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Facing digital transformation with resilience - operational measures to strengthen the openness towards change

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Abstract

Particularly in times of digital transformation processes, it is important to meet the associated challenges in the world of work and to be prepared to go along with the associated changes. But many companies - especially small and medium-sized enterprises - do not know exactly how to prepare their workforce for change and to strengthen their openness towards change. For this reason, appropriate company measures are necessary, for example in the form of training courses or workshops that focus on the development of employees' mindsets. On the one hand, a certain resilience is required on the part of employees. The ability to cope well with turbulence and challenges is known as resilience. For example, this has a positive effect on the health, the performance and the attitude towards new of individuals. On the other hand, it is important to prepare the workforce for change processes which may result from the use of new technologies. This can be achieved by familiarizing employees with new technologies and involving them in the change process at an early stage. Therefore, this article aims to turn out measures that can help to increase the resilience and acceptance of new technologies of individuals working in manufacturing companies. Accordingly, two exemplary company measures to strengthen the openness towards change are presented.

1. Introduction

In particular, small and medium-sized enterprises are challenged to keep up in the age of digital change. Due to a lack of resources, they often need more external support and benefit from practical assistance [1]. When using new technologies, not only the technical component but also the social component must be taken into account [2]. It is therefore important for companies to prepare their workforce for the change and the associated challenges. Without the commitment and motivation of the workforce, it is difficult for a change process to function [2]. It can be helpful

to start with the appropriate mindset of the employees and to promote their openness to change [3,4]. This can be achieved on the one hand by developing the skill of resilience [5]. On the other hand, by imparting knowledge about new technologies and involving employees in change processes at an early stage. The associated creation of transparency can increase employee acceptance of the use of new technologies [2]. Why resilience in particular is an important driver of change is explained below.

Resilient individuals have a higher psychological resistance to external influences (e.g., strokes of fate, failures, corporate transformation measures). They find it easier to master difficult situations and have the ability to recover more quickly from setbacks or defeats [6]. Resilience can thus contribute to maintaining mental health and positively influence employees' work and performance in the work context. In addition, resilient employees are often more satisfied with their work [7,8], which can also contribute to higher productivity and reliability. Furthermore, strengthening individual resilience can contribute to an overall more positive attitude towards life and thus also to more openness towards change [9,5] as well as acceptance of new technologies [10]. Studies show that Resilience Training can positively influence the way people deal with stress [11] and has a positive effect in individuals' well-being [12]. But also the active coping of challenges, e.g., working from home alone during corona pandemic should be much easier for resilient people.

Resilience is innate to a certain extent. The presence of protective factors or resources can promote positive psychological and physical development in people [13]. These resources can be developed (at least in part) and built upon. Resilience can therefore be learned by working on one's own behavior. It is possible to strengthen personal resilience over a lifetime through targeted training. This insight is also relevant for companies that want to benefit from resilient and thus open minded, motivated as well as productive employees. The implementation of Resilience Training, e.g., as part of workplace health promotion or organizational development, can lead to a more resilient workforce. This can be a competitive advantage for companies, especially in times of (digital) transformation. In the corporate context, not only the individual resilience of employees is considered, but also entire organizations can be resilient [14]. Resilient companies have the ability to deal constructively with crises through flexibility and stability, for example. There are different hazardous situations for companies that may require the presence of resilience: for example, natural disasters and monetary and economic crises, or poor decisions and conflicts [15]. Also, in organizational resilience, it is the individuals who decide on certain strategic directions and implement the changes. Therefore, the focus of this paper is on the resilience development of the employees in the organization.

