in terms of an informal monolog. Such a situation does not create an open communication atmosphere, with many issues remaining unaddressed. The usual result is escalation, once unvoiced issues have accumulated (Thill 2015).

Conducting effective dialog with employees at all levels and involving them in the change management process early on allows to reduce or at least minimize resistance, for resistance cannot be counteracted on a rational basis (Schwenk 2013, p. 25). The key to change management’s success lies first and foremost in a staff’s attitudes and behavior. Having said that, practice owners should carry out regular employee opinion surveys as well as perform joint project group work, involve employees in discussing any results, arrange idea contests for employees, and make intense use of all forms of communication available. Employees should
be perceived by practice owners as cooperation partners and be treated accordingly. This requires owners’ openness and acceptance – even in cases of opposing views and interests. In such situations, there must be no room for pseudo participation and hierarchical thinking, for otherwise there will be no trust and commitment on the part of the staff (Kern 2002).

3.3. Self-Management

Practice owners can incite change management processes through active self-management. In this context, self-management is understood as a practice owner’s ability to shape processes and the management of employees using management techniques, psychology, and personal leadership. The aim is for the practice owner to increase the degree of his/her own motivation on a permanent basis, as well as to pursue and continuously improve personal goals (Covey 2014, p. 79). On this matter, the Institute of Business Management Analysis in Düsseldorf, in 2006, conducted an extensive study at 260 medical practices from the point of view of practice owners, employees, and patients using a specially developed tool. As a result of the initial survey, necessity for change was given in the fields of employee management (81 %), organization (78 %), planning (73 %), marketing (68 %), and finance management (67 %). The results figures clearly showed that carrying out a change management process had to be taken into consideration with respect to the fields in question (Thill 2007, p. 15).

Subsequently, all 260 medical practices were subjected to a double benchmarking comparison with regard to the figures in question: On the one hand, it was analyzed how many of the practice management regulations and measures used by successful practices were applied. On the other hand, a comparison was made between the respective practice management system and medical practices of the same specialist fields. While in the initial analysis the medical practices surveyed implemented 31.6 % of the top practice measures and 50.3 % of the measures of
related practices on average, the average figures after conducting the change management process were 71.4 % and 94.3 %, respectively. This clearly shows that changing the management system of medical practices can lead to increased competitiveness and corporate stability (Thill 2007, p. 16).

As a result of the above self-management process, it became apparent that the practice owners surveyed showed a higher degree of satisfaction than before. They felt the significant relief effects on account of delegating non-medical tasks to the staff, the reduced need for control due to improved coordination, the tangible reduction of stress factors in everyday activities, the decreased number of conflicts, a higher degree of ease in patient care, and considerably increased work motivation. The staff members too experienced positive changes, i.e., facilitation of work through clearly defined regulations, a greater scope for independent work, increased work motivation due to the contribution of own ideas, improved communication in the team, more regulated working hours, an improved working atmosphere, and an improved relationship with the practice owner. Last but not least, patients benefited from shorter waiting times, improved process-related workflows, an improved atmosphere at the medical practice, a friendly staff, more information from the staff and physicians, and improved personal care (Thill 2007, p. 16).

The amount of work required to implement all measures was 28 hours on average per practice. This example clearly demonstrates that effective and efficient practice and self-management constitute two factors that are positively changable with very little effort (Thill 2007, p. 17).

4. Conclusion

Since the abolishment of the cost coverage principle, medical practices have been suffering from economic shortcomings, which is why they need to increase its
economic efficiency. A major approach to increasing economic efficiency is change management. Following this approach, the first step was to explain the requirements and course of change management processes for medical practices, followed by presenting and discussing selected solution approaches. As for process management, they included the business process optimization approach and the business reengineering approach. While business process optimization captures existing processes for subsequent optimization, business reengineering involves the development and implementation of a completely new ideal process without affecting current processes. Another approach is employee management. To gain a successful starting position for conducting a change management process, practice owners are required to convince their employees of the planned measures, for employees are the key to success. The self-management project demonstrated that it is possible for medical practices to achieve a change management process with a high level of satisfaction for all parties involved and with minimum expenditure of time.

**Bibliography**


Implementing a Supervisory Framework in the Insurance Sector through Change Management

1. Introduction

The financial service sector, including the insurance sector, has been facing major changes for many years. As a result, insurance companies are being confronted with constantly changing capital market regulations, changed customer behavior, and new competitive behavior (Stange & Reich 2015, p. 3). Other major change factors include low-interest-rate policies, limited growth, and pressure to innovate due to saturated markets (Zimmermann 2015). At the same time, there is stagnant demand for insurance products. In such a situation, business success and growth can only be ensured by optimization of processes and operating sequences, cost reductions, and increase of earnings opportunities (A. U. 2011). It should be noted, however, that corporate strategies in the insurance industry have a long-term orientation, especially since long-term contracts encourage customers’ loyalty to the company and correspond to the insurance industry’s goal of hedging against risks without taking them deliberately. Even so, changes always involve risks (Zimmermann 2015). The aim of the present paper is to consider the supervisory framework for change management in insurance companies. To this end, the initial step is to provide a short outline about the concept, objectives, characteristics, and tasks of change management both in general with respect to the service sector in particular. Afterwards, emphasis is put on presenting and discussing the introduction of a supervisory framework as well as implementation options for change management using the example of Solvency II. The paper concludes with summarizing the results gained.
2. Change Management

2.1. Concept, Objectives, and Characteristics of Change Management

Change Management primarily refers to the design of comprehensive, trans-sectoral, and company-relevant changes in order to initiate and implement new strategies, structures, systems, and behavior. The usual driving force when it comes to taking change measures in companies is company management or the executive board. Corporate changes can be triggered in many ways, for example by introducing new products or procedures, innovations, scant resources such as time or money, intercultural collaboration, or enhancing the complexity of corporate tasks as a result of globalization. Change management’s particular objective is to control change processes in an active and targeted manner by affecting corporate processes, resources, and employees. In this context, a distinction should be made between proactive and reactive change management. While proactive change management is aimed at long-term corporate changes, reactive change management is oriented towards short-term management of externally triggered change issues. A successful change management process needs to run through three stages, i.e., unfreezing, moving, and refreezing. The unfreezing stage deals with breaking down resistance and building up the willingness to change. The second stage (the moving stage) is where corporate change actually occurs. The refreezing stage is concerned with stabilizing the elements implemented. However, employees feel a great difference between expectation and reality. Oftentimes, reality is negated or ignored. Usually, however, the necessity of changes is recognized and accepted. Action alternatives are sought and practiced until a higher level of action flexibility and handling security is reached. Ultimately, successful procedures and practices are adopted, including such tools as project management, management control, information, marketing, diagnosis, motivation, qualification and participation, or change coaching (Gabler Versicherungslexikon 2015). Figure 1 illustrates this correlation.
2.2. Change Management in the Insurance Sector

2.2.1. Management Tasks

Management’s first task during a change management process is to determine success factors without setting specifications. It has to convey to sales employees the customer’s point of view as an opportunity for development. Moreover, it is responsible for explaining to sales employees what is required to win the competition for customers (A. U. 2011). This can be achieved only through sufficient communication. Since it is management that demands change, it must support employees accordingly. A major factor lies in providing dialog-based communication in terms of conferences, training courses, workshops, or one-on-one interviews. Only through dialog can employees’ concerns and fears be addressed and dealt with (Zimmermann 2014).
Of equal importance in this context is the measurement of customer loyalty, customer satisfaction, and process organization. Motivation for change occurs only if there is consensus on the necessity, possibility, and consequences of change. Once management has succeeded in making all parties involved recognize the relevance and potential benefits of the changes made, the next step is to ensure acceptance during implementation. This can be achieved by launching a paradigm shift in addition to a shift in perspective. In doing so, management must deal with its sales staff according to the same principles that underly the dealings with customers: So, by creating specific needs, management is able to also communicate strategic requirements to its sales staff as well as to provide appropriate incentive systems. When carrying out the change management process, the first thing for management to do before considering the benefits of the change process is to point out the positive aspects of current conditions. Ultimately, management’s duty is to pay its sales staff respect for their corporate commitment (A. U. 2011).

2.2.2. Integrating the Sales Organization into the Process

Change management requires, as a first step, a change in perspective on the part of company management. Only if the sales organization can be actively and substantially integrated into the change process will the parties concerned be able to participate in its implementation in an active manner. In this context, management must put itself in the position of its sales staff in order to develop an appropriate understanding. Emphasis should be put on formulating a common goal so that everyone involved can recognize appropriate changes and improvements. From the sales organization’s point of view, that goal is sales success. Another key factor for an insurance company’s and sales organization’s success is customers’ opinion. Against this backdrop, the task is to systematically analyze the success
factors of customers' willingness to recommend and customer satisfaction in order to considerably enhance the probability of achieving closure (A. U. 2011).

### 2.2.3. Measuring Change Management’s Profitability

Another aspect to be considered within the scope of change management projects is its profitability. As a general rule, change management is at its most profitable if it succeeds in reducing short-term investment risks while addressing those learning topics that unfold its binding effect in the medium and long term for the benefit of corporate culture’s strategic development. A major part of management when measuring profitability is risk analysis, which not only includes economic consequences and occurrence probabilities of operational risks but cultural factors as well. By analyzing potential repercussions of changes and subsequently anticipating the reactions of those concerned, management functions as a multiplying factor in the change process (Minning 2015). The figure below depicts the logical sequence of change and, with it, the possibilities of dealing with change management in a professional fashion.
The above figure demonstrates that the process runs from separation through grief and relinquishment to new bonding. In between the two poles ‘bonding’ and ‘freedom’ lies the so-called stress dimension. The more positive that dimension is affected by management, the more quickly and more smoothly minor and major corporate changes can be made in the ensuing period (Minning 2012).
3. Identifying a Supervisory Framework for the Insurance Sector Within the Context of Change Management Using the Example of Solvency II

3.1. Background Information on Solvency II

Solvency II refers to a project pursued by the European Union which was adopted by the EU Parliament on April 22, 2009. Its purpose is to thoroughly reform insurance supervision law in Europe. The program was preceded by supervisory reforms as a result of Solvency I, which are to be maintained upon introduction of Solvency II (Official Journal of the European Union 2009). Ever since this decision was made by the EU Parliament, the introduction of Solvency II has been postponed several times because there are still disagreements about the architecture of EU’s financial supervision structure. The current expectation is that Solvency II might be introduced in 2017 (Fromme 2013).

The contents of Solvency II consist of a three-pillar approach. The first pillar determines minimum solvency capital, minimum capital requirement, and solvency capital requirement in relation to eligible own funds. The second pillar involves the setting of criteria for the risk management system, especially in terms of quality. The third pillar regulates insurance companies’ reporting obligations to supervisory authorities (Bundesanstalt für Finanzdienstleistungsaufsicht 2015). Solvency II’s primary objective is to develop the previous quantity-focused financial supervision system into a comprehensive and risk-oriented supervisory system (KPMG 2009).

Solvency II will change the German insurance landscape significantly and sustainably. As early as 2009, ‘Minimum Requirements for Risk Management in Insurance Undertakings (MaRisk VA)’ became effective, providing that all insurance companies implement this requirement long before Solvency II is introduced (KPMG 2009). Due to insurance companies’ long-term orientation, which was already mentioned at the outset, a protracted, difficult process can be...
expected. Implementation of supervisory determinants, in particular, is going to be of great importance.

3.2. Supervisory Requirements of Solvency II

Supervisory requirements for insurance companies determine, first of all, the set-up of risk management in terms of a risk strategy which is to present the individual risk-strategy fields in the context of a strategic framework. Also required is an organizational framework which is to regulate the development and process organization within the context of risk strategy, as well as an internal control system controlling and ascertaining risk-bearing capabilities and limitations so as to identify the risk coverage potential. Great significance is also attached to the risk-monitoring process, for which comprehensive documentation and information through appropriate communication and reporting processes, emergency management, outsourcing, and internal auditing is mandatory (KPMG 2009).

3.3. Implementing Solvency II in Insurance Companies within the Scope of a Change Management Process

Implementing Solvency II within the context of a change management process can take place in six steps, i.e., (1) professional requirements and strategy, (2) organization, risk management and data management, (3) IT and systems, (4) transparency and reporting, (5) acceptance, and (6) integration (Stahl 2009, p. 6).

Professional Requirements and Strategy

This first step involves the processing of supervisory requirements. The project team is composed of internal and external supervision law experts who are in charge of analyzing professional requirements as well as creating appropriate legal documentation. Furthermore, the team has also the task of creating documentation
for IT-related implementation. In the process, insurance companies have to take account of the various options relating to risk management – standard procedures and internal models as methods to determine quantitative risk measurement.

**Organization, Risk Management and Data Management**

The second step is concerned with processing principles of risk frameworks, risk categories, the risk management process, the organization of risk management, and internal monitoring. The project team consists of risk management and accounting. It prepares analyses and creates documentation with respect to general risk management, centralized and decentralized risk management, decision-making processes, the delegation of responsibilities and monitoring services, reporting mechanisms, auditing processes, risk management processes, and risk management technology. It is required for all documentations to be complete and valid, given that process workflows, monitoring mechanisms, and reporting, in particular, are of great importance to supervisory authorities.

**IT and Systems**

The third step deals with processing the implementation requirements of all other steps. The pivotal basis for implementation is the database, considering that access to historical as well as current and potential data must be provided at an adequate level of quality and in sufficient quantities. This results in comprehensive requirements for all data-processing systems to be specified and adjusted in the course of this step.

**Transparency and Reporting**

The aim of the fourth step is to process the reporting obligations related to the third pillar (see section 3.1). Checks are made as to whether existing reporting structures meet the increased disclosure and reporting requirements to supervisory bodies. If analysis reveals the existence of weak points, they must be immediately eliminated in accordance with the new requirements. Furthermore, requirements
relating to the disclosure of information on financial capacity, as well as the extended disclosure obligations regarding risk process management and risk management measures must also be processed. In the case of already existing structures, the possibility is given to consolidate them with the new ones throughout the company.

Acceptance
Within the scope of the fifth step, insurance companies undergo the supervisory review process. The supervisory body, as a first step, carries out individual acceptance tests with internal models. This involves reviewing documentations of previous project stages, as well as disclosing the results of stress tests and sensitivity analyses. They must be carried out as often as possible, until they are stabilized and finally accepted.

Integration
The sixth step is characterized by backtesting procedures. The risk models used must undergo an internal review process at least once a year, wherein the actual results are documented and compared with the results anticipated. Further backtests must be performed with newly installed systems. If adjustments are made, employees require intensive training. Of equal importance is the evaluation of the overall project, for it highlights both positive aspects and aspects that deserve criticism, thus increasing learning effects for the future.

4. Conclusion

The above considerations demonstrate that change management processes in the case of a changed supervisory framework within the insurance sector face special challenges. Proper preparation, timely acceptance, and a proper way of implementing the challenges of change management processes when introducing the new supervisory framework of Solvency II will reveal how elaborate the entire
process will be in individual insurance companies. Coming to grips with the new regulatory framework at the earliest-possible opportunity is therefore essential. Hence, value and risk-based control of the entire renewal process will be further major contributing factors for implementing Solvency II successfully. Introducing Solvency II will also be accompanied by a change in German and European insurance companies’ corporate cultures. Completing a change management process in a timely and successful manner ensures the rapid return to the operating business, which contributes to a company’s revenues and secures its return.

