

# **The Relationship Between Supervisor Feedback Environment and Perceived Learning Organization Culture**

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## **Executive summary**

### **The research**

The ever-changing circumstances of the present market require organizations to be able to adapt their processes quickly in order to compete with other companies. This adaptation can be achieved by continuous learning which is ensured by becoming a learning organization. In order to help organizations to create a learning organization, this study aimed to gain insight into the contributing factors. As effective feedback and contextual factors are important predictors of learning, the seven components of supervisor feedback environment, namely source credibility, feedback quality, feedback delivery, favorable feedback, unfavorable feedback, source availability, and promotion of feedback seeking, were evaluated as possible contributors of learning organization culture.

Employees of different organizations were recruited via social media to fill in an online questionnaire measuring supervisor feedback environment and learning organization culture. After excluding respondents who did not fulfill the prerequisite of being employed under a supervisor, the final sample consisted of 120 respondents. The data was analyzed using a linear regression analysis to measure the associations between feedback environment and learning organization culture.

The results showed a positive relationship between feedback environment as a whole and learning organization culture. This means that if an established feedback environment is in place, the company is also more like to have a learning organization culture. The positive association between feedback quality and learning organization culture was significant as well indicating that if supervisors give feedback of higher quality, a learning organization culture is more likely to be established.

### **Conclusion and Recommendation**

The findings indicate that this study generated new insight into creating a learning organization culture and the importance of feedback environment. Feedback environment as a whole as well as feedback quality in specific can be interpreted as possible predictors for learning organization culture. Hence, these predictors should be promoted in organizations that are aiming at becoming a learning organization.

More specifically, I recommend increasing awareness for the importance of feedback environment for organizational learning. This can, for example, be done by giving workshops for the supervisors in which they first learn about the relevance of feedback environment and then practice the different skills in groups. After a few months, follow-up tests can be done to find out where feedback environment can still be increased. An additional way of enhancing

supervisor feedback environment is to include feedback environment in the supervisor performance appraisals to enlarge the incentives for supervisors making it more likely for them to act on it.

### **Abstract**

The rapidly changing world requires organizations to be able to quickly adapt to new circumstances to maintain a competitive advantage. Fast adaptation calls for continuous learning (e.g. accelerated by feedback to enhance employees' performance) which is accomplished by creating a learning organization. To do so, it is important to know how feedback can contribute to organizational learning. This study examined the relationship between supervisor feedback environment and learning organization culture. I conducted a cross-sectional survey study among 120 respondents and analyzed the data using a regression analysis. The results indicated that an established supervisor feedback environment heightens the likelihood of a learning organization culture being in place. Additionally, giving high-quality feedback heightens the chance of establishing a stronger learning culture. Hence, an established feedback environment is required to enhance organizational learning and especially feedback quality should be improved in companies that want to become a learning organization.

*Keywords:* feedback environment, learning, organization, culture, supervisor

## **The Relationship Between Supervisor Feedback Environment and Perceived Learning Organization Culture**

In the recent crisis of COVID-19, organizations noticed that they need to react quickly and flexibly to sustain productivity, as well as to maintain a competitive advantage. For example, organizations that implemented flexible work practices (e.g., working from home or flexible working times) were able to sustain (partial) productivity compared to organizations where said practices were not implemented (Latkovic et al., 2020, April 6). While the implementation of flexible work practices is a useful way to improve adaptability during the crisis, its effects can be short-lived when organizations decide to fade out these flexible work arrangements in post-COVID-19 times. As such, we need to focus on more cost-efficient and longer-lasting ways to improve flexibility and adaptability. One way of doing so is by focusing on feedback and the creation of a learning culture (Baker et al., 2013; Kontoghiorghes et al., 2005). Contrary to only implementing flexible work practices, feedback and learning change the cause of low productivity, namely poor job performance (Hayes & Allinson, 1998), making it possible to adapt accordingly. Receiving feedback from others (and then acting on it) eases the adaptation of organizational processes in order to make them more effective (Uhl-Bien & Arena, 2018). For instance, feedback in organizations helps with organizational goal alignment, connects performance with the overall organizational mission, and boosts motivation (Baker et al., 2013). Moreover, to ensure continuous organizational learning, it is best to establish a learning organization culture (Palmer et al., 2016). In order to set up a successful learning culture, it is important to understand the contributing contextual factors (e.g. feedback environment). Hence, the goal of this study was to find out which feedback components contribute to the positive experience of a learning culture. Subsequently, organizations can improve the components for a favorable feedback environment that are not fulfilled sufficiently within their company to contribute to organizational learning and strengthen the learning organization culture.