The positive effects of resilience are frequently highlighted in the literature and the importance of resilience for companies and their employees is emphasized [5]. In addition, the need for corporate measures to shape change is emphasized. However, it is often not made clear what exactly these operational measures can look like. In particular, concrete workshop exercises or training courses are hardly ever described. Small and medium-sized companies in particular need appropriate support here, because they often do not have the resources to deal intensively with individuals in change processes [2]. This article provides concrete tips for strengthening individual resilience and employee acceptance of new technologies.The development of employees' mindsets toward openness to change that is aimed for in this way makes an important contribution to companies that want to initiate change processes. To build resilience and openness toward change in the company, it may be helpful to ensure that employees deal with new technologies without fear. To achieve this, it is important that employees are familiar with new technological developments and accept them [10]. Holding a workshop on the use of new technologies can help to ensure that the workforce will respond positively to changes brought about by ongoing digitization. Finally, a positive attitude toward (new) situations – which is a characteristic of resilient individuals - is assumed to help people deal with them more calmly. With this in mind, the paper contributes to answering the following research question: How can company measures look like to promote the willingness and acceptance of change through mindset development among employees? Accordingly, the concepts of two company measures, Resilience Rraining (section 3.1) and the workshop on new technologies (section 3.2), are the results of this article as explained below. These were developed and tested as part of the "STÄRKE" project funded by the German Federal Ministry of Education and Research [16]. In the conclusion (section 4), the importance of the topic, implications for practice and limitations are discussed. At first, section 2 explains the method and procedure of developing and testing the operational measures.

2. Methods

The structure of the Resilience Training is based on the model of resilience in the workplace by Soucek and colleagues [17]. Factors that are significant for resilience development in the work context are highlighted here.

According to the model of resilience in the workplace by Soucek and colleagues [17], the personal resources of resilience (self-efficacy, optimism, and mindfulness) can promote resilient behavior, see Fig. 1. Consequently, the authors assume that people behave in more or less resilient ways. This behavior can be learned and includes *emotional coping* (dealing constructively with one's emotional reactions), *positive reinterpretation* (e.g., perceiving difficult situations as positive challenges), *comprehensive planning* (proceeding rationally and considering alternatives to achieving goals), and *focused implementation* (strong solution orientation without distractions). The implementation of resilient behavior is intended to reduce the potential negative impact of changing demands on employees and maintain their ability to act [17].
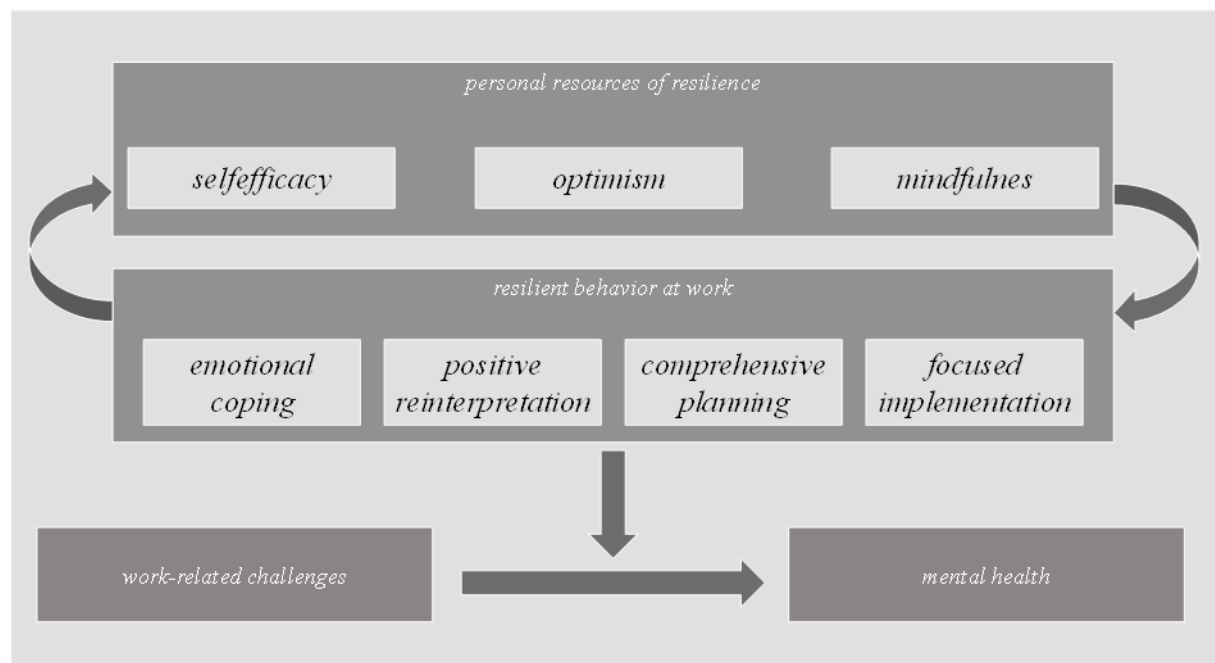