Bibliography


Peter W. Gester

Constraints of Change Processes in the Global Context
Estimations for the Period up to 2050 (35 years)

I shall conclude by saying that natural science as a form of thinking is and has always been existing in a historical context, and that its existence is based on historical thinking.
I dare to infer therefrom that nobody will be able to understand natural science unless one understands history; and that nobody will be able to answer the question ‘What is nature?’ unless one knows the nature of history. That is a question that Alexander and Whitehead have not raised. That is why I answer the question ‘Where do we go from here?’ by saying, ‘We go from the idea of nature to the idea of history’. Robin G. Collingwood, The Idea of Nature, 2005, p. 213

There is no reason why good cannot triumph as often as evil. The triumph of anything is a matter of organization. If there are such things as angels, I hope that they are organized along the lines of the Mafia. Kurt Vonnegut The Sirens of Titan

The greatest mental disorder is to believe something because we wish it to be. Louis Pasteur

The world is not enough. James Bond, 1999

The English historian Hobsbawn (1998) describes the past century as an ‘age of extremes’ that might culminate into a ‘clash of civilizations’ (Huntington 2002). Ulrich Beck summarizes these developments under the heading ‘on the way from risk society (1986) to global risk society (2008)’.

Twenty years ago, the concept of change in the context of management and/or
organizational development (Frenzel et al. 2000; Macharzina & Wolf 2010) was still a kind of magic formula bound up with the hope that change would lead the variety of processes existing in this world to a favorable way in the future. Ever since, the multifaceted container term change has been subject to a fundamental change of meaning, associating future developments with fear rather than hope and improvement (Zizek 2011; Emmot 2013). This change of meaning has been triggered by various developments at different levels.

A first triggering factor is the by now widespread awareness of the problem given the exponentially increasing world population and the resulting problem of a global overexploitation of ecosystems. By the same token, the failure of global climate conferences has revealed that there are considerable conflicts of interests between the developing and emerging countries of the Southern Hemisphere and the industrialized nations of the Northern Hemisphere (Welzer & Gerstengrabe 2013). In this context, it will also be necessary to address the question about the status, impact, and future development of technologies from a transdisciplinary perspective. Comprehensive warnings against the dangers of unabated technologization have already been given (Habermas 1968; Anders 1980, 1996, 2002; Jonas 1984; Dürr 2009).

Moreover, due to the collapse of the USSR and the dissolution of the Eastern Bloc, as well as the supposed 'end of history' (Fukuyama 1992), questions regarding geopolitical restructuring within the scope of a unipolar world order have been raised: Is the Pax Americana (Effenberger 2013) going to prevail, or is it going to raise more questions, conflicts and wars than solutions, especially considering that China and emerging countries such as India, Brazil and others have entered the scene as new global players (Hirn 2013; Kissinger 2014).

Habermas (2006) early on described the said change as the new intransparency that would entail a change at all levels of society (Sloterdijk 1983, 2008).
The change was triggered by the neoliberal turn at the beginning of the 1980s, running into an unfettered rise of casino capitalism along with its global issues, crises, declines, and uncertainties (Eagleton 2012; Crouch 2011).

Parallels between historical constellations during the period before the First World War and current geopolitical constellations have already been drawn (Clark 2013).

It therefore appears to be useful to attempt to synoptically juxtapose global developments on a transdisciplinary basis.

Futurology and, in particular, trend research are interesting, yet unreliable sciences. As many historical examples prove, things often turn out differently than one secondly thinks. The future remains an open horizon. It should nevertheless be noted that many thinkers, scientists, as well as many evaluations and studies of official government bodies, NGOs, more or less secret services, global companies and groups at least paint an alarming, if not even a pessimistic picture of future developments. In addition to specialized literature on individual subjects, various future studies have been taken into account as well (Opaschowski 2009, 2013; Abicht & Jansky 2013; Eberl 2013; Global Trends NIC 2015, 2025, 20302).

The author of the present synopsis is 63 years old; he has chosen for extrapolation a period of 35 years up to the year 2050; it is is sub-divided into three phases, i.e., long-term development, medium-term development, and short-term development. According to the average life expectancy of men in Northern industrial societies of 79 years, the author of this paper would be provided with a statistical observation period that runs into the first third of the medium-term development period.

---

Three future development periods are defined:
Future development period III (long-term trends as of 2050, i.e., in 35 years from now)
Future development period II (medium-term trends from 2025 to 2050, duration: 25 years)
Future development period I (short-term trends expected to emerge in the next ten years)

Future development period III (long-term trends as of 2050, i.e., in 35 years from now)

By 2050, approximately ten billion people will live on this planet (Emmott 2013).

That means that, by then, today's figure of 7.5 billion will have increased by roughly one-third. This makes an annual mean of round about 90 to 95 million people in addition (i.e., once the total number of people living in Germany plus those living in Sweden or Greece or Hong Kong per year).

In recent years, some emerging countries have managed to considerably improve their standard and conditions of living (Lindstrand et al. 2006³). This development will continue.

However, since the mid-1980s, the ecological footprint has exceeded the value of 1 planet Earth. This imbalance will further aggravate as to reach the value of 1 to 2.5 planet Earths (Wackernagel & Rees 1997).

Future development period II (medium-term trends from 2025 to 2050, duration: 25 years)

³ Gapminder
What needs to be found all over the globe is a way to ensure the transition from a society whose technology and economic and social system is based on fossil resources (e.g., oil, coal) to a post-fossil age. During this development period at the latest, the time of peak oil (Brökelmann 2010) will be reached. Struggles for the distribution of natural resources will have long begun (Scheub & Kuschel 2012; Grober 2013; Fischer Weltalmanach 2013; Maier 2014).

There will be an aggravated increase of hunger (Ziegler 2002, 2005, 2008, 2009) and the Global Hunger Index (Hahlbrock 2007), as well as less access to clean drinking water (Müller 2008), with the corresponding consequences.

Urbanization in terms of megacities, arrival cities, slums (Augé 2010; Saunders 2011), as well as further rural exodus in addition to an oil price explosion are the predicted consequences, along with first ecological collapses (Welzer 2012).

There will be frequent conflicts, counterinsurgency, as well as dirty, asymmetrical, and possibly also interstate wars about territories and the natural resources lying therein. The military technology acquired during the first development period will be used more frequently (Zumach 2005; Schwägerl, Rinke 2012).

**Future development period I (short-term trends expected to emerge in the next ten years)**

**Macrosociological developments**

During the first development period, strategic starting positions will continue to be ruthlessly occupied for the second and third development period. The capitalist principle of conquest by purchase or exchange will be increasingly replaced by the principles of violence and subversion, and extended by digital surveillance and spying of citizens.
Terrorist activities will come to a head, such that attacks using dirty bombs (i.e., chemical, biological, or nuclear bombs) can be expected to happen at any time (Straßner 2008; Baudrillard 2011).

**Demographic developments**

The population in the Northern industrial nations, especially in Europe, will continue to shrink.

The rest of the world population, meanwhile, will continue to grow. This development will promote ensuing migration movements and corresponding attempts of segregation (e.g., USA-Mexico, Israel-Palestine, India-Bangladesh, EU-Eastern Europe/ Mediterranean) (Miegel 2007).

The predicted result is an increase of hunger and the Global Hunger Index, as well as less access to clean drinking water, with the corresponding consequences. The oil price will continue to rise.

Global consumption of milk and meat products will further increase, with the well-known consequences for ecosystems (Welzer 2012).

Earth’s ecological and social viability will be widely overused (see Calhoun’s (1947) early experiments as well as the relevant studies on the ecological footprint).

Current environmental issues will increase and aggravate (Hüttermann 2002; Löhr 2008).

Overexploitation of the global ecosystem will continue to increase.

Increasing overexploitation of water, energy (deforestation, desertification,
overfishing, pollution), and other natural resources, accompanied by corresponding pollutant emissions (CO2, greenhouse gas etc.). (Halimi 2009; Bauer et al. 2011, Welzer & Gerstengarbe 2013)

**Fiscal, monetary, and budgetary developments**

The conjunction of Cold War military technologies, stock exchanges’ high frequency trading and game theory ideology is presented in Schirrmacher (2014).

What is more, Western industrial countries are heavily indebted (Graeber 2012; Streeck 2013; Piketty 2011, McKinsey 2015; Vogl 2010, 2015).

Among the results of these developments are currency wars (Eckert 2010).

Many countries will not succeed in changing from a debt-financed state system to a tax-financed state system (Stiglitz 2010; Streeck 2013; Wolff 2014) since they are trapped in a debt spiral due to unpayable interest charges.

As a result of this, Western countries as well as the entire Euro currency area might collapse (Otte 2011; Stelter 2014; Piketty 2015).

This, in turn, will at least question the cohesion in the enlarged EU as well as NATO’s eastward enlargement (Brzezinski 2004; Kissinger 2014).

The Dollar in terms of the world’s leading currency might lose in importance (Eckert 2010).

**Geostrategic developments**

The USA will lose its influence and possibly seek to back away from Europe in
order to move to the North American continent (Sternberg 1969; Vidal 2002; Ash 2004; Fukuyama 2006).

The unipolar world as we know it, with the USA being the hegemonic sea power, will be replaced by a multipolar world, with the continent of Eurasia being the central power. The Eurasian continent has the largest share in the world population, and it is the place where the strongest national economies are to be found.

On that continent, Russia, China, and India (RCI) will take on major geostrategic roles formerly assumed by the USA. At least, Russia will make attempts to restitute former USSR borders.

Global endeavors and expenditures in the area of arms will continue to increase, particularly outside of the debtplagued West.

By the end of the first development period, the RCI countries\(^4\) will have expanded their military forces, and developed naval forces similar to those of the USA today. Other emerging countries and subsequent Central Powers will join the new territorial hegemonies as vassal states (Hirn 2013).

Regions such as the Middle East and the Caucasus as well as those of the Stan countries will become unstable and remain a battleground due to their mineral deposits (Schwägerl & Rinke 2012; Orzechowski 2014).

There will be first water conflicts, for instance in Lima; between India, China and Pakistan (Tsangpo, Brahmaputra, the Zangmu dam); or between Pakistan and India (Indus, the Kishanganga dam). The Global Peace Index will further decrease (Senghaas 2012).

\(^4\) Russia, China, India
Domestic developments

The European-style welfare state will continue to be cut down through ‘restructuring’ (Borchert 2013; Herrmann 2011).

The Western countries will be devastated by extreme economic and currency crises.

The democratic state will keep withdrawing from public areas, including common land (Brune et al. 2007), security, supply, and infrastructure (von Arnim 2009; Roth 2014).

Public infrastructure will continue to rot or be taken over by PPP projects at citizen’s expense (Rügemer 2011).

In post-democratic states, the social contract will further erode:

Civil renunciation of force versus civil protection (Gerhard 2007; Esposito 2004).

State’s monopoly on the use of force – as can already be observed in the USA – will undergo further privatization. Structural violence and structural irresponsibility (Honegger et al. 2010) will expand (Senghaas 1972; Stapelfeldt 2010).

Civil wars (Freudenberg 2007; Unsichtbares Komitee 2010; Ley 2012; Tiqqun 2012), organized crime, and individual (violent) crime will increase (Lindlau 1987; Roth 2012; Solms-Laubach 2014).

Post-democratic states, i.e., the former democracies based on governance (Bröckling et al. 2000) and governmentality (Foucault 2010), will spread in the (Northern) world (Trojanow, Zeh 2010; Moorstedt & Geiselberger 2013,
In post-democratic societies, that is to say, in market-oriented, bisected, or authoritarian democracies, where the leading media have lost its status of a fourth power to high finance (Vogl 2015), voter participation will continue to decrease, with the result that states will lose their democratic legitimation (Bröckling et al. 2000; Crouch 2009; von Beyme 2012; Blühdorn 2013; Walter & Michelsen 2013). These developments are reflected by democracy barometers.

With the Maastricht Treaty, the EU has established the legal prerequisite for becoming an authoritarian superstate (Geppert 2013; Vogl 2015).

**Social and cultural developments**

Further development of the digital world of work 2.0 as well as corresponding upgrades to 3.0 etc., swelling of precarious and time-limited working conditions and, as a consequence, return of pauperization (Chiapello & Boltanski 2006; Altvater 2011; Crouch 2011) on the one side and increase of the mega-rich on the other side of the social continuum (Krysmanski 2010, 2012; Freeland 2013).

At the same time, one can observe shrinkage (and dissolution) of middle classes in the industrial nations. This causes an aggravation of the contrast between the poor and the rich (Stiglitz 2012), which, at the global level, is reflected in a further increase of the Gini coefficient. The American Way of Life will be substituted through Brazilianization (Beck 1999; Gersemann 2014).

This has already launched considerably enhanced social competitive struggles as well as conflicts of redistribution and distribution of funds.

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This development, moreover, leads to further social destabilization (Welzer, Leggewie 2011), which in turn is to be controlled through enhanced prevention, surveillance, and repressions.

All these developments towards compressed relationships of capital, work, surveillance, and competition encourage cases of burnout as a result of exhaustion due to performance (Marcuse 1987; Honneth 1994; Sennett 1998, 2007; Ehrenberg & Honneth 2004; Sloterdijk 2011; Neckel & Wagner 2013), as well as exponentially increased intakes of neuroenhancers and psychotropic drugs (Schwabe & Pfaffrath 2013), and absenteeism (Badura et al. 2013) in Western industrial societies.

Other keywords of global emotional and digital change include:


Global change is approaching an accelerated precision of the approximate (Gester 2013).

**Bibliography**


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Change Management in Production Processes: Financial Aspects of RFID-Projects

1. Abstract

This paper reviews the change management in production processes – especially the financial aspects of RFID-Projects. Starting with the motivation for the considered topic as mentioned above this paper is focussing on two case studies: To cover a wide range of application here are to be found an example for a small batch production as well as an example for a mass production. First is to be found a description of the considered case study and then afterwards the financial aspects for each case study are to be found. Both financial calculations are executed by the net present value method. The reason for choosing this method is that the main part of series of cash flows for Auto-ID investments are enlarged to a time period of several years.

Opposite the first thought the case study for the small batch production is much more profitable then the considered case study for the mass production. The case study for the mass production is already at a high degree of automation. There is not much to improve regarding time saving and process acceleration. In contrast to that in the considered factory for the small batch production is also operated at a high technology level with but there is a low level of automation and much human work is needed. Concluding in this case study is more potential for optimisation. The highest benefit per year is archived by changes in the process rather than with the technology itself. The change, which significantly increases the productivity, is identifying the small load carriers rather than identifying the working steps.
2. Motivation

The challenges in the area of industrial engineering caused by turbulent production environment (Shorter product lifecycles and a constantly downsizing amount of repeated orders) require an adaption of existing IT concepts like EDM (engineering data management) as well as PDM (product data management). The costs of implementation, problems with data security but also the need to improve the handling of complex processes to operate profitable as a company require the synthesis in an integrative engineering process.

Auto-ID-Concepts respectively Auto-ID-Applications offer the possibility to create analysis in real time with simultaneously recorded data. Especially in global operating companies data have to be accessible immediately at different locations - not only for the controlling department. That can be data, which directly concern the production planning and control or on the other hand data from the maintenance respectively inventory.

Implementation costs and the effort of implementation respectively -duration are factors, which decision makers in the industry partly lead to cancel Auto-ID-Projects at early stages. The gathering of personal data and personal times to create post calculations in real time doubtless contain risks regarding data privacy.

This paper is answering the open questions of implementation costs, running costs, yearly benefit and the return on investment for two case studies: One case study for a small batch application and one case study for a mass production.

3. Financial Aspects of RFID-Projects

First is to be found a description of the considered case study and then afterwards the financial aspects for each case study are to be found. Two case studies are
included in this paper. To cover a wide range of application here are to be found an example for a small batch production as well as an example for a mass production.

3.1. Auto-ID in Small Batch Production: Case Study Manufacturing of Special Tools for the Metal Cutting Industry

The first case study is a worldwide operating company, which produces tools for metal cutting. Standard products are produced at other locations in the world. The German subsidiary does produce special tools. As it is special the average order quantity is one or two. Before the product goes into the production department it has to be designed and the work preparation department has to set the order of working steps and has to choose the type of raw material. After these steps the product goes into production where an RFID systems should add benefit and minimize as well as prevent errors. Figure 1 shows the primary goals for this case study.