### **Learning in Organizations and the Importance of Context**

A learning organization culture is defined as a corporate culture that emphasizes structured approaches to achieve learning at a higher level (Škerlavaj et al. 2007). It promotes collaboration and innovation within, and between, teams (Joo et al., 2012) and has structured learning practices that are consistent between departments (Jo & Joo, 2011). In addition, learning organizations have an open information system including dialogue and communication (Burgoyne, 1992), reflection to learn from mistakes and improve organizational learning in the future (Pedler et al., 1989), and an environment free from

blaming (Fulmer & Keys, 1998). According to Fatima Sta. Maria and Watkins (2003), a learning culture poses the prerequisite for implementing change. A benefit of learning organizations is that they maintain a competitive advantage because they can react to external circumstances faster and are equipped with the necessary tools to meet external demands (Burgoyne, 1992).

In order to create a learning organization, it is important to find out how learning takes place to subsequently ensure that the requirements for successful learning are fulfilled. The Constructivist Learning Theory proposes that learning occurs through constructing knowledge and deriving meaning from experiences and interaction (Bada & Olusegun, 2015; Watling et al., 2014). According to this theory, learning is contextual and a social process (Hein, 1991), occurs through reflection and experiences (Bada & Olusegun, 2015), and is motivated by attitudes and beliefs (Bada & Olusegun, 2015). It can be concluded from Constructivist Learning Theory that in order for contextual aspects such as feedback environment to contribute to organizational learning, the necessary context to promote learning needs to be created.

### **Feedback Environment and its Relation to Learning Culture**

A supportive context is not only important for organizational learning but also for feedback. For feedback to be effective and to be transferred into action, it is imperative to have a good feedback environment in place (Baker et al., 2013; Steelman et al., 2004). Feedback environment is the context of feedback processes in a daily work environment and consists of seven components, namely source credibility, feedback quality, feedback delivery, favorable and unfavorable feedback, source availability, and promotes feedback seeking (Steelman et al., 2004). Source credibility measures the belief in the expertise of the feedback source (i.e. the supervisor). Feedback quality is about the usefulness and the consistency of the feedback. Feedback delivery asks for the way feedback is given. Favorable and unfavorable feedback take into account if the feedback can afterwards be seen as accurate. Sources availability measures the amount of feedback and the ease with which the employee can get feedback. Promotes feedback seeking assesses if employees are encouraged to seek feedback. If these seven aspects are fulfilled, they can create a context that can contribute positively to the usefulness of feedback (Steelman et al., 2004).

Feedback, feedback environment, and learning culture seem to be intertwined in different settings. In an educational setting, the context of teaching and feedback giving affects learning and the use of received feedback (Havnes et al., 2012), as suggested by constructivism (Bada & Olusegun, 2015). For instance, if teachers deliver feedback to

students quickly in the hallway, students are less likely to believe the feedback and do not use it to change their behavior. In order for feedback to be helpful and to be used efficiently, dialogue between teacher and student is needed (Havnes et al., 2012). Dialogue is also needed in organizations, as a learning organization culture partly consists of giving and receiving feedback (Garvin, 1993). A good fit between organizational demands and needs of the employees (e.g. by an established feedback environment) leads to the desired employee performance and subsequently to the reinforcement of the desired behavior (Hayes & Allinson, 1998). The basis for organizational learning is individual learning, for instance through feedback (Hayes & Allinson, 1998).

Nevertheless, some requirements need to be met in order to be able to learn from feedback. A positive supervisor feedback environment is both the prerequisite for feedback to be effective (Steelman et al., 2004), as well as creating the right learning environment can support organizational learning (Kluge & Schilling, 2003). For instance, when employees notice that their supervisor is willing to take the time to give them feedback, they are more inclined to accept the feedback and use it. Therefore, it is likely that this is the starting point for an organization and its employees to learn from mistakes, reflect on them, and implement a learning organization culture. This subsequently leads to a better learning environment (Pedler et al., 1989).

Additionally, scholars have tried to understand the effect of aspects similar to feedback environment on organizational learning. For example, supervisor support is similar to the willingness of a supervisor to give feedback. Support by supervisors plays a positive role in motivating employees to participate in training, as well as in transferring their knowledge to the workplace (Park et al., 2018). Moreover, supervisor support reinforces learning of employees (Ghosh et al., 2015). Additional aspects of feedback environment—such as communication, dialogue and interaction of supervisor with subordinates—positively influences organizational learning and effectiveness (Bisel et al., 2012). Supervisor attitude can also influence an employee's willingness to learn (Macneil, 2001). Thus, supervisors should set a good example and consider how they deliver feedback in order to be helpful. In doing so, they can reinforce constructive feedback, and increase the likelihood that employees learn to view mistakes as a possibility to learn (Macneil, 2001). Hence, the supervisor plays an important role in creating a learning culture through feedback.