Fig. 1. Model of Resilience in the Workplace (own presentation based on Soucek et al., 2015)

As part of a research project to strengthen resilience in companies, Resilience Training was developed based on the resilience model for work. The individual exercises serve to promote and train the individual facets of resilient behavior. The selection and design of the exercises resulted from literature research and discussions between the scientific project partners. After the first concept of the Resilience Training had been developed, it was tested with the staff of the operational project partners. The training was carried out and subsequently evaluated by the participants. Based on the evaluation, which was very positive overall, the training was slightly adapted.

The structure and content of the second company measure workshop on new technologies is based on literature that provides guidance on how to reduce employees' concerns and fears about digitization. According to this, transparency through the provision of information on new technologies and data protection, as well as the early involvement of employees in planned digitization measures, can increase acceptance of these measures [10]. The possibility of a trusting exchange about concerns and fears can also be helpful and is made possible in the workshop as part of a

change of perspective. These factors were taken into account in the design of the workshop and its exercises. The workshop was also tested with the employees of the company project partners, evaluated and adapted accordingly.

Consequently, the measures presented in this paper for generating openness to change are scientifically sound and have been tested in practice.

3. Results

This chapter explains the structure and content of the two operational measures to promote openness to change. First, exercises to strengthen employee resilience are explained. Then, a concept is presented that can be used to increase employees' acceptance of new technologies.

3.1. Concept of a Resilience Training for Employees

A training concept for employees was developed to raise awareness of the concept of resilience and to carry out concrete exercises to strengthen resilient behavior. The structure of the training is based on the four facets of resilient behavior according to Soucek and colleagues [17]. When conducting the Resilience Training in the company, it is advisable to appoint a person to conduct and moderate the workshop. Alternatively, external trainers also can provide support. The aim of Resilience Training is for participants to acquire strategies for resilient behavior that they can implement in their day-to-day work.

During the first module, participants gain an understanding of what resilience means - especially in the workplace. Participants then learn strategies and techniques to better manage their personal thoughts, emotions and behavior. One opportunity is to consciously get some distance to stressful situations. To do this participants can become aware of their personal stressors and resources in both their personal and professional lives by creating their personal "stressor and resource map." This creates an awareness of which aspects in one's life should be avoided and which should be encouraged. These can help them to react more calmly to difficult situations and challenges and to remain able to act (emotional coping). In another exercise, participants are trained in the behavior of "positive reinterpretation". Here, the primary focus is on the fact that there are different ways of perceiving, evaluating, and interpreting things. This points out, that everyone is responsible for their own thoughts and that challenging situations can also be seen as an opportunity for personal strengthening and further development.

The focus of the second module is on building resources and dealing with crises. The knowledge transfer on the topics of types of resources and crises prepares the participants for the exercises. In the following ABC exercise, participants think of a personal resource for each letter of the alphabet and write it down. This serves to raise awareness of their own resources, which they can lay on in the event of a challenging situation. Finally, they think about how they can expand their resources even further and draw on them more to cope (emotionally) with difficult situations. To this end, the participants formulate concrete goals.