![Figure 1: Primary goals for an Auto-ID introduction for the small batch production](image-url)
Next is to be found the hierarchic process level model for this case study (Figure 2). The considered part for this case study is production. It is the first step of the Glauto process chain paradigm. In order to keep the focus on the financial aspects this rough overview about the process itself is only included in this paper. More details about Glauto can be found in several papers published by Andre Gleser.

![Hierarchic process level model for the small batch production](Image)

Figure 2: Hierarchic process level model for the small batch production

### 3.1.1 Net Present Value

Chapter based on (Gleser, 2010)

This chapter features the net present value method in order to economically quantify the use of the RFID-System. In the running costs are additionally included 4000€ maintenance charges (estimation) the used interest rate is 4%. The acquisition costs also include the acquisition of IT-Hardware.

The net present value will be calculated by the following formula:

\[
C_0 = \sum_{t=0}^{T} c_t \times (1 + i)^{-t} = \sum_{t=0}^{T} c_t \times q^{-t}
\]
where

\[ C_0 \] net present value,

\[ T \] planning horizon in periods,

\[ c_t \] cash flow \( c_t = e_t - a_t \),

\[ a_t \] project payback at the end of period \( t \),

\[ e_t \] savings at the end of period \( t \),

\[ i \] calculation interest rate,

\[ q \] interest rate factor \( q = 1 + i \).

Table 1: Running costs for an RFID-System in €

<table>
<thead>
<tr>
<th></th>
<th>1. Year</th>
<th>2. Year</th>
<th>3. Year</th>
<th>4. Year</th>
<th>5. Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yearly costs for new IT hardware</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Costs for new orders</td>
<td>7.578,15</td>
<td>7.578,15</td>
<td>7.578,15</td>
<td>7.578,15</td>
<td>7.578,15</td>
</tr>
<tr>
<td>Maintenance charges</td>
<td>4.000</td>
<td>4.000</td>
<td>4.000</td>
<td>4.000</td>
<td>4.000</td>
</tr>
</tbody>
</table>

Table 2: Benefit per year for an RFID-System in €
<table>
<thead>
<tr>
<th></th>
<th>1. Year</th>
<th>2. Year</th>
<th>3. Year</th>
<th>4. Year</th>
<th>5. Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benefit for repeat orders</td>
<td>7.720.28</td>
<td>7.720.28</td>
<td>7.720.28</td>
<td>7.720.28</td>
<td>7.720.28</td>
</tr>
<tr>
<td>Saved printing costs</td>
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<td>672,36</td>
<td>672,36</td>
<td>672,36</td>
<td>672,36</td>
</tr>
<tr>
<td>Benefit for automation of</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sending goods to sub-supplier</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benefit for visualizing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>next production step</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benefit for useless walks</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>of the blue men</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benefit for easier understanding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>of drawing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benefit for not filing paper</td>
<td></td>
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<td>documents</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>transponder</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sum</td>
<td>85.859,1</td>
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<td>85.859,1</td>
<td>85.859,1</td>
<td>85.859,1</td>
</tr>
</tbody>
</table>

**Table 3: Net present value of an RFID-System in €**
<table>
<thead>
<tr>
<th></th>
<th>0. Year</th>
<th>1. Year</th>
<th>2. Year</th>
<th>3. Year</th>
<th>4. Year</th>
<th>5. Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acquisition costs</strong></td>
<td>115.11</td>
<td>0</td>
<td>21.068</td>
<td>21.068</td>
<td>21.068</td>
<td>21.068</td>
</tr>
<tr>
<td><strong>Benefit</strong></td>
<td>0</td>
<td>85.859</td>
<td>85.859</td>
<td>85.859</td>
<td>85.859</td>
<td>85.859</td>
</tr>
<tr>
<td><strong>Gap (benefit – running costs per year)</strong></td>
<td>0</td>
<td>64.791</td>
<td>64.791</td>
<td>64.791</td>
<td>64.791</td>
<td>64.791</td>
</tr>
<tr>
<td><strong>Discount factor</strong></td>
<td>0</td>
<td>0.962</td>
<td>0.925</td>
<td>0.889</td>
<td>0.855</td>
<td>0.822</td>
</tr>
<tr>
<td><strong>Cash value per year</strong></td>
<td>0</td>
<td>62.297</td>
<td>59.906</td>
<td>57.599</td>
<td>55.383</td>
<td>53.252</td>
</tr>
<tr>
<td><strong>Net present value</strong></td>
<td>-115.11</td>
<td>-52.822</td>
<td>7.084</td>
<td>64.683</td>
<td>120.06</td>
<td>173.318</td>
</tr>
</tbody>
</table>

**Figure 3: Development of the net present value of an RFID-System**
3.2. Auto-ID in Bulk Applications: Case Study European Logistics Centre for Textile Production

The considered company is a Swiss company, which produces outdoor- and mountain clothing and -equipment. The company is specialized in the high quality, premium sector and is trying to be the technology leader. 55% of the products are produced in Asia or in Europe. The considered site in Germany is the European logistics centre. The complete logistic is orientated on the on time provision on commissioned and packed goods for the customers. The core of the logistic system is the Dematic multi-shuttle storage system. Cardboard boxes and cases are stored in it for commissioning. When they are needed they are automatically delivered to the picking places. An automatic small parts storage, which is constructed as a high-bay warehouse, is the replenishment for the multi-shuttle storage.

Figure 4: Primary goals for the Auto-ID introduction
Next is to be found the hierarchic process level model for this case study (Figure 5). The considered part for this case study is storing and packing. It is the first step of the Glauto process chain paradigm. In order to keep the focus on the financial aspects this rough overview about the process itself is only included in this paper. More details about Glauto can be found in several papers published by Andre Gleser.

**Figure 5: Hierarchic process level model for bulk application**

### 3.2.1. Net Present Value

Chapter based on (Yang, 2014)

This chapter features the net present value method in order to economically quantify the use of the considered RFID-System. The used interest rate is 4%. The acquisition costs also include the acquisition of IT-Hardware.
<table>
<thead>
<tr>
<th>Qty. of transponder</th>
<th>1.Year</th>
<th>2.Year</th>
<th>3. Year</th>
<th>4. Year</th>
<th>5. Year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>3.000.00</td>
<td>3.000.00</td>
<td>3.000.00</td>
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<tr>
<td>Price of transponder (assumption)</td>
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<td>0.08</td>
<td>0.07</td>
<td>0.06</td>
<td>0.05</td>
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<tr>
<td>Sum</td>
<td>270.000</td>
<td>240.000</td>
<td>210.000</td>
<td>180.000</td>
<td>150.000</td>
</tr>
</tbody>
</table>

Table 4: Running costs for an RFID-System in €

<table>
<thead>
<tr>
<th>Entry of goods</th>
<th>1.Year</th>
<th>2.Year</th>
<th>3. Year</th>
<th>4. Year</th>
<th>5. Year</th>
</tr>
</thead>
<tbody>
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<td>Commissioning</td>
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<td>135.000</td>
<td>135.000</td>
<td>135.000</td>
<td>135.000</td>
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<tr>
<td>Stock-taking</td>
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<td>5.000</td>
<td>5.000</td>
<td>5.000</td>
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<tr>
<td>Quality control</td>
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<td>4.500</td>
<td>4.500</td>
<td>4.500</td>
<td>4.500</td>
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<tr>
<td>Sum</td>
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<td>148.400</td>
<td>148.400</td>
<td>148.400</td>
<td>148.400</td>
</tr>
</tbody>
</table>

Table 5: Benefit per year for an RFID-System in €
<table>
<thead>
<tr>
<th>Year</th>
<th>Acquisition Costs</th>
<th>Running Costs</th>
<th>Benefit</th>
<th>Gap (benefit – running costs per year)</th>
<th>Discount Factor</th>
<th>Cash Value per Year</th>
<th>Net Present Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>145.864</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>-145.864</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>270.000</td>
<td>148.400</td>
<td>-121.600</td>
<td>0.962</td>
<td>-117.092</td>
<td>-232.211</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>240.000</td>
<td>148.400</td>
<td>-91.600</td>
<td>0.925</td>
<td>-84.730</td>
<td>-316.941</td>
</tr>
<tr>
<td>3</td>
<td></td>
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<td>148.400</td>
<td>-61.600</td>
<td>0.889</td>
<td>-54.762</td>
<td>-371.703</td>
</tr>
<tr>
<td>4</td>
<td></td>
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<td>148.400</td>
<td>-31.600</td>
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<td>-27.018</td>
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</tr>
<tr>
<td>5</td>
<td></td>
<td>150.000</td>
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<td>-13.152</td>
<td>-411.873</td>
</tr>
</tbody>
</table>

Table 6: Net present value of an RFID-System in €

Figure 6: Development of the net present value of an RFID-System
3.3. Comparison between Mass and Small Batch Production

This chapter deals with the comparison of the two case studies. When comparing the development of the net present value it is obvious that the case study for the small batch production has reached the return on investment after less than two years – in contrast to that the case study for the mass production will never reach the return on investment as it looks from today. The reason for that is certainly the design of the system and the way transponders are reused or not reused. The transponder of the case study of the small batch production will be once fitted on a small load carrier and reused until they are defect. In contrast to that one of the requirements for the case study mass production was to tag on article level. In this application approx. 3 millions transponders are needed each year, if tagging is done on article level with no reuse. Thus the transponders have to be as cheap as possible to gain economical usage. With smart labels the price is in 2014 approx. 0,1 €/ pc. for the needed quantity of transponders. Even with the assumed decreasing prices of transponders (Table 4) this in the greatest summand of the running costs. In contrast to that the benefit per year is increasing from approx. half of the running costs to approx. the same amount, which is the benefit per year in the fifth year of usage (Table 6 and Figure 7).
Figure 7: Comparison of the net present value for the two considered RFID-Systems

4. Conclusion and Implications for the Future

Opposite the first thought the case study for the small batch production is much more profitable than the considered case study for the mass production. The case study for the mass production is already at a high degree of automation with its automated multi-shuttle storage system and automatic barcode identification. There is not much to improve regarding time saving and process acceleration. The biggest advantage is at 4.2a commissioning, because that is the only work step where manual work by human with possible errors is done.

In contrast to that in the considered factory for the small batch production is also operated at a high technology level with assistive equipment like machining centres, CAD / CAM etc. but there is a low level of automation and much human work is needed to produce a qualitative product which satisfies the customer.
Concluding in this case study is more potential for optimisation. The highest benefit per year is archived by changes in the process (useless ways of the blue men etc.) rather than with the technology itself. As the handled quantities are low in this case study the use of barcodes to identify the small load carriers with the produced goods rather than identifying the RFID transponder might bring similar yearly benefit with lower acquisition costs. The change, which significantly increases the productivity, is identifying the small load carriers rather than identifying the working steps.

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Abstract

Cross cultural changes are inevitable in our today’s global world. We cannot stand still. Change is omnipresent. A leader needs to be agile, flexible and adaptable to lead global, virtual teams. Enhanced processes and lessons learned can be copied from the manufacturing- and production industry era into today’s service industry. Interwoven human basic needs, change process as well as dimensions of culture and sustainability theories are part of leading innovations.

1. Introduction

Cross cultural changes can shift our mindset. The more we are working in a global environment, virtually in global teams, via skype, via email the more we have to be flexible, agile and adaptable to cross cultural nuances. It does not mean that when all speak English, as an example, that all participants in a meeting or a conference call understand the same. The most impressive example is when we assume that Americans, Canadians, Australians, Irish and British people think alike. Not necessarily. What about Indians? They have English as one of their official languages as well among many others? One size fits all does not cut it. There are many nuances in languages even in one country in itself. When we take it a step further onto the political landscape, things get even more complicated: at the United Nations for one document to be published you have to have all six official languages completed and approved. Official languages are English, Spanish, Chinese, French, Arab, and Russian. We have to be ready to be flexible, agile but also be patient and adaptable for many changes to lead innovation.
Language and communication are only one of the aspects we have to look at when thinking of cross cultural changes that can lead innovation. Innovation and change are big words that have different nuances and meanings. We have to look deeper into theory initially in order to understand the overlapping importance and relevance.

2. Manufacturing & Service

![Timeline Image]

Source: New York University, Global Talent Management Class HRMD-CE940800/2014, Susanne Mueller, MA

The timeline (Mueller, 2014) is illustrating milestones in the continuum from manufacturing to the service oriented industries of today. What will be in 2020? We are not too sure how exactly it will look like but it is not that far away so we better get going and planning ahead. It seems we can almost see the perfect vision ahead of us; we rather should plan and prepare well for the cross cultural changes that can lead to innovation. Each era has something special; one era would not work without the next; we are hoping we can learn something from each one of them and implement lessons learned. Who knew what would happen after Frederique Taylor (1911) focusing on maximizing and optimizing the assembly
lines. His theory dates back from times where hierarchy and human precision were key. Fast forward to today we use robots for assembling cars most of the times, as an example. Manual labor would be way too expensive and probably more prone to errors. Each car has to be perfect, each car in one production line needs to look alike and function at a 100%. The Hawthorne effect (1924) realized that when observing workers that they would work more, maybe not so much better. What if your manager is always breathing down your neck? That style might not be the best way to motivate your workforce. It might have been the right thing to do in 1924, though. In today’s times Daniel Pink (Drive, 2009) talks about mastery and purpose to find the best time to work to have a very motivated workforce. Each person should find their perfect time to work productively and effectively. Obviously, this does not work for a traditional blue color job, a bank teller associate, a supermarket cashier; more so this would apply for somebody working from home on their computers, working independently at any time of the day or night, working virtually independent of their geographical location, or is a small business owner working happily from their kitchen table. Who says we need to be sitting in an office when we pick up the phone for a call center? We obviously have to look at both sides of the coin. Innovation can only happen when people are working well together. Cross cultural changes and cross functional teams need to learn from each other in order to work well. Etiquettes and guidelines needs to be established in a way like Frederique Taylors assembly lines. In 1955, Kroc opened up the first McDonald’s in Des Moines, IL with a first day sale of $366.12; little did we know that McDonald would become such an iconic brand. Today we can find more than 36,000 retail McDonalds in 100 different countries. (http://www.mcdonalds.com/us/en/our_story/our_history.html) We don’t need to go hungry when traveling and longing for a quick burger in one of these restaurants or a drive-through. McDonald’s innovative ideas are a perfection of the automatization and precision of Frederique Taylor taken to the next level. And then in the 1970s we hear of computer gigs, namely the late Steve Jobs. Without his inventions and forward thinking innovations we could not picture ourselves in today’s world. With
all the Iphone, Ipad, IPod and the alike we are under constant surveillance similar to the Hawthorne effect without voluntarily wanting it. But on the other hand we take advantage of all the fantastic technology to bridge the changes of time. So all the knowledge from the manufacturing and industrialized era brings us to the 2015 standing at a cross road of cross cultural awareness for a shift in innovation. This timeline can help us identify and understand the relevance of all being interconnected.