Considering these findings and the similarity of support and communication to feedback environment, I argue that it is likely that the relationships between feedback environment components and learning organization culture are similar. More concrete, *I*

*expect to find positive relationships between each of the feedback environment components and learning organization culture.* The relationship can be explained by looking at the details of the different components and their consequences. The fulfilled aspects of feedback environment are displayed by considerate delivery, showing interest in the employee and their development, taking enough time to give feedback, and demonstrating that they can reliably estimate the employee's performance (Steelman et al., 2004). This behavior proves the supervisor's credibility to the employees by showing them that they have their best interests in mind (Fedor et al., 1989). If employees take the feedback seriously, they are more likely to act on it and learn from it (Albright & Levy, 1995). As a result, this leads to better performance and increased learning potential (Albright & Levy, 1995). By regularly repeating this style of interaction, it will turn into a habit and is thus implemented into the organization's culture (Bisel et al., 2012). As an established feedback environment determines that feedback and mistakes are viewed as learning opportunities (Macneil, 2001), the culture will develop into a learning organization culture over time. Due to the characteristics of feedback environment and the process of learning in organizations, an established feedback environment is likely to enhance the learning organization culture of a company.

### **The Current Study**

By conducting this study, I contribute to the Constructivist Learning Theory (Bada & Olusegun, 2015) by demonstrating that, in addition to educational learning, context also plays a role in organizational learning. Furthermore, this study will aid in uncovering which aspects of a feedback environment are correlated with perceived learning organization culture. In doing so, I can put more emphasis on the beneficial components of feedback environments to create the type of environment needed to stimulate the emergence of a learning organization culture. Hence, I can provide supervisors and policymakers with advice on how they can create the best possible feedback environment which in turn will beneficially affect their organization's learning culture. At the same time, organizations can strengthen their credibility to employees by creating the right conditions for effective feedback (Fedor et al., 1989). Subsequently, the organization's learning ability will improve its competitive ability as they are able to learn and adapt faster.

In the present study, I examined the interplay between feedback environment and learning culture. Specifically, I studied the following research question: How does the feedback environment as implemented by the supervisors relate to a perceived learning organization culture? The following hypotheses were tested:

H1: An implemented supervisor feedback environment relates positively to a learning organization culture.

H2: Each of the seven components of supervisor feedback environment, namely source credibility (H2a), feedback quality (H2b), feedback delivery (H2c), favorable feedback (H2d), unfavorable feedback (H2e), source availability (H2f), and promotion of feedback seeking (H2g), relate positively to a learning organization culture.

## **Method**

### **Participants and procedure**

For this study, I created an online survey with Qualtrics (Qualtrics, 2020). I recruited respondents by distributing the survey via the social media platforms LinkedIn, Facebook, and WhatsApp. The online survey contained an information letter, the consent form, questions regarding the respondents' demographics, and the questionnaires about feedback environment and learning culture in organizations (see Appendix). Active consent was required for the questionnaire to be displayed. The prerequisite to participate was to be employed under a supervisor in an organization. If the prerequisite was not fulfilled, the study was terminated prematurely. Participation took approximately 10 minutes. There was no reimbursement.

In total, I recruited 181 respondents. Of those, 31 stopped prematurely and six had not finished by the time the data collection ended. Twenty-three respondents had to be excluded because they did not fulfill the requirements for participation. The final sample consisted of 120 respondents, exceeding the minimally required sample size of 103 respondents (based on an F-test a priori power analysis, power = 0.08,  $\alpha = 0.05$ ,  $\eta = 0.15$ , conducted with G\*Power for Macintosh, Version 3.1.9.6). The respondents had an age range of 22 to 72 of which 59 were males ( $M_{\text{age}} = 40.36$ ,  $SD_{\text{age}} = 11.54$ ), 60 were females ( $M_{\text{age}} = 38.80$ ,  $SD_{\text{age}} = 11.38$ ) and one person indicated their gender as "other" and did not report their age. Eighty-six respondents were German, 26 had another nationality within Europe and eight respondents indicated having a nationality outside of Europe.

### **Materials**

Respondents had to complete a series of general demographic questions (age, gender, nationality, and main occupation) in order to describe the sample as well as to make sure they fulfilled the prerequisite. Next, I assessed supervisor feedback environment and perceived learning organization culture using different questionnaires.