In another exercise, the participants reflect on the crises they have already experienced in their workplace and how they dealt with them. The goal is to sharpen their sense for experienced (past or present) crises. The people working in the exemplary companies reported, e.g., about conflicts with colleagues, their personal disability to manage situations of change or the fear of dealing with new technologies which have been implemented in their workplace respectively the fear of failure. To this end, the participants first discuss in teams of two how they have dealt with experienced crises. Subsequently, it is determined which resources are to be developed to cope with possible crises and challenges in the future. This not only helps to strengthen personal resources, but also shows that it is important to have goals and to plan them comprehensively (third facet of resilient behavior). The implementation of the set goals is done on one's own responsibility. In order to strengthen the fourth facet of resilient behavior "focused implementation", the so-called Fish! philosophy is presented to the participants. This is a motivational concept inspired by the behavior and attitude of salespeople at the Pike Place Fish Market in Seattle [18]. The ability to self-motivate and a positive attitude towards one's own work can help to implement personal goals in a focused manner and also to master challenges or difficult tasks at work in a more relaxed manner.

Overall, the training is also intended to raise awareness that while change can be challenging, it is not necessarily threatening and can even be an opportunity for personal growth.

3.2. Concept of a Workshop on New Technologies

Change processes during digital transformation are accompanied by challenges that must be overcome by the entire workforce. Many employees are not always positive about change, as this creates uncertainty. This can be particularly the case with the planned introduction of more complex technological systems. In this case, it is important to involve employees in the change process right from the start in order to ensure acceptance of the innovations. For this reason, an employee-oriented workshop was developed to reduce possible concerns and fears regarding the use of new technologies [16].

The aim of the measure is to create an awareness of the fact that it is possible to remain capable of acting individually despite the changes in the course of digitization and the associated new requirements. It makes sense for employees from different departments and hierarchical levels to take part in the measure and for it not to be carried out separately for managers and employees. This enables different perspectives to be considered, and managers gain an impression of what their employees are concerned or worried about with regard to new technologies. To allow fruitful discussions the number of participants should not exceed 10-12.

The first module is about the digitization possibilities at one's own workplace, see Fig. 2. In his role as a moderator, one person presents the main technical options for networking and digitization in production via worker assistance systems [19]. This is followed by a tour of the respective workplace with the respective activities of the participants. The first exercise is conducted in small groups discussing how certain activities (e.g., soldering on threads or piece count control) are currently performed and how they could be done more easily and efficiently by using new technologies. The results of the small group work are recorded on a flip chart and presented by the participants. The aim of the module is to involve employees in change processes and thus make it clear that new technologies are not a threat but an enrichment.
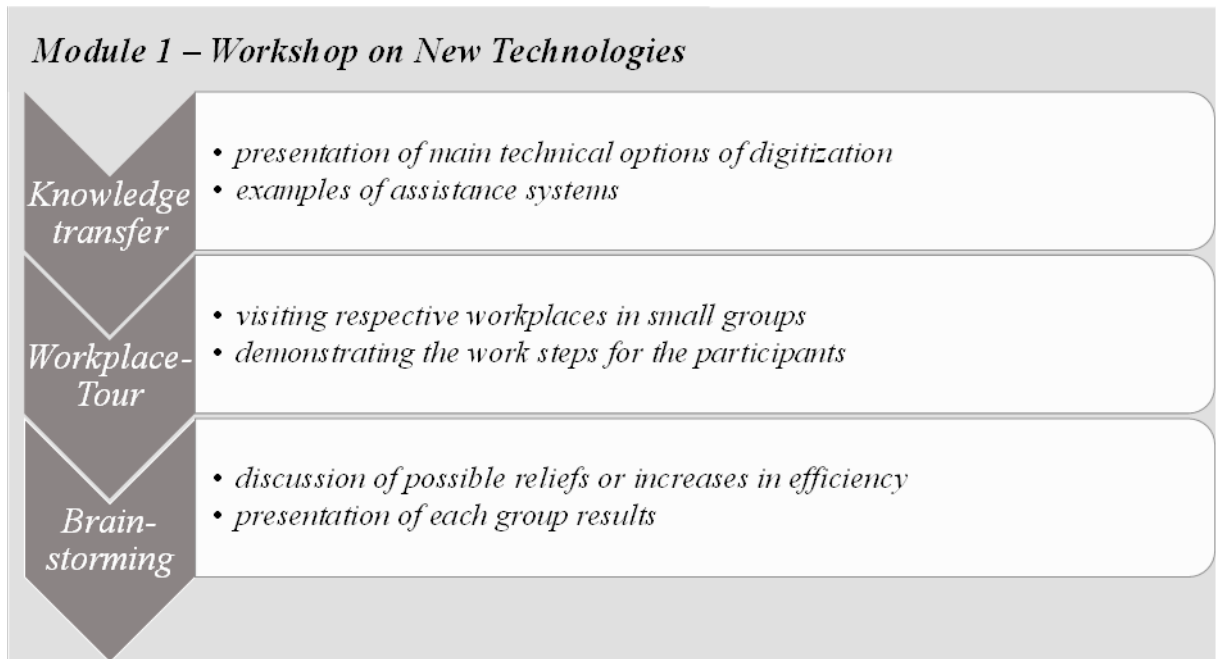