3. Leadership & Communication

As another aspect of being totally interwoven is the human aspect of leadership and communication when it comes to strategic approaches and designs for effective implementation of a change management process. How many times do we see mergers and acquisition (M&A) or new business implementation in a foreign continent where we don’t find any clear communication and guidance with a human touch and approach when it comes to an important business deal? There should be lessons learned from each good and bad business deal. But, au contraire, we don’t always like to learn from history. Great leadership needs to be understood and applied with a cross cultural lens. Again, not all English speaking countries are the same when it comes to communication and understanding concepts. Maslow’s hierarchy of needs and the Kotter 8 steps of leading change can bring light to understand the concept of change. Humans are not machines that are ready and willing to change at all times. (Human to Human, Kronbügel, 2014) With machinery we can re-program, re-engineer, and perfect an outcome easily. Humans might follow a concept on paper but when it comes to understanding and using a concept and implementing new processes it will certainly take a few more steps and more so a clear communication strategy, executive presence, and a top down approach to trickle down to all involved.
4. The Link between Maslow, Kotter and Hofstede

4.1. Needs by Maslow

From Maslow’s hierarchy of needs we learn that physiological (1), safety (2), belongingness (3), esteem (4), and self-actualization (5) are required to be a whole person to unleash the human potential. If some of the pieces are missing the hierarchy is lacking important elements in order to be balanced. A few years ago, somebody added internet (Appendix) to the hierarchy of needs. On one hand it is not a scientific approach, more so it feels like a joke, but on the other hand, what do we do without the internet. The internet (0) is part of our daily lives; although very sad, but it cannot be omitted in order to conduct business. So then the internet should be added to the hierarchy of needs. To contrast Maslow’s hierarchy we can use Kotter 8 steps of leading change to juxtapose the needs. In order to manage change effectively we can combine Maslow’s hierarchy of needs with Kotter’s 8 steps of leading change. If we suggest that the internet is needed for the hierarchy of needs then Kotter with his 20 years of ample and in-depth research in the change management field has changed as well. We should congratulate him and his team to change the 8 steps to adapt to today’s needs. From a change perspective this is the absolute right way to go. If we talk about change we need to be clearly forward thinking and be open to change our approach to adapt. If we come up with a methodology we cannot think it is written in stone for the rest of our lifetime.

Kotter’s 8 steps of leading change (1996, 2015): create a sense of urgency (1), build guiding coalition (2), form- strategic vision & initiatives (3), communicate the vision (enlist – volunteer army) (4), enable action by removing barriers (5), generate short term wins (6), build on change (sustain – acceleration) (7), institute change. All elements are equally important to create effective change in an organization.
4.2. Steps of Change by Kotter

The 4th step initially focused on communicating the vision versus in the latest version (www.kotterinternational.com, 2015) the steps enhances to “enlist army.” Can we explain it in a way that the message needs to be carried by people instead of a mere communication document? A communication is only as good as the person/team who is drafting and delivering it? Step number 7 also seems to focus more on sustainability which has been a big, new word in organizational and global cultures. Without sustainability and focus on the long term, we cannot successfully march forward any longer.

With thinking much more forward we are trying to combine Maslow’s hierarchy of needs with the 8 steps of change. It can give us a different global view:

<table>
<thead>
<tr>
<th>Cross cultural change</th>
<th>Institute change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Actualization (5)</td>
<td>Sustain – accelerate (7) / form strategic vision &amp; initiatives (2)</td>
</tr>
<tr>
<td>Esteem (4)</td>
<td>Generate short term wins (6)</td>
</tr>
<tr>
<td>Belongingness (3)</td>
<td>Build guiding coalition (2)</td>
</tr>
<tr>
<td>Safety (2)</td>
<td>Enable actions by removing barriers (5)</td>
</tr>
<tr>
<td>Physiological (1)</td>
<td>Create sense of urgency (1)</td>
</tr>
<tr>
<td>Internet (0)</td>
<td>Enlist – volunteer army (4)</td>
</tr>
</tbody>
</table>

Compilation by Kronbügel/Mueller, 2015

We can begin with the physiological level (1) that would equate to create a sense of urgency (1). When we focus on the physiological level we need all our ducks in a row to create a sense of urgency to change and question the status quo. If we never look outside of our comfort zone we will never change. We need to challenge ourselves at all times; especially in a thriving business if we don’t go with the times we will never be competitive any longer.

Another phase in following the two models is certainly the aspect of safety (2) and enable actions by removing barriers (5). Even though we want to be cautious
but competitive it might equate to risk; we need to follow rules and legal regulations (i.e. Sarbanes Oxley) in order to stay in business. Each country has different legal aspects that need to be taken into consideration. In an M&A situation we want to mitigate all risks.

Especially in an M&A situation we need all partners on the same page. Belongingness (3) and building guiding coalitions (2) are extremely crucial. If we don’t have all players on board this transition will never work. There are always hard discussions to be had as a change in culture can take up to ten years to happen. In order to build coalitions effective communication and having gate keepers at pivotal position are required.

The further we are in the hierarchy the more we want to focus on esteem (4) to generate short term wins (6). In the fast paced industries of today, we forget how to honor and celebrate short term wins. The recommendation is to celebrate each and every milestone.

The final point in the comparison is self-actualization (5) that equates to sustain and accelerate (7) form strategic vision and initiatives (2). Does this ever end, one can ask? Probably not, if we give in we give up. The 8 steps of leading change as well as Maslow’s hierarchy of needs are our building blocks for effective change that leads innovation.

Kotter is the expert and guru for the change theory. Geert Hofstede is the counterpart when it comes to cross cultural theories. When looking at his life we can take a few insights for cross culture change and innovation for our never ending changing world. “Culture is the collective programming of the mind distinguishing the members of one group or category of people from others” (Hofstede, Dimension of national culture) with power distance (PDI), individualism versus collectivism (IDV), masculinity versus femininity (MAS), uncertainty
avoidance. Additionally, to his theory in 2010, Michael Minkov added long term orientation versus short term orientation (LTO). It seems that those two experts understand that the world has been changing so theories needs to be adapted as well.

4.3. Cross-cultural by Hofstede

Geert Hofstede (the Hofstede center, http://geert-hofstede.com) adds a further element of cross culture into the change management process. As initially proposed a change in an organization is only as good as the management team/leadership team is handling it. With many different global players and stakeholders it can become multi-layered and very complex. “Around the world in 80 seconds” (Mueller, 2014) elaborates on the multi-layered complexity of cultures that are not always visible initially. What if you are dealing with a team member working in the Western world but if they live another culture at home will they bring that to the table? Geert Hofstede explains that we refer to our culture and compare the new or different place to what is known and ingrained in us. This is a relevant point and it should not be taken lightly when working globally. How can we know how the situation is in a place we have never worked nor lived? Make sure to ask many questions to understand the new culture in a business setting.

5. Summary

In summary, the timeline with a few important milestones together with the theories help to understand how to effectively master transformation in an ever changing global environment. Different cultures work and communicate on different levels but all have their input that needs to be taken into consideration for success. The excellent and commendable changes in theories can be seen as a positive development and evolution in the change process for innovation. We should analyze lessons learned and omit fatal errors in the future.
Appendix

Source: Maslow's hierarchy of needs
http://www.vicchi.org/2013/04/20/the-list-of-basic-human-needs-fixed/

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Sebastian Lamm

Change Management in Higher Education Institutions through Massive Open Online Courses – Status Quo and Implications for the future

1. Introduction

The US American system of higher education has been facing a crisis situation for many years now. In recent years, costs relating to higher education in the USA have increased above inflation level. This increases pressure on all those who decide to study in expectation of gaining a better position in the labor market. For otherwise neither would students be able to repay the high tuition fees nor would academic education have the desired effects on labor markets. In addition, due to fierce competition, many small US colleges are currently working in a very inefficient manner. Despite low tuition fees, such colleges do not raise its fees because they fear students to be enticed away. Parallel to the increase of university education costs, incomes are declining in terms of purchasing power (Barber, Donelly & Rizvi 2013, p. 12). Added to this is the high level of youth unemployment in the USA as well as in the Euro zone and other countries of the world, demonstrating that the US education system is not the only one to be under pressure. Oftentimes, higher education fails to take sufficient account of the needs of the labor market in that tertiary education is expensive and obviously does not entail any economic advantages to a great number of graduates (Tse & Esposito 2013).

As early as the first stages of the 2000s, the Massachusetts Institute of Technology began to provide students with the opportunity of downloading numerous course
materials free of charge. Although the first MOOCs had emerged as early as 2008, it was not until 2011 when the Stanford University and the Harvard University launched similar platforms that they managed to establish themselves as a new way of teaching (Austrade Report 2013, p. 2). By 2013, other MOOC platforms followed in Europe, Asia, the Arab world, and Latin America. Against this backdrop, the present paper deals with MOOCs’ current development, as well as presents and discusses MOOCs’ structure, examination formats of applied technologies, and business models.

2. Fundamentals of MOOCs

2.1. The Term ‘Massive Open Online Courses’

The term ‘Massive Open Online Course’ refers to a course which is offered via the Internet; it is mostly carried out in the field of higher education free of charge and without any limitations as to the number of participants (Butler 2012). Unlike in e-learning, participation is not limited to university members. Also, rights concerning teaching materials are free, allowing developers to freely combine and recompile further courses (Reich 2012).

2.2. Current Developments of MOOCs

As of 2012, after MOOCs had been initially offered only by universities and professors in 2008, there have been numerous providers in the market that coordinate and foster MOOCs as distributors (Inside Higher Ed 2013). Among them are both commercial and non-commercial providers. The number of courses offered is increasing on a permanent basis. The number of providers sharing this market is low. The MOOC market is particularly focused on the USA. To this day, most MOOCs have been developed in the USA. Despite the programs’ global orientation, most participants are US American citizens (Gaebel 2013, p. 12). Since MOOCs are directed at an international audience, the teaching language is
English, thus ensuring global access to MOOCs. In order to remain competitive and accessible on an international scale, the few providers in the Federal Republic of Germany, too, offer their courses in English. Some providers collaborate with universities; others implicate various professors in their range of courses. In either case, however, courses are conducted almost exclusively by leading researchers with excellent reputation (Rivard 2013).

At the current stage, it can be stated that an educational revolution based on MOOCs is not likely to occur. Prophetic words such as those of Sebastian Thrun, who predicts that in fifty years from now there will only be ten universities left, still need to be proven in reality (Watters 2013).

3. Approaches to Massive Open Online Courses
3.1. Course Structure and Examination Formats

To be able to characterize MOOCs, a distinction must be made between three structural moments, i.e., (1) way of teaching, (2) way of feedback and discussion, and (3) way of testing and evaluating knowledge.

Way of Teaching
The actual teachings frequently take place via the conventional procedure of frontal teaching. In this context, two ways can be distinguished. For one thing, there is the possibility to record a regular lecture or some other university event on film using a camera. The costs relating to documenting courses in such a way are comparatively low, as is the didactical gain compared to frontal teaching. The only difference is that the audience becomes many times bigger due to the use of digital media (Justice Harvard 2013), with the professor rarely addressing the camera but mainly looking into the eyes of a real audience that is facing him/her. In fact, there also are certain hybrid forms where the professor occasionally directly addresses the virtual audience in addition to the physical audience. However, this does not
change the fact that the course is not carried out for the sole purpose of being presented online.

The second form of teaching involves video footage designed exclusively for use in MOOCs. Here, the advantage is for video technology to make full use of its strengths. Thus, didactics is enabled to fully focus on participants behind the screen while interactive and supplementary medial elements can be embedded in videos or surrounding websites to the point that students have control over the order, depth, and speed of the course (University of Edinburgh 2013, p. 11). The major disadvantage is that it takes elaborate production efforts to create the required video footage (Gaebel 2013, p. 6). In a representative longitudinal study, half of all US American university teachers surveyed state that creating and supporting online courses is much more expensive than carrying out offline courses (Allen & Seaman 2013, p. 22). So, if learning contents are prepared especially for online courses, the related costs tend to be higher than in the case of conventional teaching.

**Way of Feedback and Discussion**

To provide support for the great number of participants, partly comprising several thousand students, there was the need to find a modus different from that provided by conventional distance education. The didactics of MOOCs provide that participants give mutual advice and support, and engage in discussions with one another. Since participants have a different level of knowledge, many questions can be answered by other participants. To be able to integrate the tremendous number of participants and to do justice to the word ‘massive’, MOOCs make use of the digital forum structure. This makes it possible for a great part of the support work usually associated with regular seminars to be performed by the participants themselves (Education Advisory Board 2012, p. 7). The pedagogical idea behind is that in reality students also come together to discuss common learning contents, while the lecturer at best takes up moderation of the topic: MOOCs move this
communication process to the virtual, specifically designed forums of Web 2.0 (Education Advisory Board 2012, p. 7)

Ways of Testing and Evaluating Knowledge

In most MOOCs, examinations and knowledge tests in the course of regular seminar programs are carried out using quizzes. Based on multiple choice tests, online knowledge tests can be conducted in a simple way. For evaluation, computer programs are used, meaning that here too lecturers do not have to deal with correcting several thousands of examinations. Wherever standardized knowledge tests are impossible to conduct or wherever it is necessary to submit written texts, use is again made of MOOCs’ above-mentioned strategy to oblige participants to correct their work on a mutual basis. To what extent it is possible to ensure equality and fairness in the process is a question that has not been investigated yet. Should it be possible for MOOCs to be used as a means to gain university credits in the foreseeable future, however, that question needs to be answered.

3.2. Applied Technologies

All existing providers of today’s MOOC platforms use their own software to allow communication among participants as well as between lecturers and participants in order to carry out and assess tests, to render texts accessible to all participants, and to carry out all organizational tasks. In the early versions of MOOCs, communication was still carried out via open social networks. Video footage was most frequently provided via platforms such as Youtube. Today, streaming such data frequently takes place via separate servers as well (Colman 2008).

Unless use is made of servers of existing providers, providers of MOOCs have to provide a server or webspace. Participants, on the other hand, require a broadband connection, ideally charged at a flat rate. In many cases, data
communication technology in the Western world is already sufficiently elaborated for that matter. Even in Europe and North America, there are still some provincial areas which are not yet connected to the high-speed network. In the emerging and developing countries, however, the development of data infrastructures is considerably less advanced. Providing access to the Internet alone frequently poses a problem, let alone the fast connections necessary to watch tutorial videos (World Bank 2012).

3.3. Identifying Advantages and Disadvantages of MOOCs

The advantages and disadvantages relating to MOOCs can be identified in many respects. Refraining from conducting an in-depth analysis from the perspectives of education, sociology, network theory, didactics, and economics, the aim in what follows is to address some crucial aspects of the current debate on the pros and cons of the new academic teaching situation with MOOCs.

Due to the innovative nature and popularity of MOOCs, several surveys have been conducted on the part of lecturers and participants in recent years (Allan & Seaman 2013). As a result, it was shown that although the number of participants who actually completed a MOOC was low, even those participants who did not receive a completion certificate stated that they frequently benefitted from the MOOC to a large extent. One of the advantages of MOOCs, then, is the variety of knowledge and experience they convey and which can by no means be reduced to obtaining a certificate (BIS 2013, p. 6).

Another advantage of MOOCs is that they can bring about cost reductions. It is argued that although designing MOOCs may be expensive, they – once created – can be attended by any number of students without any additional costs. Thus, the cost ratio is much lower than in the case of conventional courses which are carried out in the physical presence of participants in one place (Gaebel 2013, p. 11).
A problem inherent to MOOCs are high dropout rates. However, considering how many participants do manage to complete a course, it becomes apparent that this number of course graduates still significantly exceeds the number of course graduates achieved at conventional universities. Seen from this perspective, there should not be a problem. The question about the reasons for withdrawing from a course can also be seen in a broader context, however: The question then is how successful transfer of knowledge can be ensured: Is it because participants do not manage to keep the pace with the course's contents that they discontinue the course, or are they more interested in other course contents? In this context, increased interaction opportunities to inquire about, satisfy, and evaluate the level of actual learning success as well as learning needs can be opened up within a direct feedback-providing environment with a lecturer. However, such communicative feedback loops can also occur in MOOCs – they just need to be instituted and applied (BIS 2013, p. 8).