*Supervisor feedback environment* was measured using the Feedback Environment Scale (FES; Steelman et al., 2004). The FES consists of seven subscales. *Source credibility* was measured using the corresponding five-item subscale with a reliability of  $\alpha = .87$  in the present study. Respondents for example had to rate the statement “My supervisor is generally familiar with my performance on the job”. The five-item subscale for assessing *feedback quality* included statements like “The performance feedback I receive from my supervisor is helpful” and had a reliability of  $\alpha = .92$ . *Feedback delivery* ( $\alpha = .81$ ) was measured by a five-item subscale containing statements such as “When my supervisor gives me performance feedback, he or she is considerate of my feelings”. *Favorable* ( $\alpha = .88$ ) and *unfavorable* ( $\alpha = .86$ ) *feedback* were assessed with the respective four-item subscale. For favorable feedback, respondents, for instance, had to rate the statement “My supervisor generally lets me know when I do a good job at work”. The unfavorable feedback subscale included statements such as “When I don’t meet deadlines, my supervisor lets me know”. *Source availability* was assessed by the corresponding five-item subscale with a reliability of  $\alpha = .83$ . For example, respondents were asked to rate the statement “My supervisor is too busy to give me feedback”. The four-item subscale *Promotes feedback seeking* used statements like “My supervisor encourages me to ask for feedback whenever I am uncertain about my job performance” with a reliability of  $\alpha = .71$ . Each of these sub-scale items was rated on a seven-point Likert scale ranging from “1 = strongly disagree” to “7 = strongly agree”. Item 3 of source availability, item 5 of feedback quality, items 3 and 4 of feedback delivery, item 2 of favorable feedback, items 2, 3 and 5 of source availability as well as items 1 and 2 of promotes feedback seeking were reverse scored. I created mean scores for each sub-scale in order to measure H2. For the overall FES score used to test H1, I averaged scores over the 28 items to create an overall feedback environment score. The reliability of the FES in the present study was  $\alpha = .96$ .

*Perceived learning organization culture* was measured using the concise version of the Dimensions of a Learning Organization Questionnaire (DLOQ; Marsick & Watkins, 2003; Yang, 2003). The concise version consists of seven items representing the dimensions of a learning organization with questions about learning behavior, work relationships, and external circumstances. The items were scored on a seven-point Likert scale ranging from “1 = strongly disagree” to “7 = strongly agree”. An example of a statement that participants were asked to rate was “In my organization, people are rewarded for learning”. I averaged

scores across the seven items to generate an overall DLOQ score. The reliability of the DLOQ in the present study was  $\alpha = .89$ .

### **Data analysis**

To examine whether feedback environment is positively related to perceived learning organizational culture, I performed a linear regression analysis with IBM SPSS Statistics for Macintosh, Version 26.0. Feedback environment (hypothesis 1) functioned as an independent variable and perceived learning organization culture was used as the outcome. Additionally, I tested the relationship between each of the respective subscales of feedback environment and perceived learning organization culture (hypothesis 2) by means of multiple linear regression analysis in SPSS.

## **Results**

### **Descriptive Statistics and Correlations**

First, I provided descriptive statistics (Table 1). When looking at correlations between feedback environment (both in general and its components) and learning organization culture, all of them were significant and positive correlations. This means that high scores on feedback environment in general, as well as high scores on the feedback environment components, are positively related to high scores on learning organization culture.

### **Preliminary Analyses**

Prior to performing the final analyses, I checked the underlying assumptions of a linear regression analysis. First, I checked the normality of the residuals using a normal probability plot and found no violations of this assumption. Next, I checked the assumption of linearity using a scatterplot of the standardized residuals with the standardized predicted values. When fitting a non-linear best fit line (Loess Curve), it appeared that the relationship of standardized predicted values and the standardized residuals is linear around zero; meaning that the assumption of linearity is not violated. Finally, I checked the assumption of homoscedasticity using the same scatterplot and found that this assumption was not violated either. Hence, linear regression analyses could be performed.

### **Main Analysis**

When performing a linear regression analysis to test the relationship between feedback environment and learning organization culture, the overall model was significant ( $F(1, 118) = 66.06, p < .001$ ) and 35.30 % of the variance of the differences in learning organization culture was explained (adjusted  $R^2$ ; Table 2). I found a significant positive effect of feedback environment on learning organization culture ( $\beta = .60, p < .001$ ). This supports hypothesis 1.