Fig. 2. Course of the Workshop on New Technologies, Module 1 (own presentation)

The second module focuses on the topic of "data management". To begin with, information is provided on the technical and legal principles involved in data management and on the types of employee data that may be collected.

Building on this knowledge, the first group exercise is conducted. The participants have the task of assuming one of four roles in the group in turn (management, works council member, technology-savvy employee, concerned employee). From the perspective of the respective person, the group now discusses how they feel about the topic of "data management" and what opportunities and risks they associate with it. The results are again visualized on a moderation wall and discussed. Sharing concerns and fears about digital transformation can help reduce resistance to change among the workforce. Moreover, talking to tech-savvy colleagues can be a resource for non-tech-savvy employees when it comes to dealing with challenges resulting from implementation of new technologies.

Module 2 – Workshop on New Technologies

Information
- *basic principles of data management and data collection*

Group exercise
- *perspective adoption on different roles*
- *discussion and associated feelings of these roles*

Visualization
- *collecting of results*
- *discussion of feelings in the group with all participants*

Fig. 3. Course of the Workshop on New Technologies, Module 2 (own presentation)

4. Conclusion

New technologies open up new opportunities and possibilities for companies to increase their productivity and competitiveness. In exploiting the potential created by digitization, humans in the organization play a central role. That is why it is important that employees take a positive approach to the associated change processes. Companies can prepare their workforce for this change with targeted measures to strengthen resilience [19] and acceptance of new technologies. Corresponding measures in the form of workshops and training courses have been described in this article. It can be useful to start with the employees' mindsets and attitudes. Workshops and trainings to increase the openness toward change through resilience of employees can be embedded, e.g., in measures of corporate health management or change management. Investing in building resilience in the workforce, in particular, can provide benefits for both individuals and the organization. Employees benefit from greater job satisfaction and an overall better quality of life. The company can benefit from a healthier, motivated workforce that is ready to change [5]. This article provides advice on how companies can foster this as part of operational measures.

When companies face a change process, there are certainly a number of other operational measures that become necessary. In addition to the provision of information, the inclusion of employees in the transformation process and

the development of a corresponding mindset among employees, which is the focus of this article, it could be helpful, for example, to adapt the corporate culture and strategy accordingly with a view to the new vision of the company. This could provide orientation for employees and reduce uncertainty among the workforce [16]. Building up concrete competencies and qualifications among employees could also contribute to commitment and increase the success of the change process. It is also helpful if executives in particular help to shape the (digital) transformation in the company in their roles as role models, supporters and mediators [20].

One limitation of this research work is that the impact of the operational measures has not yet been fully tested. It is planned to carry out and evaluate the training and the workshop in other companies. It would also be interesting to investigate to what extent the training and workshops change employees' attitudes toward new technologies, their resilience and their openness to change. However, the measures presented in this paper for generating openness to change are scientifically sound and have been tested in practice.

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