Closely linked to the above issue of communicative feedback is the issue of participant motivation. Surveys have shown that even where credit points are awarded for taking part in MOOCs the number of participants who completed a course was well above average only where there was direct and face-to-face contact with all participants in addition to virtual learning hours. In such cases, the motivation to continue was much greater than the wish to terminate the course. The difficulty of ensuring participant motivation, therefore, is definitely one of the major disadvantages of MOOCs as we know them today. Judging from the first data, it seems that they can be established only through providing direct support between lecturers and students in a similar way as in the case of conventional seminars, even though it can only be provided via online media within the scope of MOOCs (Bruff 2013).
4. Business Models and Industry Structure of MOOCs

In what follows, the aim is to introduce the major players in the MOCC market. To this end, it should be noted that the MOCC market is dominated by US American providers. Even with regard to the level of organization, there is a great difference between MOOCs in the USA and MOOCs in Europe. The table below depicts today’s major MOCC platforms according to its size:

<table>
<thead>
<tr>
<th>MOOC provider, country</th>
<th>Number of participants</th>
<th>Number of courses</th>
<th>Number of collaboration partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coursera, USA</td>
<td>5,537,387.00</td>
<td>542</td>
<td>107</td>
</tr>
<tr>
<td>edX, USA</td>
<td>approx. 1,600,000.00</td>
<td>94</td>
<td>29</td>
</tr>
<tr>
<td>Udacity, USA</td>
<td>approx. 700,000.00</td>
<td>33</td>
<td>none</td>
</tr>
<tr>
<td>FutureLearn, GB</td>
<td>(not specified)</td>
<td>2 (with another 27 coming up)</td>
<td>29</td>
</tr>
<tr>
<td>Iversity, D</td>
<td>approx. 220,000.00</td>
<td>9 (with another 25 coming up)</td>
<td>collaboration with professors</td>
</tr>
</tbody>
</table>

Source: author's own illustration based on Reich (2012).

Among the first MOOC courses were the commercially-oriented Udacity courses. Its focus lies in the area of information technology, allowing programmed course works to be tested by Udacity’s own servers in a simple and standardized fashion, without course leaders having to make additional efforts for that purpose (Inside Higher Ed 2013, pp. 5 & 6). Another commercially-centered MOOC offer is presented by Coursera courses. Unlike the internally developed Udacity courses, however, Coursera courses are based on large-scale collaborations with outstanding universities in the USA. Coursera’s goal is to collaborate only with the
world’s best universities, meaning that course offers made e.g. by US American universities outside the Ivy League are usually excluded from the program (Rivard 2013). It thus functions as a ‘reservoir’ for MOOCs. As for the German-speaking area, Coursera collaborates with the Technical University of Berlin, the LMU Munich, as well as with the University of Zurich (Coursera 2013).

Another MOOC platform is edX, originally a non-commercial platform for bundling online offers by the Massachusetts Institute of Technology and the Harvard University (Lawton & Katsomitros 2012, p. 5). Its main objective is to provide study opportunities free of charge. In order to improve both the didactics of distance learning and the effects of real university courses, all participating faculties accompany the project with their own research teams to evaluate students’ behavior when completing the courses (Breslow et al. 2013). Today, edX ranks second of all MOOC programs worldwide, and is used as a supplementary course program by many universities (Goral 2013). It is very easy to use given that edX provides a program code on the Internet any educational institution has free access to (edX 2013).

Using the MOOC program FutureLearn, the Open University bundles one of its most important British university collaboration partners. The initiative was founded by the collaborating universities themselves. The platform is coordinated in line with the British higher education system, and is 100 percent owned by the Open University. Among the non-university institutions currently collaborating in this association is the British Library, the British Council, and the British Museum, indicating that this form of MOOC is based on the idea to make knowledge broadly available, i.e. not only to educational institutions (FutureLearn 2013).

The last MOOC platform to be considered is Iversity, a German company from Berlin which not only offers courses in German but also in English, Russian and Spanish. Iversity uses a self-developed platform. It collaborates with individual
lecturers rather than universities, usually lecturers and professors teaching in the Federal Republic of Germany. The collaboration, however, is not limited to lecturers of that kind, since Iversity sees itself as an online university looking for success in the international market (Iversity 2013).

5. Conclusion and Implications for the Future

To sum up, it can be stated that the MOOC market is not yet fully matured. The two latter platforms, in particular, are still in the start-up phase, which is why the above considerations reflect just a particular moment in time. Equally unclear at present is the profit that can be generated through MOOC platforms. Also, it is too early to assess whether the MOOC market will allow educational offers to be commercially used on a large scale.

For the future, it can be assumed that MOOC platforms will pursue the objective of either founding an independent online university or else providing online support for conventional universities. The main focus will probably be put on providing an educational offer either free of charge or at a very low price in order to allow every person to have access to higher education programs, without excluding anyone from using existing educational opportunities. In this respect, MOOCs can even be put into context with approaches to corporate social responsibility (Waddock 2008).
Bibliography


Michael Leisten

Change Management at Complementary Medical Practices within the Context of the Academization of the Naturopathic Profession

1. Introduction

The German population’s demand for complementary medical treatments has greatly increased in recent years. Even in modern medicine, complementary healing methods are becoming increasingly important (Hochschulschule für Gesundheit & Sport, Technik & Kunst 2015). Thus, orthodox medicine and naturopathy are no longer in contradiction with each other, but should be ideally practiced jointly. Karin Kraft, professor at the University Medicine Rostock, states: ‘The future belongs to the combination of orthodox medical and complementary medical treatment such as with naturopathy in accordance with integrative medicine’ (Kraft 2012). This trend is also reflected in current forms of complementary medical training. While just a few years ago it was sufficient for naturopathic training programs to be taken at conventional schools for naturopathy, the new trend is demanding a deeper and more profound knowledge of complementary medicine. The result is an academization of the naturopathic profession that is becoming more and more established (Hochschulschule für Gesundheit & Sport, Technik & Kunst 2015).

Against this backdrop, the question arises how complementary medical facilities manage to put the academic knowledge gained into practice. The present paper addresses this question by examining learning transfer management, transfer assurance, the sustainability of learning experiences, and practical measures to

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6 ‘Der Kombination zwischen schulmedizinischer und komplementärmedizinischer Behandlung wie zum Beispiel mit Naturheilverfahren im Sinne der integrativen Medizin gehört die Zukunft’
promote transfer success which can be used in any complementary medical practice.

2. Learning Transfer Management

The best way to prove the effectiveness of an academic study program in complementary medicine is by directly putting what has been learned into practice. Study programs turn out to be very promising, then, if its contents can be applied directly to everyday activities at the medical practice and lead to increased performance on the part of the practice owner (Weisweiler 2008). During a learning transfer, something that has been learned in a specific situation is applied to a new situation. In this context, transfer is aimed at ‘various gaps between prior learning and knowledge, new learning processes and performance at work’ (Weisweiler 2008, p. 16). Hence, what is crucial for succeeding in academic studies in complementary medicine is not to acquire as much knowledge as possible during the study program, i.e. in the learning field, but to transfer that knowledge to the function field by applying it in complementary medical practice (Bergmann & Sonntag 1999).

After completing a course of studies in complementary medicine, the skills acquired have to be applicable to everyday occupational activities (Solga 2005). The course therefore needs to be divided in two areas: targeted arrangement of the learning field, on the one hand, and targeted arrangement of the function field, on the other hand (Solga 2005). To establish and implement these measures, targeted management is required. Learning transfer management includes all measures of planning, optimizing, and controlling a learning transfer (Solga 2005). The term transfer management is associated with idea of learning transfer being plannable, organizable, and controllable (Lemke 1995).

\footnote{\‘verschiedene Lücken zwischen früherem Lernen und Vorwissen, neuen Lernprozessen und der Leistung am Arbeitsplatz ab\'}
Similar to educational control, learning transfer management should go through the three stages, i.e., it begins with a requirement analysis, then accompanies the learning measure, and only ends after completion of the implementation stage. The outcome is a recognizable performance increase on the part of the complementary medicine practitioner whose positive effects are first and foremost of a practical nature. The performance in the function field is the result of a series of interdependent factors. For one thing, it depends on the quality of the learning transfer. The quality of the learning transfer, for its part, relies on learning success, which in turn hinges on learning transfer motivation (Solga 2005).

In this context, learning success refers to the acquisition and preservation of certain knowledge, skills, and attitudes that can be more or less applied to changed situational conditions after the course of studies has been completed (Solga 2005). Learning transfer motivation, on the other hand, means the complementary medicine practitioner’s willingness to apply the skills acquired in the learning field in the occupational context. It is expressed in the stamina and intensity of the practitioner’s endeavor to integrate learning contents into work tasks (Solga 2005).

Moreover, learning success and transfer motivation are also subject to internal conditions which are rooted in the learner’s personality, such as thinking skills, previous knowledge, occupational attitudes, and the degree of certain personality characteristics relevant to learning and learning transfer such as conscientiousness (Solga 2005).

3. Transfer Assurance and Sustainability of Learning Knowledge

Transfer management’s main concerns are transfer assurance and sustainability of learning knowledge, which too have an interdependent relationship. It calls for measures and methods allowing a quick and sustainable transfer (Schier 2008). Bergmann and Sonntag (1999) contend that transfers are the better, the more
varied problem orientation and the more realistic the learning environment and application conditions are designed. It is therefore recommended to begin with the planning of transfer-assuring measures, where expected benefits, the timeframe for implementation, and necessary support measures are set and specified prior to the education program and parallel to requirement planning (Lang 2006).

Having completed studies in complementary medicine, the aim is to determine to what extent the planned measures succeeded or failed. Lang (2006) proposes that a transfer report should be drawn up to make transfer processes become comprehensible and to allow to reflect in a detailed manner the reasons why transfer succeeded or failed (Piezzi 2002).

Surveying learning and transfer success in terms of employee and patient surveys, deepening seminars, or learning materials for self-study may be helpful (Mudra 2004). What is particularly conducive to transfer, according to Piezzi (2002), are measures that are tailored to the specific situation even prior to the actual study program so as to allow creating better conditions for effective transfer assurance. However, this requires a great deal of commitment on the part of the complementary medical practitioner, especially since those measures have to be subsequently implemented in a targeted manner, which provides that the practitioner recognizes its necessity and also has the competence to put them into effect (Piezzi 2002). Transfer success and sustainability, as mentioned above, depend on a variety of factors and measures, which are dealt with in the paragraph below.

4. Measures to Promote Transfer Success in Practical Implementation

4.1. Measures to Be Taken Prior to the Study Program

In the academic literature, there is a series of measure catalogues which provide an overview of the major factors in promoting transfer success, offering important
information on how to design the individual process components in a way conducive to transfer success (Piezzi 2002). The disadvantage of those catalogues is that they frequently only refer to individual influencing factors while giving the impression that the packages of measures are universally valid (Piezzi 2002). However, what is essential for transfer success is a practice-oriented selection of appropriate measures taking into account all relevant interactions with other influencing factors during the entire transfer process. Positive effects can only be achieved through a useful combination of various targeted measures.

As mentioned above, the process of transfer promotion begins prior to the start of the study program. Aside from carrying out a specific analysis of requirements, this includes aligning the program with participants’ expectations, needs, problems, and previous experiences. Furthermore, participants should be involved in study planning right from the start (Pieler 2001). What should go without saying too is relating the program to practical activities as this allows tightening the link between acquired academic knowledge to practical activity, a stronger focus on the program’s benefits for practical application, greater involvement of all university bodies in the education process and thus a stronger orientation of all stages in the educational process towards transfer, and makes separate planning of transfer promotion based on selective, universally valid transfer measures largely unnecessary (Piezzi 2002). Such complete achievement of integration is arguably the exception rather than the rule. But even if it is not fully achieved (but only when carrying out requirement analysis, for example), it still fosters a stronger orientation of the entire educational activity towards transfer and might be complemented by targeted transfer-promoting measures.

4.2. Learning Field Measures

Kolb (2008) lists some major factors to promote educational measures’ transfer success already during studies:
the learning methods used allow linking new and existing knowledge,
participants are free to contribute their own content-related wishes and to help steer the procedure according to their needs,
transparency concerning individual application benefits fosters a high level of learning motivation,
case studies and examples are closely related to participants’ function field,
during training, individual strengths and weaknesses are analyzed for implementation,
further efforts are made to develop a plan of measures featuring realistic schedules and good control opportunities.

There are several approaches to transfer management which are focused on learning environment characteristics. Since they also address the factors mentioned above, they will be briefly outlined below.

Creating Identity between Learning Environment and Application Environment
This approach is based on the idea that the likelihood of contents from the learning field being transferrable to situations in complementary medical practice rises with increasing similarity of the two contexts (Solga 2005). That is to say that it is necessary for practical situations and tasks to be simulated as realistically as possible. This presupposes, however, that the characteristics of the function field are describable (Solga 2005). Moreover, it is useful to simplify the learning field in such a way as to allow learning processes and, above all, retention of learning contents to be incited and controlled. As a result, what has to be asked is what elements need to be identical, what elements can be adjusted without any consequences, and what elements actually must be adjusted for the sake of promoting the learning process (Solga 2005). Having said that, it becomes apparent that this approach not very suitable for work environments subject to rapid changes.
Communicating General Principles and Using Changing Contexts
This approach is in strong contrast to the preceding approach of identical elements, for it involves the development of general thinking and problem-solving strategies as well as fundamental theoretical knowledge – i.e., ‘flexible’ skills that can be applied to many different challenges (Solga 2005). Due to so-called methodical skills, people are enabled to quickly and comprehensibly acquire situation-specific knowledge, and to manage new, complex tasks on an independent basis. Major methodical skills include target-means analysis, hypothesis testing, logical reasoning, and creativity techniques (Solga 2005). Critics of the approach usually cite studies on transferring general thinking and problem-solving strategies to occupational application contexts which have demonstrated that spontaneous processes happen considerably more seldom than supporter of this approach hope they do (Solga 2005). A possible solution to this problem would be if the learner put those thinking and problem-solving strategies to the test in many different problem situation in order to gradually detach them from the respective contexts. This gradual abstraction process would subsequently allow further transfer. However, such a procedure is very time-consuming and requires systematic planning (Solga 2005).

Constructivist Approach of Designing the Learning Environment
The constructivist approach combines the two preceding contrasting approaches. Its principles are authenticity, situatedness, and multiple contexts. The principle of authenticity aims for specialized knowledge to be acquired in situations of practical application (Solga 2005). According to this principle, on-the-job learning is the most suitable method of learning. The principle of situatedness or graphicness aims to simulate major function fields as authentically as possible whenever learning in real application situations is not possible (Solga 2005). The principle of multiple contexts, like the approach of communicating general principles and using changing contexts, postulates the development of knowledge and skills in many different application situations (Solga 2005).
4.3. Function Field Measures

The third major sphere of influence on transfer success is the function field and its specific situational circumstances. Exactly how the knowledge and skill acquired can be implemented in everyday operations depends directly on how the work environment is designed (Solga 2005). It is therefore necessary to create and uncover opportunities to put what has been learned into effect, as well as to develop own incentives for the learning transfer (Schlitter & Erb 2006).