Subsequently, I performed a multiple linear regression analysis to test the relationship between the feedback environment components and learning organization culture. The overall model was significant ( $F(7, 112) = 11.63, p < .001$ ) and 38.50 % of the variance of the differences in learning organization culture was explained (adjusted  $R^2$ ; Table 3). I found a significant effect of feedback quality on organizational learning culture ( $\beta = .59, p < .001$ ), meaning that high scores on feedback quality were positively associated with high scores on learning organization culture. This supports hypothesis 2b. The other effects were not significant (see Table 3 for all non-significant parameters) which does not support the hypotheses 2a and 2c-g.

### **Discussion**

This study investigated the potential role of feedback environment in building a learning organization. More specifically, I investigated the relationship between feedback environment and learning organization culture. In line with the first hypothesis (H1), I found a positive relationship between feedback environment and learning organization culture. This means that in organizations in which there is a good supervisor feedback environment, it is likely that there is also a learning organization culture in place. Additionally, I found a positive association between feedback quality (a sub-component of feedback environment) and learning organization culture. This finding is in line with the second hypothesis (H2b) indicating that giving high-quality feedback makes it more likely that a stronger learning organization culture is in place. However, I found no support for a positive association between the other sub-components of feedback environment and learning organization culture.

#### **The Feedback Environment Components and Learning Organization Culture**

The positive relationship between feedback quality and learning organization culture can be explained by looking at the aspects of feedback quality more closely. High-quality feedback is non-personal and helping to improve the receiver's performance and reach their goals (Whitaker & Levy, 2012). The employees notice that high-quality feedback benefits them directly which may have positive effects on them becoming more open towards feedback and about their mistakes as they receive help instead of punishment. As a corollary, they may develop a proactive attitude towards feedback and development and start learning from their mistakes. Over time, this may consolidate their attitude towards feedback and mistakes which is subsequently established in the learning organization culture. Hence, the

characteristics of feedback quality benefit the establishment of a learning organization culture.

However, given that I found no significant relationship between most of the feedback environment components and learning organization culture, my results differed from the results of other researchers (Bisel et al., 2012; Ghosh et al., 2015; Macneil, 2001). They found that supervisor support, supervisor attitude, and communication are positively related to learning culture. Methodological differences between my study and the previous studies can explain differences in results. The concepts supervisor support, attitude, and communication are similar to the feedback environment components, but they are not identical because they focus on aspects beyond the feedback situations as well. For example, supervisor support also includes aspects such as making the employees feel heard and valued (Griffin et al., 2001); aspects that are not part of the respective components of feedback environment. This might explain why feedback environment as a whole is related to learning culture (including supervisor support and communication) and why the respective components, except for feedback quality, are not.

In order to further explain why feedback quality is related to learning organization culture and why the other feedback environment components are not, it is also helpful to notice one detail that distinguishes feedback quality from the rest of the components. Feedback quality is more objective than the other components (Whitaker & Levy, 2012). High quality ensures that feedback is meaningful and subsequently leads to improved performance (Steelman et al., 2004). For instance, high-quality feedback is consistent and independent of mood and attitude. In other words, feedback quality concerns the aspects of feedback that directly affect effectiveness and content. The rest of the components are characterized by sympathy, liking, and emotions (Steelman et al., 2004). The feedback recipient is biased by their perception of intentions, liking, ego, and their relationship with the supervisor. This in turn may interfere with learning (Lott et al., 1970). Therefore, as a result of the characteristics of the rest of the components leading to employees' biases, the respective feedback components are not related to learning organization culture.

An alternative explanation could be that employees cannot distinguish that well between the different components when working in home office as it was the case during data collection due to COVID-19. They may have felt an overall established feedback environment from their supervisor but could not evaluate the different components that well during video or audio calls. Online conferencing compared to face-to-face meetings making it harder for employees to interpret different, specific cues (Pauleen & Yoong, 2001). This

could have caused the non-significant findings in the present study. Feedback quality poses an exception as these questions were more straightforward and easier to assess (Steelman et al., 2004). Thus, it is possible that during times in which employees receive feedback from their supervisor face to face—which aids the evaluation of the components—there would have been a significant relationship between the feedback environment components and learning organization culture.

### **The Constructivist Learning Theory in Organizations**

The findings of the present study can be linked back to the Constructivist Learning Theory which emphasizes the need for a suitable context for learning (Hein, 1991). However, there are some important conceptual differences between the original theory and how the present study has conceptualized the theoretical tenets. The Constructivist Learning Theory (Bada & Olusegun, 2015) originally focused on the circumstances of learning within the context of education where learning takes place in front of the classroom. In contrast, learning in organizations takes place in the background and the focus is set on outcomes for the company rather than on outcomes for the individual student. Regardless of these operational differences, both studies led to the same conclusions. The results of this study show that context does not only play a role in learning in an educational setting but also when learning takes place in organizations. In terms of feedback in organizations, employees learn best from feedback when a feedback environment is established.

