

Organizational Citizenship Behavior in the context of digital change

Saskia HOHAGEN

*Institut für Arbeitswissenschaft, Ruhr-Universität Bochum
Universitätsstraße 150, D-44780 Bochum*

Abstract: The digital transformation is not only changing society, but also the working environment. This article addresses the question to which extent the digital transformation is related to the voluntary behavior of employees in the workplace. To answer this question, an online employee survey was conducted in a healthcare insurances in North Rhine-Westphalia. In sum, perceived preparation for digital change in the organization is significantly positively related to the OCB dimensions short-term (individual) help and long-term (strategic) help. The results of the study are discussed and practical implications are derived.

Keywords: digital transformation, organizational citizenship behavior, quantitative research, healthcare insurances

1. Introduction

Digital transformation is changing the way organizations work (Lippe-Heinrich 2019). In this context, the terms industry 4.0 or work 4.0 are used in research. Both in industry 4.0 and in the context of work 4.0, the importance of digitalization is increasing (Ittermann & Niehaus 2018; Poethke et al. 2019). Poethke et al. (2019) indicates that digitalization is one dimension of work 4.0. Initial researchers (e.g. Hummert et al. 2019) address the effects of digital transformation in the context of the working environment. The focus here is on affective, motivational and behavioral effects (Poethke et al. 2019).

In practice, effects that have a positive influence on the performance of an organization are of particular interest. Organizational citizenship behavior (OCB) represents a construct that fulfills this requirement (Podsakoff et al. 2009). OCB is understood as "individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization" (Organ 1988, p. 4). This definition makes it clear that OCB represents an extra role behavior that is not formally determined and is therefore at the discretion of the employee (Rose 2016). Research distinguishes between different OCB dimensions (Podsakoff et al. 2000), e.g. helping, conscientiousness, sportsmanship, courtesy and civic virtue (Podsakoff et al., 1990). Central to the discussion of OCB is the helping dimension (Ehrhart 2018), which focuses on helping and supporting others (Smith et al. 1983). Vey and Campbell (2004) indicate that this dimension can be clearly attributed to extra role behavior.

The aim of this paper is to address the relationship between digital transformation and OCB.

2. Theoretical Background

Reinhardt (2020) highlights the following effects of digital transformation at the

individual level: more knowledge work, development of new forms of networking and an increase in flexible working. In addition, the degree of digitalization is significantly positively related to job satisfaction and work engagement (Hummert et al. 2019). This results are in line with a study by Poethke et al. (2019), where digitalization was operationalized as the use of information technology. Furthermore, this study was able to show that digitalization is positively related to creativity, empowerment, and intrinsic motivation.

In the context of OCB research, the study by Hummert et al. (2019) showed that the degree of digitalization was not significantly related to OCB. A different picture emerged in the study by Poethke et al. (2019). Here, digitalization has one of the greatest relationships with OCB. To this effect, Coldwell (2019) argues that industry 4.0 will have a negative impact on work in the form of extreme OCB. These highlighted research results show different outcomes when considering the relationship between digitalization and OCB. Against this background, it is important to take a deeper look at this perspective in this paper.

The focus of the present paper is neither the degree of digitalization (Hummert et al. 2019) nor the use of information technology (Poethke et al. 2019), but rather the perceived preparation for digital change in the organization. This paper is based on the assumption that the more employees feel prepared for the digital transformation in the organization, the more they exhibit voluntary behavior at work.

3. Methodology

The research in this paper builds on a quantitative online survey conducted in 2018 at a healthcare insurances in North Rhine-Westphalia. 924 employees participated in the survey. The response rate is 64.71%. During analysis, data sets with missing values were excluded. The sample includes 738 participants. The sample description can be seen in Table 1.

Table 1: Sample description

Sample	n	%
Gender		
male	211	28.6
female	459	62.2
not specified	68	9.2
Age		
up to 29 years	79	10.7
30 to 39 years	146	19.8
40 to 49 years	258	35.0
50 to 59 years	141	19.1
60 or older	26	3.5
not specified	88	11.9
Manager		
yes	102	13.9
no	635	86.0
not specified	1	0.1

Note. n=738.

Much more female participants (62.2%) than male participants (28.6%) took part in the survey. The age distribution shows that one third of the participants are between 40 and 49 years old (35.0%). In addition, 13.9% managers and 86.0% employees participated in the online survey.

The questionnaire contains five self-developed items to assess the perceived preparation for the digital change in the organization. An example item is "The managers are clearly preparing us for the digital change". In addition, the questionnaire included seven items to elicit OCB. OCB was operationalized using a shortened and adapted scale focusing on the OCB dimension helping developed by Smith et al (1983). The items were translated into German using translation-back-translation method. An exploratory factor analysis shows that two OCB dimensions emerge, "short-term (individual) help" (example item: I help others when they have heavy work loads.) and "long-term (strategic) help" (example item: I make innovative suggestions to improve the department.). All items were based on a seven-point Likert scale.

4. Key findings and discussion

The main analysis of the relationship between perceived preparing for digital change in the organization and OCB is based on a regression analysis. A correlation analysis was performed in advance. Since the three variables are not normally distributed, the Spearman-Rho method was used for the correlation analysis. Table 2 shows the descriptive statistics and correlations.

Table 2: Descriptive statistics and correlations

	M	SD	(1)	(2)	(3)
perceived preparing for digital change in the organization	4.24	1.30	(.879)		
short-term (individual) help	5.66	1.14	.183**	(.787)	
long-term (strategic) help	4.78	1.20	.290**	.457**	(.708)

Note. *p < .05, ** p < .01, n=738.