Creating and Uncovering Opportunities to Put What Has Been Learned into Effect

Whether or not the qualifications gained in the course of the study program can be implemented in practice depends, first of all, on the extent to which the complementary medical practitioner recognizes the possibility of making practical use of the learning contents he/she has acquired. To this end, it is required to create and uncover occasions for transfer. Also helpful for implementation are clearly defined objectives. To put them in concrete terms, one might independently develop certain tasks or projects whose fulfillment or implementation, respectively necessitate specific transfers. In addition, it is imperative to ensure that complementary medical practices, too, have the required resources to put what has been learned into practice (e.g., specific software)

Creating Incentives for Learning Transfer Processes

Complementary medical practitioners need to create own incentives to make use of their knowledge in the best-possible way. Incentive effects are particularly created by positive feedback on the part of patients, and a high degree of flexibility on the job.
5. Conclusion

The above considerations show that the increasing academization of complementary medical professions entail a discernible change in transferring knowledge from theory into practice, which can be done by appropriate change or rather learning transfer management at any complementary medical practice. Learning transfers are most successful if what has been learned can be directly put into practice, and, where applicable, previous knowledge gaps be filled. Learning success is expressed in retaining knowledge, skills and abilities, whereas its motivation results from the desire to directly put the skills acquired into effect. Thus, great importance is attached to transfer assurance and sustainability of learning experiences, for example through such measures as integrating participants in study planning, creating an appropriate learning and application environment, or designing the learning environment in a constructivist manner. On that basis, complementary medical practitioners can create and uncover appropriate opportunities for applying what has been learned as well as create own further incentives for learning transfer processes.

Bibliography


Jürgen Ohse

Change Management and Skills Shortages As a Result of Socioeconomic Change Processes

1. Introduction

When considering society in the socioeconomic development context, social ways of living cannot only be regarded as the passive result of a dominating economy. This is due to the fact that economic developments too are an integral part of society. Social conditions and political regulations not only result from economy, but are important in its own right. Changes in people’s lifestyles provide impetus for changing economic systems as well. Both momenta are interlinked with each other (Berichterstattung zur sozioökonomischen Entwicklung in Deutschland 2015).

For a long time, the socioeconomic model of the Federal Republic of Germany stood for stability, security, growth, and employment. It ensured prosperity and social peace, and was even deemed to be an exemplary model. However, that ‘golden age’ is a thing of the past. Over the last 25 years, various political upheavals, global developments, technological and therefore social changes of global magnitude have changed the world like never before (Wiesnet 2003, p. 1). The picture of the reality of people’s life is quite different today. It is characterized by fixed-duration contracts, employment interruptions due to phases of self-employment, extended vocational training, or even unemployment. In addition, work contents have changed too: While industrial work declines in importance, skilled work becomes increasingly significant. Aside from specialist knowledge and vocational skills, skilled work requires commitment, self-initiative, self-organization, and self-marketing (Bundesministerium für Bildung und Forschung 2011).
Against this backdrop, companies are increasingly facing problems with recruiting qualified personnel. The present paper addresses this topic in two steps. The first step is to present the current socioeconomic state of population and household structures, as well as qualification and income structures in the working population. As a second step, the aim is to demonstrate how it is possible for companies to carry out suitable HR marketing activities under the given socioeconomic conditions.

2. Surveying the Current Socioeconomic State


In the last thirty years, population and household structures have shown a substantial change as regards the individual age groups’ proportions. That change, however, has only a minor impact on the working age population. The overall proportion of the population under the age of 30 in Germany has greatly decreased. The proportion of the population aged between 30 and 60, meanwhile, has increased. It can be expected that by 2030 the proportion of the working age population will be vastly reduced. However, changing demographics not only change the working age population but also their age structure. With this in mind, one can already forecast that in 2050 today’s largest group within the working age population (i.e., aged between 35 and 49) will be outdated by the working age population aged between 50 and 64 (Opitz & Schwarz 2005, p. 15).

The consideration of household structures reveals the following picture: While the proportion of one and two-person households has increased in the last thirty years, the proportion of households with three or more members has decreased. As for the social status of household members, a significant structural shift from employee to pensioner households can be observed. There is a direct link between population ageing and changed household structures. The development towards smaller households, then, constitutes a direct consequence of demographic
change, rather than a trend towards singe households on account of changed lifestyles (Opitz & Schwarz 2005, p. 17).

### 2.2. Qualification Structures in the Working Population

The retirement of older age groups and the employment of younger work groups, respectively is accompanied by changes in the level of qualification as the level of formal qualification relating to younger age groups is higher than that relating to older workers (Opitz & Schwarz 2005, p. 15). Younger work groups usually have a higher level of education than people exiting from the labor market. Thus, the qualification structure shows an increasing shift towards higher formal qualifications (Opitz & Schwarz 2005, p. 17). This is also the reason why the proportion of the working population with low levels of qualification has decreased in virtually all sectors of the economy, whereas the working population with higher levels of qualification increasingly gain in significance. The proportion of employees with medium-level qualifications, in contrast, has remained unchanged. The qualification structure of unemployed people, however, is considerably less favorable than that of the working population. While one out of four employees has higher formal qualifications, this is true only for one out of nine unemployed people. The proportion of people with low qualifications is significantly higher in unemployed people than in people of the working population (Opitz & Schwarz 2005, p. 18).

### 2.3. Income Structures in the Working Population

The preceding considerations are also reflected in the working populations' income structures, as is depicted in the chart below.
The income structure shows that a higher level of qualification is also accompanied by a higher level of income. While employees have a monthly net income of €2,801 on average, self-employed people and civil servants, respectively earn an average monthly net income of €4,065 and €4,138, respectively. Unemployed people, which frequently come from the low-skilled sector, have an average monthly net income of €1,431 (Statista 2015).

3. **Interim Conclusion**

The current socioeconomic state is that the level of formal qualifications relating to the younger working population is higher than that relating to the older working population. Also, the younger working population typically has a higher level of education than the older working population. On the other hand, both the working population aged thirty and below as well as the working population aged between thirty and forty-nine is likely to decrease significantly. These developments cause problems for companies’ recruitment of qualified personnel. To recruit qualified
personnel, effective and efficient personnel marketing is required. In what follows, the aim is to present and discuss appropriate change management measures companies can introduce for that matter.

4. **Strategic Personnel Marketing as Change Management for the Avoidance of Skills Shortages**

To be successful, marketing is to be focused on demanders' current and potential needs. For personnel marketing, that means that emphasis is put on the needs of current and potential personnel, which lay the groundwork for all further actions. Personnel marketing therefore includes all corporate measures that aim to gain and retain certain groups of individuals as future employees (Batz 1996, pp. 18 & 19).

4.1. **Performance Policy**

Given the potential skills shortage in Germany, it is pivotal for companies to develop an elaborate performance policy in the field of personnel marketing, especially since performance policy determines the buyer or applicant's interest in a specific product. The product defines itself through the workplace. The workplace is related to the workplace environment, i.e., the company and the prospects it offers. Performance policy might prove particularly effective because it allows companies to get a clearer picture of applicants just as it allows applicants to get a more accurate picture of the company as it is in everyday practice, for instance by having a first chat with prospective colleagues (Schamberger 2006, pp. 145).

The first step is for the company to develop an appropriate job profile. Job profiles are to indicate a company’s need for specialized personnel. Job offers can be advertised both internally and externally. Initially, job offers are frequently advertised internally. If no suitable applicant can be found, external advertising
takes place. External advertising can take several forms: conventional job advertisements, the Internet job market, personnel consultants, personnel leasing, university marketing, headhunting, public relations work (active), as well as job centers or private job agencies, assessment of solicited and unsolicited applications, or use of applicant pools (passive) (Bartscher & Frick 2009, p. 69).

Based on the above-mentioned profile requirements and given the expected skills shortage, the requirements mentioned below are considered crucial for specialist and executive employees:

- an independent and structured way of working, a talent for organization (40%)
- a reliable and responsible way of working (30%)
- English skills (90%)
- knowledge of MS Office (70%)
- affinity towards social networks such as Twitter, Facebook, Xing (30%)
- communication skills and communication style (90%)
- team orientation and capacity for teamwork (50%)
- creativity (40%)
- a high level of initiative and commitment (40%)
- a self-confident appearance (40%)
- persuasion and assertiveness (30%).

Companies set up its job advertisements by initially giving a brief introduction of the company and its philosophy. This is usually followed by providing a detailed account of the position in question as well as the tasks associated with it, and by the applicant profile. Job advertisements conclude with providing the company’s contact details. If the company attaches great importance to personnel marketing,
advertisements are designed in an elaborate manner (Bartscher & Frick 2009, p. 69).

4.2. Salary Development

A key aspect of personal marketing is salary development in new employees. Salary development should have both a monetary and a non-monetary basis. In monetary terms, salary development should be communicated in such a way when recruiting new personnel that they feel treated fairly by the new employer. New employees must have the feeling of being paid in reasonable proportion to the salaries of his/her fellow workers. In practice, however, this ethical value cannot be definitively expressed. To this day, it has not been possible to determine this absolute level of wages. Wages are coupled with the demand and supply of the labor market (market conformity) and determined by historical, social, and political factors (social conformity) (Hentze 1991, p. 96).

Another benchmark is performance conformity. Since it focuses on actual performance, the most important source of information is personnel appraisal (Hentze 1991, pp. 97 & 98). Target agreements, too, constitute instruments for variable remuneration that makes the relation between performance and success transparent. However, target agreements are tools not only to motivate but also to communicate. Targets allow to convey the corporate strategy, concrete objectives, and reference points for the behavior of executives and employees (Hentze 1991, pp. 100 & 101, 121).

A further major tool within the context of salary development of new employees is presented by fringe and social benefits, which are granted by companies on a voluntary basis and, usually, according to economic calculations. The purpose of this method of employee control is to increase profitability. For if employees are motivated, the rationale goes, they make better contributions to corporate success.
The additional costs incurred by this strategy are lower than the additional profits achieved.

Today, additional social benefits are mainly supposed to have a positive influence on motivation, job satisfaction, identification with the company, and corporate climate. In this way, companies ultimately mean to promote its employees’ willingness to perform, performance level, and flexibility. Aside from that, they mean to retain capable employees in the company for the long term. This is especially true for pension commitments. For if employees leave, companies in many cases lose precious company-specific experience and knowledge (Kruse & Kruse 2003, p. 55). The major social benefits include: company pension schemes, extra payments in excess of tariff agreements, health-related protection, staff housing, in-house training programs (e.g., own driving schools), cultural and sporting activities, company life insurances, and other social benefits (e.g., company loans, removal allowance, company cars). Corporate social benefits can be agreed on the basis of individual contracts or company agreement. The former variant is often used in the retention of executive employees (Jung 2011, pp. 589).

4.3. Communication Policy

To encounter the expected skills shortage, personnel marketing particularly needs to pursue communication policy. The aim of communication policy is to communicate the advantages of the company and its vacant positions (Kotler et al. 2003, p. 838). When positioning themselves in the market, companies have to provide its target groups with information on what they are interested in (Drumm 2005, p. 351). The task of communication policy, therefore, must be to take account of the various factors as well as to develop a method that successfully addresses the target group in order to avoid scattering losses. Successful and targeted customer approach is carried out via the following stages: Personnel
recruitment and training period, communication of career opportunities, employee management, work environment, and appraisal interviews (Wiese 2005, p. 40).

5. Conclusion

The present paper dealt with change management and skills shortages as a result of socioeconomic change processes. The first step was to present the current socioeconomic state, with the result that the level of formal qualification relating to the younger working population is higher than that of the older working population. Furthermore, it became apparent that the younger working population usually has a higher level of education than the older working population. On the other hand, it was revealed that it is likely for both the working population aged thirty and below as well as the working population aged between thirty and forty-nine to strongly decrease. These developments suggest that effective and efficient personnel marketing is imperative for companies to react to the impending skills shortage.

It could be shown that successful personnel marketing based on the three pillars of performance policy, salary development, and communication policy constitutes an effective and efficient marketing model for recruiting specialized employees. Last but not least, it was demonstrated on the basis of demographic surveys that skilled shortages in the German labor market is no myth, but a real phenomenon. To conclude, it can be stated that a high-quality personnel management model can encounter the expected skills shortages in a positive manner, which means that companies need not necessarily be concerned about qualified human capital.

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Change Communication in Midwifery Practice

Abstract

Midwifery practice involves an intermediary role of promoting collaboration between all stakeholders, especially between family members and health care practitioners. Midwives inform the patient and family about the possible risks associated with the pregnancy, coordinate advanced care for complicated cases, and offer family support. They quell anxiety and stress by informing the family about the pregnant woman’s health situation. Concerns over the safety of the pregnant woman build anxiety and stress among family members. In this regard, constant communication with family members is crucial in reducing stress and anxiety. Besides, family members, as the main financiers of maternity care, need regular updates on the health condition of their loved one. This helps in advance financial planning, which ensures that the pregnant woman receives optimal care to alleviate undesirable health outcomes. In addition, less stressful conditions enable a pregnant woman to mentalise and reflect on her feelings. Mentalisation is an essential process in the intellectual development of the unborn child. Therefore, effective communication skills are at the heart of midwifery practice. Maternity care providers need to be emotionally intelligent and empathic in order to respond to the emotional needs of a pregnant woman in an optimal way. Using a grounded theory approach, this paper evaluates the main communication challenges and tools used in midwifery practice. A mixed methods design is proposed for obtaining quantitative and qualitative data on communication efficacy in maternity care. The study’s findings will have implications for the communication strategies and tools employed by midwives in their practice.
Introduction

One of the core roles of midwifery practice is to relieve the stress associated with antenatal care by informing the patient of the possible risks and referring complicated cases to specialist medical care. Less stressful conditions improve the pregnant woman’s ability to ‘mentalise’, which is essential in the unborn child’s intellectual development. Effective communication is required to inform the patient and family of possible risks and offer appropriate support. Good communication skills, including emotional intelligence and empathy, enable midwives to be sensitive to their patients’ emotions and respond appropriately.

Patients with complex care needs express different feelings and emotions at different times. Therefore, responding to each patient’s feelings at any given time requires the midwife to be in constant communication with the patient and family members. In addition, communication skills in midwifery practice aid in accurate and appropriate information exchange that is vital in the decision-making process (Arnold & Boggs 2007). Communication enables midwives to understand a pregnant woman’s feelings, involve the family, decide on the appropriate level of care, and refer complicated pregnancies to expert care. This helps avert potential health risks and improve the outcomes of the patient. If midwives are not proficient in their communication skills, many problems can arise and compromise the quality of midwifery services.

Problem

The patient’s family is an important stakeholder in healthcare practice. As such, the family needs regular updates on the medical condition of their loved one. Pregnancies carried by chronically ill women are often risky and thus, cause stress among family members. Effective communication is therefore crucial in alleviating family stress and enhancing calm in spite of the existing tensions. It ensures that
accurate updates are made to the family on time. Communication between the maternity care teams is also important.

As pointed out by Kunyck and Olson (2001, p. 317), effective communication is essential, especially in maternity care due to the “multiple handovers made during the labour duration”. These include the patients’ transfers from home settings to the hospitals as well as the referrals made between the midwives and obstetricians according to the development of the cases. In all these instances, it is important to inform and involve the family members to ensure that they are prepared financially and emotionally, especially when complicated pregnancies are involved. The failure to deliver accurate information to any of the involved parties can compromise the safety of care offered and might have devastating implications for the well-being of the patient.

**Objectives**

One objective of this paper is to review the present global communication requirements in the health care system, especially in the midwifery practice. The second objective is to explore present and future challenges in midwifery practice. In the near future, midwives are expected to face new challenges in perfecting their responsibilities as partners, practitioners, and leaders in maternity care provision. Among the areas where the practice of midwifery is anticipated to be extremely challenging is in ensuring effective communication with all involved stakeholders. Effective communication will empower midwives to provide support to families, especially when complicated pregnancies arising from chronic illnesses are involved. Therefore, the third objective of the research is to define the tool that will foster a more efficient communication process among midwives as well as between nurses, patients, and their families.
**Methodology**

The quality of midwifery services depends largely on the qualifications of the midwives and the efficacy of information transfer between midwives and patients/families. This underscores the need to research the present communication tools and assess their efficiency as a feedback system involving midwives, patients, and their families. Thus, a mixed methods study that integrates qualitative and quantitative techniques is appropriate in this research.