This result can also be explained theoretically by looking at the definition of constructivism. Constructivism emphasizes learning through experiences and social processes in which knowledge is constructed (Bada & Olusegun, 2015; Hein, 1991; Watling et al., 2014). The results of the present study show that effective learning in organizations is enhanced if the necessary context is in place. That is, this study demonstrates that feedback environment, and feedback quality in specific, are positively related to the development of a learning organization culture. The reason for this is that high-quality feedback is meaningful and related to experience (Whitaker & Levy, 2012). Feedback environment provides the requirements for effective feedback which contributes to learning, thus establishes the necessary context. The employees derive meaning from feedback and learn from their mistakes through reflection. In order to integrate this and create a learning organization culture, employees over time make a habit out of these positive interactions where mistakes are seen as a helpful way to improvement.

### **Limitations and Suggestions for Further Research**

As with all studies, the present study has some limitations that deserve further attention. First, the results are not generalizable to every culture because my sample mainly consisted of German (71.6%) respondents. Especially in Eastern countries, it is likely that their view of an established feedback environment differs from the view in Western countries such as Germany. Germany has an individualistic culture where the needs of individuals are emphasized (Sully De Luque & Sommer, 2000). Most of the Eastern countries are collectivistic cultures in which they prioritize group needs and feedback is generally group focused (Sully De Luque & Sommer, 2000). Feedback environment, as measured in the current study, is likely to be focused on individual employees. Further research should study the determinants of a good feedback environment in Eastern countries, potentially using different instruments to measure it and investigate its relationship to learning organization culture.

As a result of using a snowball sample, I did not have a random sample and it might not be representative of all employees in organizations leading to limited generalizability (Kirchherr & Charles, 2018). It's possible that only a specific group of individuals could be included, such as psychologists which belong to the largest part of my circle of acquaintances. This heightens the likelihood that the respondents put more emphasis on soft skills and supervisor relationships than non-psychologists (Sartori et al., 2013). In turn, this could have biased the results making the relationship between feedback environment and learning organization culture more significant than it would have been in a random sample. Future research could investigate the relationship between feedback environment and learning organization culture again using a random sample.

Another limitation is that my study cannot be generalized to specific generations because I did not have enough respondents from different age groups to test for generation differences. However, different researchers found that generations have different needs at work (Schullery, 2013); making it possible that there is also a difference in the need for an established feedback environment. Younger generations are more focused on individual needs and benefits (Schullery, 2013). They are more likely to value a relationship with their supervisor, as well as regular dialogue, and thus to appreciate an established feedback environment. Older generations, such as the baby boomers, are traditionally more focused on results and hard work instead of dialogue and relationships (Schullery, 2013). Hence, they are less likely to value the feedback environment components that focus on the supervisor-employee relationship and supervisor support. Therefore, it is possible that for younger generations the relationship between feedback environment and learning organization culture

is stronger than for older generations. However, there is likely no difference in generations regarding the relationship between feedback quality and learning organization culture as feedback quality is more objective and neutral compared to the other feedback environment components (Whitaker & Levy, 2012). Further research could investigate these assumptions in order to be able to meet the needs of different generations and adapt organizational efforts accordingly.

Further research could also investigate if there are differences between companies. Organizations work best under different leadership styles which are adapted to the organization's needs (Zeffane, 1994). For example, the transactional leadership style is useful in a company that has standardized processes but may be harmful in organizations in which innovation and creativity are needed (Aarons, 2006). This could also be the case for feedback environment. It might be needed in some companies, but some aspects could be unnecessary or even fatal in others. In the emergency room, for example, making mistakes would be harmful and there is no time for gentle feedback. If an assistant has made a mistake, they need to be corrected immediately. To build a learning organization, it would be helpful to find out which organizations would benefit from a good feedback environment.

### **Practical implications**

This study found that feedback environment can be used as a way to improve learning culture in organizations. Specifically, I found that especially the quality of feedback is important for creating a learning organization culture. Thus, in order to establish a learning organization culture, it is essential to enhance feedback quality in organizations. Additionally, my results showed that when implementing a feedback environment, it is important to not only establish one component but to improve the overall feedback environment in the organization. Besides feedback quality, only feedback environment as a whole—and not the separate components—can strengthen the learning organization culture. Feedback environment can, for example, be improved by increasing awareness for the importance of giving effective feedback in order to enhance the understanding behind it and thus heighten the chances for implementing a feedback environment (Levy, 2013). Additionally, supervisors should receive training to improve their contextual behaviors (Young & Steelman, 2014). The content of the workshops should include how a favorable feedback environment is established. Moreover, the effect on the employees and the organization needs to be explained to incorporate the rationale. During the workshops, supervisors first need to be educated and afterwards have to practice the new skills with the coaches (Steeleman & Williams, 2019). Besides training, another way to enhance a favorable feedback environment