The correlation matrix shows that the two OCB dimensions, short-term (individual) help and long-term (strategic) help are significantly positively related to the preparation for digital change. This result shows that the better perceived prepared employees feel for digital change, the higher their voluntary behavior at work. Table 2 clearly shows that long-term (strategic) help (.290 **) is more strongly related to preparation for digital change than the OCB dimension of short-term (individual) help (.183 **). In addition, it is clear that there is no multicollinearity in the investigation.

Continuing, simple linear regression analysis were conducted for the two criteria of short-term (individual) help and long-term (strategic) help with the predictor perceived preparation for digital change. Before these two analysis were examined, the prerequisites for conducting a regression analysis were checked (Hair et al. 2019). According to Bortz and Schuster (2010) as well as Bühner and Ziegler (2009), the following four prerequisites are tested: linearity, homoscedasticity, normal distribution and no multicollinearity. At the beginning, the focus is on the regression analysis between preparation for digital change and the OCB dimension of short-term

(individual) help. The prerequisites test shows that there is linearity between predictor and criterion. The modified Breusch-Pagan test indicates that there is no heteroscedasticity ($p = .013$). However, there is a non-normal distribution of the residuals. Both the Kolmogorov-Smirnov test ($p = .001$) and the Shapiro-Wilk test ($p = .001$) indicate a non-normal distribution. Collinearity is not present, the condition index is below the reference value of 15. Not all requirements to perform a regression analysis were met, so the bootstrapping method is used for the analysis. Table 3 shows regression analysis results in the summary.

Table 3: Results of the regression analysis to investigate the relationship between preparation for digital change and the OCB dimension of short-term (individual) help

	b	SE	p	R ²
perceived preparing for digital change in the organization	.142	.032	.001	.026**

Note. * $p < .05$, ** $p < .01$, $n=738$, b and SE Bootstrapping.

The regression analysis results show that preparation for digital change has a significant influence on short-term (individual) help. The effect is positive ($b = .142$). The explained variance of the model is 2.6% ($R^2 = .026$, $F = 19.987$, $p = .001$). Based on these results, it is clear that when employees feel prepared for digital change, they are more willing to help their colleagues in the short term.

The second simple regression analysis focuses on the predictor perceived preparation for digital change and the criterion of long-term (strategic) help. The examination of the prerequisites for conducting a regression analysis showed that linearity exists between the predictor and criterion. Heteroscedasticity was tested using the modified Breusch-Pagan test showing that no heteroscedasticity ($p = .046$) is present. Both the Kolmogorov-Smirnov test ($p = .001$) and the Shapiro-Wilk test ($p = .001$) indicate a non-normal distribution of the residuals. The condition index is below 15, therefore there is no collinearity. Based on these results, the bootstrapping method is used to perform the regression analysis. The results of the second regression analysis are summarized in Table 4 below.

Table 4: Results of the regression analysis to investigate the relationship between preparation for digital change and the OCB dimension of long-term (strategic) help

	b	SE	p	R ²
perceived preparing for digital change in the organization	.267	.033	.001	.083**

Note. * $p < .05$, ** $p < .01$, $n=738$, b and SE Bootstrapping.

Perceived preparation for digital change also has a significant effect on the OCB dimension of long-term (strategic) help. Here, too, there is a positive effect ($b = .267$). In this examined model, the explained variance is 8.3% ($R^2 = .083$, $F = 66.692$, $p = .001$). Employee preparation for the digital change is positively related to long-term (strategic) help to other employees.

Comparison of both regression analysis findings shows that preparation for digital change has a greater effect on long-term (strategic) help than on short-term (individual)

help. In summary, it can be highlighted that perceived employees preparation for digital change leads to more voluntary work behavior at the workplace. These findings make an initial contribution that illustrates that OCB research appears important in the context of digitalization.

The result of this research is in line with the findings of the study by Poethke et al. (2019). It should be noted that this investigation chose different operationalizations for both digitalization and OCB. From this study, it can be deduced that it seems to make sense for organizations to prepare employees for the digital change in the organization. In this way, employees know what to expect, are prepared and experience less overwhelming. This means that employees are more willing to help and support their colleagues. In practice, however, it should be taken into account that OCB can also have negative consequences, such as role overload (Bolino & Turnley 2005). Coldwell (2019) has already highlighted this negative effect, which needs to be examined in perspective.

5. Conclusion and outlook

The study showed that perceived preparation for the digital change is positively related to both the OCB dimension of long-term (strategic) help and to the OCB dimension of short-term (individual) help. It should be noted that this investigation is also subject to limitations. On the one hand, it should be emphasized that the study is based on a self-assessment. This approach is suitable for this study, because the OCB dimension is neither rewarded nor sanctioned and is at the discretion of the employee (Organ et al. 2006). In addition, the OCB research shows that there is no significant difference between external and self-assessment (Carpenter et al. 2014). However, in order to generalize the results, the next step is to expand the investigation to other industries and also to an external assessment. Furthermore, it seems clear from previous studies on the relationship between digitalization and OCB that the operationalization of the constructs is also a key issue. In this study, the focus on the OCB construct was only placed on one dimension. However, OCB is a multi-dimensional construct and in subsequent studies other extra role behavior dimensions, such as civic virtue (Vey & Campbell 2004), should be considered.

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Alte Heerstraße 111, D-53757 Sankt Augustin

info@gesellschaft-fuer-arbeitswissenschaft.de · www.gesellschaft-fuer-arbeitswissenschaft.de

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