The qualitative design will generate basic information about the theory of communication and the methods that midwives use to communicate amongst themselves, retrieve feedback from patients, and update patients’ families. An extensive analysis of latest journal articles will generate data regarding the communication tools in use and those still under design and testing. The analysis of this data will involve the grounded theory approach to develop a new tool or theory of communication between midwives, pregnant women, and families.

The quantitative method will help assess communication efficacy among midwives and between nurses, patients, and their families. This will involve the use of three types of surveys, one for each target group, i.e., nurses, patients, and family members. The surveys will contain several types of questions, each designated for assessing a specific aspect of the midwives’ work. The survey questionnaire will contain seven-point Likert-scale questions for measuring the quality midwifery services. It will also include ten multiple-choice questions that will address the issue of communication tools that midwives and patients prefer or use to exchange information. Open-ended questions will be included to allow the respondents to express their views about the subject matter.

Quantitative data analysis will involve the Pearson Correlation tool to determine the correlation between the key variables. In particular, the correlation between
Midwifery service quality, integration of technology in communication, and involvement of family members will be determined. Studies indicate that the Pearson Correlation tool helps identify correlation between variables with a high precision, which facilitates a detailed study to test hypotheses (Prion & Hareling 2014). Thus, this data analysis tool will be imperative in processing the gathered information to identify the problems associated with the current communication approach.

**Representation**

Midwives make referrals to advanced care for complicated pregnancies and act as mediators between obstetricians and the pregnant woman’s family (Bradley & Bray, 1996). In the Netherlands, most women, including those with chronic illness, prefer to nurture their pregnancies in the home setting with the help of midwives. If health complications that endanger the safety of the woman and that of the foetus arise, then specialist care is sought. Thus, midwives should facilitate effective communication and coordination to improve the health outcomes of the mother and foetus.

Effective communication promotes clear distribution of responsibilities, risk selection, and coordination, which characterise the Dutch midwifery practice. According to Bradley and Bray (1996), this system ensures cost effective care for pregnancies carried by chronically ill women and reduces exposure to unnecessary medical interventions. Family members supply important information that midwives use to monitor the pregnant woman’s condition and recommend advanced care if necessary. As such, clear communication channels between family members and midwives are vital. Unlike in the Netherlands, in the US midwives play a supportive role with obstetricians coordinating most of the delivery processes, which results in relatively better outcomes (Bradley & Bray 1996). However, the Dutch system has
the advantage of being cost-effective and responsive to the care needs of both high- and low-risk pregnant women.

Pregnant women under maternity care and their families should be treated with utmost respect by the health care providers including midwives. The views of these parties should be sought at all times and taken into consideration at each step of the care planning process. This requires a patient-centred approach to incorporate patient/family views, values, and preferences in care planning. As such, healthcare management should aim at enhancing communication between the involved parties in order to make sure that the input of all the concerned people are not only respected, but also considered when making important decisions. Failure to consider this factor might have detrimental repercussions on the wellbeing of the patient, especially when one of the involved parties is neglected and made to believe that his or her views are insignificant. This can even result in families neglecting and abandoning their members in hospitals. In this regard, to enhance the cooperation between maternity care providers and the family of a pregnant woman, effective communication should be encouraged and coordinated by the midwives.

Empathy is essential in midwifery practice. It enables midwives to comprehend and appreciate a patient’s view, feelings, experiences, and perspectives. Empathy can be achieved through communication with the patient as well as with her family. Family members can provide the necessary information if the patient is unable to do so. Empathy is particularly important when practical interventions are involved. As Kunyk and Olson (2001) point out, showing empathy for the patient entails practical actions like regular communication with the patient’s family. This protects the patient and family members from emotional suffering. Empathy also entails taking into consideration the views, beliefs, and attitudes of the patient when making clinical decisions. This can be achieved through regular communication with the patient and family members.
Besides showing empathy, midwives should communicate politely to the family and the pregnant woman, especially when the pregnancy involves complications. Inappropriate language directed to the patient or the patient’s family members can cause unnecessary panic and stress. In particular, if surgical procedures are anticipated, the patient’s attitude towards the process might be negatively affected when rude and inappropriate language is used by the midwives or any other maternity care providers. Inappropriate language can cause emotional change, which can affect a pregnant woman’s ability to deliver safely (Cornelis & Coop 2014). To the family of the patient, the midwives should communicate politely in a language that can promote the confidence of the family in times when sensitive processes are anticipated.

**Solution**

Trends in the health care system indicate that midwives will face new challenges in their work as partners, practitioners, and leaders in maternity care provision. One of the key areas of midwifery practice that is expected to be challenging is in ensuring effective communication among all stakeholders involved. Midwives not only give maternity care to pregnant women, but also provide psychosocial support to family members. In this regard, future midwifery managers should undertake to enhance communication as one way of empowering midwives to provide appropriate family support, especially when the pregnancies involve complications due to chronic illnesses.

Research evidence suggests that communication occurs between the mother and the unborn child (Cornelis & Coop 2014). Quality maternity care reduces stress, which enhances the mother’s ability to reflect on her feelings and achieve happiness. Evidence shows that when a pregnant woman is excited, her unborn child normally displays calmness (Cornelis & Coop 2014). The unborn child is also highly responsive to the mother’s voice and emotional state, indicating that there is
a strong emotional bond between the two. Bonding can be achieved through talking, playing music for the child, and daydreaming about the newborn’s development. This means that quality maternity care enhances mentalisation, which improves bonding as well as the unborn child’s emotional and intellectual development.

Contemporary midwifery practice faces multiple challenges that necessitate changes in the practice to conform to emerging trends. Quality is central to midwifery practice and as such, effective communication should be embraced to protect patients’ safety. According to Arnold and Boggs (2007), quality health care delivery requires the joint participation of all relevant stakeholders in a concerted action. The key stakeholders include the health care practitioners and the patient’s family. Family members are often the financiers of health care and therefore, their input is important. A breakdown in communication between the financiers and the health care providers can cause delays and affect the health outcomes of the patient (Arnold & Boggs 2007). Additionally, regular communication will enable the financiers to source for funds in time to avoid delays that may lead to loss of lives.

**Conclusion**

Effective communication between midwives, patients, and family can help reduce stress, instil confidence, and enhance the mother’s ability to mentalise, which create a positive relationship between her and the unborn child. Positive emotions during pregnancy depend on tiredness and exposure to stressors. Effective communication in midwifery practice enhances the quality of maternity care, the level of support received by the family, and the outcomes of complicated pregnancies. Thus, midwives should develop proficiency in emotional intelligence and empathy that are essential in communication.
Bibliography


The Dual Health Insurance System in Germany within the Context of Social Work

1. Introduction

Combating sickness and promoting public health constitutes the main task of the public health system in Germany whose fulfillment is to be contributed to by all involved in the health care sector. Among the major actors in this context are carriers or financers of health-related services, including health insurance schemes. In Germany, health insurance companies rely on a dual system: one has to distinguish between the statutory health insurance system (SHI) and the private insurance system (PIS) (Claßen 2009, p. 113). Other major actors in the health care system include health care providers, such as physicians and caregivers, and social workers who work in public health institutions – insofar as social work takes place within social institutions (Franzkowiak et al. 2011, pp. 131, 137).

The present paper aims to examine the relationship between the health insurance system as service carrier and social work in the health care sector as service provider taking particular account of the separation of SHI and PIS. To this end, emphasis is put on answering the following question: How does the German dual health insurance system affect social work in the health care sector?

To answer that question, the first step must be to provide a brief characterization of the German health insurance system with the aim of highlighting certain points of conflict existing within the German health insurance system. This includes a presentation of both the historical background (see 2.1) and the current state of the health insurance system in Germany (see 2.2) Subsequently, the third chapter
deals with describing the link between social work and the health care system in order to clarify the effect of the separation of the German health insurance system on social work. This will be done by explaining the concept of health promotion (see 3.1) in order to lay the groundwork for determining the resulting contact points between the health care system and social work (see 3.2.), on the one hand, as well as the conflicts caused by the dual system in the current health care system with respect to the role of social work in the health care sector, on the other hand (see 3.3). The paper concludes with a brief summary in the fourth chapter.

2. Private and Statutory Health Insurances

The purpose of the present chapter is to give an overview of the German health insurance system taking special consideration of the separation between statutory and private health insurance. This includes, first of all, a description of the historical background and, as a second step, of the current state of the Federal Republic of Germany’s health insurance system.

2.1. Historical Background

Historically, the separation between statutory and private health insurance dates back to the law pertaining to the sickness insurance for laborers of June 15, 1983 (Health Insurance Act) (Baier & Wandt 2012, p. 40). The associated introduction of statutory health insurance constituted the first component of the then Imperial Chancellor Otto von Bismarck’s social legislation and social reform (e.g. von der Schulenburg & Greiner 2007, p. 56). The main purpose of Bismarck’s social policy was to win the working class for the State and thereby remove the economic basis of existing – voluntary – social insurance schemes of e.g. trade unions or labor unions (Castelli & Dieckmann 2009, p. 11). The aim was to alienate laborers from the increasing socio-democratic currents while gaining their interest in the continued existence of the monarchist State (Wählung 1996, p. 38). That interest as
well as laborers’ satisfaction with the political leadership could only be achieved by providing for their social security and, with it, for their financial security in the event of illness, which had been tantamount to loss of income (Fleßa 2007, p. 75). The objective when founding statutory health insurance, then, was to protect workers from the financial risk of falling ill, hence SHI initially was supposed to be sheer income maintenance (Wähling 1996, p. 46). Added to this were payments in kind which were limited to medical treatment in the event of illness, medication, and aids (Baier & Wandt 2012, p. 40). Family insurance, on the other hand, was not a mandatory benefit, but an optional benefit of the SHI which could be introduced by the respective health insurance’s statutes (Wallrabenstein 2010, p. 83). Nursing care insurance was only introduced in 1995 (Fleßa 2007, p. 75).

In order for the group of laborers or socially deprived people to be captured, statutory health insurance had been conceived as a compulsory or mandatory insurance (Baier & Wandt 2012, p. 40; Wähling 1996, p. 38). For this was the best way to ensure the solidarity principle whereby social groups with higher income were capable of helping to carry the benefits of people with lower income (Baier & Wandt 2012, p. 41; Wähling 1996, pp. 44, 46), with risk-independent contributions being paid proportionately by employer and employees (Fleßa 2007 p. 75). Since SHI’s group of insured persons mostly included workers, while self-employed and better earning people were excluded due to their expected higher standard of living (Baier & Wandt 2012, p. 41), solely 10 % of the population were insured in the statutory health insurance (Wähling 1996, p. 41).

Carriers of health insurances were supposed to be presented by specifically created public-law legal persons with the right to self-administration – the so-called „Ortskrankenkassen“ (i.e., public organizations providing statutory health insurance to individuals living within a particular area), which also included existing insurance schemes (Baier & Wandt 2012, p. 40). The counterpoint to health insurances under public law was constituted by mutual insurance funds under private law, which
enjoyed great popularity because unlike in mandatory insurances contributions were calculated depending on the individual risk (Baier & Wandt 2012, p. 40). As for private insurers’ range of services, daily benefits insurance remained the only benefit until the early 20th century (Wagner-Braun 2002, p. 316). One of the reasons that accounts for Bismarck’s negative stance towards private health insurance was that he believed it to be unuseful for contributing to his idea of national insurance (Wallrabenstein 2010, p. 90) because private insurance joint stock companies were subject to the potential danger of becoming insolvent (Baier & Wandt 2012, p. 41; Wallrabenstein 2010, p. 90). This presented the first step to clearly separating state-organized mandatory insurances from private insurers, the result of which being a competitive relationship that lasts to this day (Baier & Wandt 2012, p. 41).

In summary, it can be stated that the German health insurance system’s duality can be historically traced back to Bismarck’s laborer-oriented social policy (e.g. Wagner-Braun 2002, p. 21). The historical starting point of health insurances, on the other hand, largely lies in the idea of paying sickness benefits for the purpose of age compensation (Wallrabenstein 2010, p. 83).

2.2. Status Quo: Health Insurances within the Health Care System of the Federal Republic of Germany

Membership in today’s SHI is obligatory for workers and employees with an annual income below a certain income threshold, students (until the completion of the 14th semester), farmers, and artists (e.g. von der Schulenburg & Greiner 2007, p. 51). People with incomes exceeding the income threshold have the opportunity of taking out voluntary insurance (Wimmer et al. 2008, p. 59). According to the German Social Code (SGB), the task of the SHI is to preserve or improve the health of its insured members (Clășen 2009, p. 113). The SHI benefits catalogue, which is mainly stipulated by law, includes the following services: treatment of
diseases according to the principle of benefits in kind, early identification of
diseases, and prevention of diseases (von der Schulenburg & Greiner 2007, p. 57).
The catalogue regulates precisely what medical care services be paid for, whereby it applies that they shall be economic, sufficient, necessary, and appropriate (Castelli & Dieckmann 2009, p. 17).

The fact that SHI membership and benefits are stipulated by law significantly affects PHI’s field of activity (Wimmer, p. 63). In comprehensive health insurance, the group of persons insured in the PHI is limited to self-employed persons, salaried employees with an income above the statutory insurance limit, pensioners who have been insured in the PHI throughout their working lives, students, doctors in training, employees who have previously been insured in the PHI, part-time employees, and insured persons on parental leave provided that they have been exempt from compulsory insurance (von der Schulenburg 2005, pp. 158 & 159).

Unlike in SHI, the range of services in PHI is not regulated by the State, but depends on the individual tariff model and insurance company, leading to a more varied offer of service providers and products (von der Schulenburg 2005 p. 157; Wimmer 2008, p. 64). In principle, one has to distinguish between medical expenses insurance (comprehensive health care insurance, supplementary insurance), daily allowance insurance (daily sickness allowance and daily hospitalization allowance insurance), and (statutory and voluntary) nursing insurance (Wimmer 2008, pp. 66 & 67).

To sum up, it turns out that SHI and PHI particularly differ from each other with regard to its members and range of services while sharing the basic idea of reimbursing medical costs and providing comprehensive health security and promotion (Wähling 1996, p. 41; Wallrabenstein 2010, p. 83). As will become apparent below, however, the dual system is not without consequences for health care.
3. **Health Care and Social Work**

This chapter is concerned with putting the dual health insurance system into the context of social work in the health care sector. To this end, attention is initially drawn to the concept of health promotion, which provides a point of reference for determining points of contact as well as conflicts between health care and social work afterwards.

3.1. **Health Promotion**

In the 1986 Ottawa charter, the World Health Organization (WHO) introduced the concept of health promotion to describe a strategy for securing and improving health at the level of society – a strategy which has been continually developed by recommendations made in the course of subsequent international conferences (Pelikan & Halbmayer 1999, pp. 22 & 23). Thus, health is considered within the context of society, i.e., it is no longer understood merely in terms of absence of illness (Homfeldt 2012, p. 495), but as an integral part of everyday life (Dapp 2007, p. 78). Health is a state of complete physical, mental, and social wellbeing. The more resources are available to successfully cope with everyday conflicts, the less likely it is for illness to be a coping strategy (Wilser 2008, p. 248).

Health promotion, then, refers to a comprehensive social and political process (Pelikan & Halbmayer 1999, p. 23) where personal as well as social resources and potentials are promoted using health-policy-based forms of intervention as well as health-related measures (Andreae 2009, p. 97). In other words, the concept of health promotion comprises both actions that aim to strengthen people’s capabilities and skills as well as actions that aim to change social, economic, and environmental conditions in order to alleviate its (negative) effects on public and individual health (Pelikan & Halbmayer 1999, p. 23). Having said that, health promotion not only affects health care’s area of responsibility but that of all policy
areas (Dapp 2007, pp. 78 & 79). In doing so, the overall goal is no longer to counteract the variety of individual causes of diseases, but rather to create proper conditions for creating and securing health (Wilser 2008, p. 249).