is to include the supervisor feedback environment in performance appraisals of supervisors. Institutionalization of the desired behavior makes supervisors more likely to act on it (Dahling & O'Malley, 2011). By strengthening the feedback environment, companies move one step closer to creating a learning organization. Additionally, they increase their credibility to employees by creating the necessary conditions for effective feedback and learning as they contribute to the development of their employees (Fedor et al., 1989; Men, 2012).

### **Conclusion**

The results of this study contributed to the Constructivist Learning Theory and demonstrated that context is a requirement for learning in organizations. I discovered a positive relationship between feedback environment and learning organization culture. More specifically, I found that feedback quality seems to be an important factor in creating a learning organization culture. This study provides the basis for further research about feedback environment and learning organization culture. Moreover, the results can pose as a starting point for organizations to strengthen their feedback and learning culture.

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**Table 1***Descriptive Statistics and Correlations Feedback Environment, its components and Learning Organization Culture*

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1. Feedback Environment	5.31	0.95	-								
2. Source Credibility	5.73	1.04	.86**	-							
3. Feedback Quality	5.35	1.26	.89**	.84**	-						
4. Feedback Delivery	5.36	1.17	.78**	.72**	.73**	-					
5. Favorable Feedback	5.06	1.27	.84**	.64**	.68**	.64**	-				
6. Unfavorable Feedback	5.27	1.06	.55**	.34**	.41**	.10	.43**	-			
7. Source Availability	5.10	1.28	.82**	.58**	.61**	.50**	.65**	.56**	-		
8. Promotes Feedback Seeking	5.21	1.13	.82**	.62**	.66**	.58**	.71**	.37**	.68**	-	
9. Learning Organization Culture	4.63	1.21	.60**	.51**	.62**	.40**	.52**	.35**	.46**	.48**	-

Note. *N* = 120. \*  $p < .05$ . \*\*  $p < .01$ .

**Table 2***Results of the Regression Analysis for Learning Organization by Feedback Environment*

Effect	<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>
Constant	.55	.51		1.08
Feedback Environment	.77	.10	.60***	8.13

*Note.*  $N = 120$ .  $F(1, 118) = 66.055$ .  $p < .001$ .  $R_2 = .359$ . (Adjusted  $R_2 = .353$ ).

SE = standard error.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

**Table 3**

*Results of the Regression Analysis for Learning Organization by Feedback Environment Components*

Effect	<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>
Constant	1.34	.65		2.07
Source Credibility	-.06	.16	-.05	-.35
Feedback Quality	.57	.15	.59***	3.82
Feedback Delivery	-.17	.13	-.17	-1.32
Favorable Feedback	.17	.12	.18	1.50
Unfavorable Feedback	.03	.11	.02	.23
Source Availability	.05	.11	.05	.44
Promotes Feedback Seeking	.05	.13	.05	.41

*Note:*  $N = 120$ .  $F(7, 112) = 11.634$ .  $p < .001$ .  $R_2 = 421$ . (Adjusted  $R_2 = .385$ ).

SE = standard error.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

## Appendix

### Online Survey

**Information letter** concerning the study for Xenia Berlin's master's thesis "Feedback and Learning in Organizations"

This study is conducted for my master's thesis a part of the Work, Organization and Health Psychology Programme of Radboud University Nijmegen. For their master thesis, students conduct a study on a psychological topic under supervision of a teacher of the psychology programme.

The current study is interested in the feedback and learning culture in organizations. More specifically, I would like to know what the context is like in which feedback is given and how employees perceive the company's learning culture. Within this survey, you will be asked to first give your consent and subsequently to fill out several questionnaires. The questionnaires assess the context in which you receive feedback from your supervisor and the way you perceive learning takes place within the company. For every questionnaire, you will receive a more detailed explanation of what is asked from you later on. In total, this will take around 10 minutes. I would really appreciate it if you could take the next few minutes to fill out this survey.

During the study you can indicate at any moment in time that you want to quit participating, without you having to explain why you want to quit. Quitting during the study has no consequences whatsoever.

The information that I collect will be processed anonymously. This means that the results cannot be traced back to you. The consequence of this is that I cannot inform you about your personal results after the study has been completed. However, I could inform you about the results of the study as a whole. If you wish to be informed about the results of this study, then please send me an e-mail ([x.berlin@student.ru.nl](mailto:x.berlin@student.ru.nl)).