3.2. Contact Points between Health Care and Social Work

Given the social rather than medical understanding of health, whereby health or illness, respectively arises in the everyday context (Dörr 2005, p. 94), health promotion is also part of the task area of social work, understood as being a manifestation of social education and social work (Greuèl & Mennemann 2006, p. 15). For social work helps qualify everyday situations and ways of living (Homfeldt 2012, p. 495) insofar as it enables people to better recognize and cope with their own concerns – also in terms of health (Franzkowiak et al. 2011, p. 139). It mobilizes resources, activates individual strengths, organizes solidarity, and promotes participation and integration (Greuèl & Mennemann 2006, p. 15). What is crucial about it is its holistic-multidimensional, biopsychosocial approach of considering both social and individual aspects of health (Franzkowiak et al. 2011, p. 138). That means that it includes both material and social determinants underlying the need of help in the individual case and the subjective situation of people seeking help with its physical, psychological, and mental aspects (Homfeldt 2012, p. 495).

With this approach, social work plays a complementary role in public health (Franzkowiak et al. 2011, pp. 131, 133), constituting a link between medical and nursing care in the hospital, on the one hand, and support in rehabilitation and nursing facilities, on the other (Ansen et al. 2004, p. 59). Among its main tasks is dealing with acutely or chronically ill people and their relatives, people in financially and socially precarious situations which force them to change or leave their jobs, people subject to unemployment or care dependency, people who have to deal with the issue of early retirement and its consequences or who are confronted with
social exclusion and social decline as a result of their illness (e. g., alcohol and drug addicts, mentally ill people, parents bringing up children with disabilities). The job of social work in this context is to react to the *key problem of situation-specific coping*, for instance in acute crises (e.g., mental attacks, or traumatic experiences with psychiatry), or *life-long forms of coping* with chronic illness or permanent disability in terms of counselling, support, and intervention (von Kardoff 2004, p. 355).

To control the fulfillment of these tasks, social work cooperates with both service providers (e.g., outpatient nursing services, inpatient nursing facilities) and service carriers (e. g. health insurances, pension and social security insurance carriers) of the health care system, putting particular emphasis on cooperating with service carriers as access to postdischarge aids typically depends on its prior approval (Ansen et al. 2004, p. 33). Cooperating with health insurances, for example, conduces to, in particular, preparations for discharge from hospital and patients’ transfer to aftercare treatment (Ansen et al. 2004, p. 33).

Based on health promotion as an interface between health care and social work, it is possible to display certain conflicts within the health care system that illustrate the relation between the dual health insurance system and social work.

### 3.3. Conflicts

The duality of the German health insurance system harbors the risk of a two-class system of medical coverage, which opposes the idea of equal health-related opportunities within the health system. In view of the continuous rise in health care costs as a result of medical progress and demographic change as well as economic stagnation and high unemployment rates, it becomes almost impossible for the PAYG-financed SHI to finance medical care (e. g. Hoffmann 2004, pp. 46 & 47). Aside from increasing contributions and supplementary contributions, this
leads to politically determined benefit cuts that have to be implemented by physicians in the form of savings measures and that manifest themselves in the preference of private health insurance patients over statutory health insurance patients which affects nearly all areas of medicine (novel diagnostic methods, high-tech medical products, surgical techniques, new medicines, physical therapy, reconvalescence treatments) (Guzek 2008, pp. 27 & 28). Even now, early hospital discharges despite ongoing health issues are no longer a rarity (Guzek 2008, p. 27) Moreover, due to legal provisions on SHI, private health insurance patients become the preferred patients in that physicians can determine the level of service fees for private health insurance patients for themselves, meaning that they receive higher fees for providing the same services (Hoffmann 2004, p. 51). Thereby, health treatment is made dependent on the level of income in the sense that persons insured in the SHI, i.e., the lower income groups, have fewer health-related opportunities than high-income earners who are free to take out private insurances. What does this state of affairs mean for social work in the health care sector?

Insofar as SHI’s cutbacks in benefits are opposed to people’s health promotion in the sense that health treatments are insufficient for allowing independent management of everyday life (e.g. in the wake of early hospital discharges), it is the sociopolitical job of health-promoting social work to intervene and create appropriate conditions for securing health by controlling and organizing the ‘network existing between health insurances, service providers, and insured persons’ (Greuèl & Mennemann 2009, p. 79). This includes, above all, establishing and maintaining close personal contact with the respective health insurance (Ansen et al. 2004, p. 31) in order to allow patients access to the benefits necessary for their health. To achieve this purpose, social work needs to cooperate with health insurances to the extent that – relying on the German Social Code and SHI’s task – it justifies the appropriateness of certain benefits to them so that they will approve of the respective health measures.
4. **Conclusion and Outlook**

For today’s social work, the duality of the German health insurance system, which dates back to Bismarck’s laborer-oriented social policy, means an extension of its responsibilities and field of activities in that the structural differences existing between SHI and PHI cause social inequality with respect to the health treatment and health promotion of people insured in the SHI as opposed to people insured in the PHI and, as a consequence, necessitate social work. In view of rising health care costs, high unemployment rates, changing demographics, and health policies that adhere to a statutory health insurance system based on the pay-as-you-go principle, it is likely for social work to remain an important and necessary vocational field in the health care sector in terms of fulfilling the social political task of public health promotion in the future.

**Bibliography**


Jürgen Wiegand

Integrating Quality Management to Ensure Effective QSH Management in Companies

1. Introduction

In its regulatory capacity, employers’ liability insurance associations provide that every company must have a specialist employee for occupational safety and health (OSH). This provision is an integral part of the German Occupational Safety and Health Act, which provides for measures to prevent accidents at work and work-related health hazards, as well as measures to ensure that working conditions are humane. It belongs to a company’s indispensable support processes – both in social and economic terms. Accidents and work-related diseases entail a huge financial burden for companies, and in many cases, shortcomings in OSH suggest shortcomings in the product and service quality (Schliephacke 2008, pp. 21).

In consideration of the above, integration of total quality management in companies is of key importance. The present paper, therefore, deals with integration of quality management to ensure effective OSH management in companies. The first step is to present the key tasks as well as company-related advantages of occupational health and safety. Subsequently, the aim is to present and discuss integration of ISO 9001 quality management in terms of a OSH-related change management process. The paper ends with some concluding remarks.
2. Occupational Safety and Health Management in Companies

2.1. Obligations

The German Occupational Safety and Health Act entails several obligations for every entrepreneur. First, entrepreneurs must appoint specialist employees for occupational safety and health whose main task is to support the entrepreneur in occupational health and accident prevention. In particular, OSH specialists are to give advice on the ergonomic design of workplaces, work processes, and work environments; to check all technical equipment on a regular basis and evaluate its hazards; to regularly examine workstations and point out existing deficiencies; to investigate work-related accidents and provide security-related instructions. The prerequisite for this includes a profound knowledge of applicable laws as well as the regulations and rules of the employer’s liability insurance association, EU directives, as well as other laws and ordinances such as the Occupational Safety Act, the Occupational Health Act, the ordinance governing workplaces and computer workstations; and further training in these fields in order to always be up-to-date (Fabry 2015, pp. 3 & 4).

2.2. Advantages

The appointment of a specialist employee for OSH involves several advantages for companies. First of all, having a skilled specialist employee for OSH may lead to a reduction of accident risks and, as a result, considerably fewer cases of work-related illnesses. Added to this is the reduction of premiums due to the employer’s liability insurance association (Fabry 2015, p. 5). A major economic advantage of OSH for companies is the possibility to integrate OSH in its quality management system. This is done by the application of ISO quality standards, allowing outside parties to evaluate whether or not the quality management system meets the quality standard and thus the OSH requirement. Every OSH-relevant aspect can be included in the quality management manual, procedural guidelines,
maintenance plans, operational instructions, briefings and further documents. Participation in briefings and therefore compliance with OSH provisions can be accounted for by attendance lists every employee must be registered in. Also, every employee has the opportunity to look up all OSH-relevant aspects in the respective documents; access is granted at any time. This ensures a clear and transparent regulation of occupational safety and occupational health (Fabry 2015, pp. 6.).

3. ISO 9001 as a Quality Standard for OSH

The process-oriented quality management system of the ISO 9001 standard integrates the process and quality orientation approach in terms of quality-oriented process management so as to materialize efficient processes with great customer benefits on the basis of common, complementary goals (Pfeifer 2001, pp. 285). The DIN EN ISO 9000/2000 standard states as follows: ‘The quality management system is that part of the organisation’s management that focuses on achieving results relating to quality objectives in order to meet the needs, expectations, and requirements of interested parties where appropriate. The quality objectives complement other objectives of the Organisation such as those related to growth, funding, profitability, personnel safety, and environmental effects of processes, products and services’ (ISO 9000/2000, p. 17). Based on this approach, the ISO 9001 quality management system provides a control cycle to promote and steer quality requirements that function beyond the boundaries marked by corporate areas or departments. OSH affects any of those areas, as is illustrated by the figure below.
The factors mentioned in the chart (i.e., measurement, analysis, and improvement as well as product realization, and management of resources) correlate with the interest of certain groups and individuals in an organization’s performance and success (e.g., customers, suppliers, persons within an organization, business associates). Identifying information on stakeholder requirements lays the groundwork for a successful implementation and improvement of the quality control cycle (ISO 9000/2000, p. 10). According to ISO 9000/2000, those requirements constitute demands or expectations that derive from external requirements (e.g. from laws, customer expectations/requirements, or standards and regulations) and internal requirements, resulting from the determined quality policy and documents regarding the organizational structure and the development and production process. They flow into the processes, and are crucial for creating satisfaction on the part of stakeholders. The required resources can be determined and provided. Thus, the identified quality requirements also form the basis for measuring both the
degree to which the requirement has been implemented and the efficiency and effectiveness of processes. The process results, in turn, are captured by the analysis processes, and transferred to those responsible. Potentially required corrective measures to improve customer satisfaction give new impetus to the control cycle and ensure the quality management system’s continuous improvement (Pfeifer 2001, pp. 70).

According to ISO 9000, developing and implementing such a system involves the following steps:

- Surveying the demands and expectations of customers and other stakeholders;
- Determining the quality policy and quality objectives within the organization;
- Determining the processes and responsibilities required;
- Determining and providing appropriate resources;
- Introducing methods to measure the effectiveness and efficiency of every single process;
- Identifying processes’ current effectiveness and efficiency;
- Establishing means to prevent errors and eliminate its causes;
- Introducing and applying a process for the quality management system’s continuous improvement.

Even though the customer-oriented quality management system outlines the main processes to be defined within a quality management system, it does not specify a particular process organization, thus offering plenty of scope for a distinct process design (Zollondz 2002, pp. 16.). A standardization of the process organization is incapable of responding to the various and complex dimensions and offered products of the individual industrial sectors and economic areas. Hence, the quality management requirements included in the ISO 9001 standard are of a general nature and apply for any organization in any industrial or economic sector.
regardless of the product category on offer (Zollondz 2002, p. 17). It should be noted that those requirements do not pertain to product quality but to the organizational units’ quality capability, i.e. a unit’s capability to realize a product that meets the specific product requirements (Zollondz 2002, p. 17).

4. Integration of the ISO 9001 Standard as a Change Management-Process

4.1. Quality Policy as a Crucial Prerequisite for Implementation

The prerequisite for establishing a quality management system according to ISO 9001 is for top management to clearly define quality objectives when developing the quality policy. Introducing a quality management system is subject to the decision of top management, whose responsibility is to appoint a quality management representative or a responsible department when necessary, and to set quality-related corporate objectives by means of a documented quality policy. When defining the concept of quality, clear and feasible objectives should be envisaged. A primary requirement for implementation is the identification and persuasion of all involved. All quality objectives should be set for every hierarchical level and be agreed with the individual persons involved. They should be formulated in a manner which allows them to be the basis and motivation for the actions of everyone involved, as well as to render its implementation measurable and useful. Another requirement is the realization and maintenance of the quality process at all organizational levels, and a verifiable knowledge transfer to all relevant organization members by documenting the quality process in a quality management manual or circular letter, in staff meetings, at notice boards, or in staff training initiatives (Pfitzinger 1995, pp. 21.).
4.2. Determining the Current State

In order to measure the degree to which the quality requirements are fulfilled, quality management and its documentation should be carried out as accurately as possible in practical application. Introducing a well-functioning quality management system therefore requires the examination and identification of all quality-related processes and documents:

- Operational and organizational structure;
- Job description;
- Process, working, and investigation guidelines;
- Quality recordings and documents.

Once identified, the current state needs to be compared with the specified requirements in order to be able to counteract deviations and eliminate weak points by implementation of the quality management system. Those deviations and weak points should be formulated and evaluated subsequently, also taking into consideration potential sources of error. The data base thus determined provides the foundation for making a decision on the choice and extent of the relevant quality-promoting measures. Considering that individual requirements are becoming more and more numerous and strict, offered products more and more complicated, division of labor more and more sophisticated, and deadlines ever more tight, it is required for top management to be fully included in quality evaluation. To facilitate the evaluation of the current state, normative quality assessment may be used. It can be applied within every unit (Geiger 1998, p. 412).

4.3. Eliminating Weak Points

If weak points are recognized, it sometimes proves necessary to introduce modified procedures and workflows. They should be clearly documented for the
purpose of notifying and, if necessary, training the people involved. The fundamental prerequisite for the necessary knowledge transfer is close cooperation with the relevant specialist departments.

4.4. Documentation and Evaluation

Once processes, interfaces, and all managerial, monitoring, and executive activities have been clearly defined and assigned to the respective responsibilities, they have to be thoroughly documented. However, since process descriptions must be implementable, they should be made with the active participation of all relevant departments. Working procedures and processes that, due to the experience and training of the implementing staff, run smoothly, do not require detailed documentation. Too detailed a definition may be counterproductive if employees’ scope of action is restricted and the necessary cooperation and creativity hampered.

It is therefore advisable to divide quality management documentation into three documentation categories:

- Quality management manual;
- Quality management procedures;
- Work and test instructions.

The quality management manual describes the quality management system’s organizational and operational structure and provides an overview of relevant system-related documentation. Making a significant contribution to providing a clear corporate structure, it constitutes the most important tool for the implementation and maintenance of the quality management system. When developing a quality management manual, the DIN EN ISO 10013 standard may be used as a reference point. The quality management manual can be used both internally and externally. The procedures described in it should serve as an
orientation guide for employees by providing an overview of the most important rules of procedure (DIN ISO 10013).

Last but not least, evaluation of the quality management system operated within the company must take place at regular intervals. This is done through management review or quality management assessment, respectively. It formally evaluates the current situation and appropriateness (effectiveness, efficiency) of the entire quality management system in terms of quality policy, standard requirements, and achievement of quality objectives, and is carried out by top management (Geiger 1998, p. 166). The standard requires:

- Documentation of the results obtained by quality management assessments;
- Traceability of the data and documents;
- Determination of the inspection intervals;
- Documentation of orders concerning corrections or additions through top management.

Important information is also provided by quality statements, internal quality audits, supplier audits, and customer or consumer feedback (Geiger 1998, pp. 167).

5. **Conclusion**

The above considerations demonstrate that the quality concept and its related approaches can be applied to any kind of procedures and processes, including the field of occupational safety and health or OSH management, respectively. Quality comprises a comprehensive concept that pervades the company as a whole through the integration of the interests of customers, suppliers, and employees with the side effect of high employee satisfaction. Quality is the main concern of customers. All processes must therefore be quality processes, where the set
requirements are met without compromises. Managers must allow their employees to keep the error rate as low as possible, while employees must ensure an excellent product quality in the creation and marketing process. Thus, implementation of a separate quality assurance department is not necessarily required as each and every corporate process must be considered on the basis of quality criteria.

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