If you have remarks or complaints about our study after participating, you can contact me under [x.berlin@student.ru.nl](mailto:x.berlin@student.ru.nl). Possible questions you have as a result of this information, you can send to the same email address.

Now, I would like you to think about whether you want to participate in our study. You are of course free to decide that you do not want to participate in this study. In that case I thank you for time. If you indicate that you want to participate in this study, I will ask you to give your consent on the next page. By giving your consent, you indicate that you are sufficiently informed about the study and that you want to participate in the study and that you voluntarily do so.

Kind regards,

Xenia Berlin

Master student of the Work, Organization and Health Psychology Programme

Radboud Universiteit Nijmegen, Netherlands

**Consent form** for participation in a study for Xenia Berlin's master's thesis "Feedback and Learning in Organizations"

I hereby confirm that

- I was satisfactorily informed about the study and I have read and understood the written information on the study.
- I was informed that the current study is conducted by Psychology student Xenia Berlin as part of her master's thesis
- I have had the opportunity to ask questions regarding the study and my questions have been answered satisfactorily
- I was allowed sufficient time to consider whether to give my consent.
- I participate of my own free will.

I understand that

- I have the right to withdraw my consent at any time without having to give a reason and that withdrawing my participation has no further consequences. [L  
SEP]
- my information will be processed anonymously.
- the outcomes of the study cannot be considered as a diagnostic test.
- I will not be informed about my individual results.
- **I hereby consent to participate in the study referred to above.**

I consent.

I do **not** consent (and thus cannot participate in the study).

**Please fill in some demographic data below.**

1. How old are you? \_\_\_\_\_
2. Please indicate your gender.
  - a. Male
  - b. Female
  - c. Other

3. What is your nationality?
  - a. German
  - b. Other nationality within Europe
  - c. Other nationality outside Europe

4. What is your main occupation?

(Explanation: A supervisor is your immediate superior in your workplace and the person whom you report to directly in your organization. Your supervisor can for example be the head of your team or the head of your department.)

- a. Employed and reporting to a supervisor
- b. Employed but not reporting to a supervisor
- c. Self-employed
- d. Student
- e. Other

**Supervisor Feedback Environment Scale** measured on a seven-point Likert-type scale ranging from strongly disagree to strongly agree (Steelman et al., 2004)

In the following, you will be asked to answer questions about the feedback context with regard to your supervisor. Your supervisor can for example be the head of your team or the head of your department.

Source credibility

1. My supervisor is generally familiar with my performance on the job.
2. In general, I respect my supervisor's opinions about my job performance.
3. With respect to job performance feedback, I usually do not trust my supervisor.
4. My supervisor is fair when evaluating my job performance.
5. I have confidence in the feedback my supervisor gives me.

Feedback quality

1. My supervisor gives me useful feedback about my job performance.
2. The performance feedback I receive from my supervisor is helpful.
3. I value the feedback I receive from my supervisor.
4. The feedback I receive from my supervisor helps me do my job.
5. The performance information I receive from my supervisor is generally not very meaningful.

Feedback delivery

1. My supervisor is supportive when giving me feedback about my job performance.

2. When my supervisor gives me performance feedback, he or she is considerate of my feelings.
3. My supervisor generally provides feedback in a thoughtless manner.
4. My supervisor does not treat people very well when providing performance feedback.
5. My supervisor is tactful when giving me performance feedback.

#### Favorable feedback

1. When I do a good job at work, my supervisor praises my performance.
2. I seldom receive praise from my supervisor.
3. My supervisor generally lets me know when I do a good job at work.
4. I frequently receive positive feedback from my supervisor.

#### Unfavorable feedback

1. When I don't meet deadlines, my supervisor lets me know.
2. My supervisor tells me when my work performance does not meet organizational standards.
3. On those occasions when my job performance falls below what is expected, my supervisor lets me know.
4. On those occasions when I make a mistake at work, my supervisor tells me.

#### Source availability

1. My supervisor is usually available when I want performance information.
2. My supervisor is too busy to give me feedback.
3. I have little contact with my supervisor.
4. I interact with my supervisor on a daily basis.
5. The only time I receive performance feedback from my supervisor is during my performance review.

#### Promotes feedback seeking

1. My supervisor is often annoyed when I directly ask for performance feedback.
2. When I ask for performance feedback, my supervisor generally does not give me the information right away.
3. I feel comfortable asking my supervisor for feedback about my work performance.
4. My supervisor encourages me to ask for feedback whenever I am uncertain about my job performance.

**Perceived learning organization culture** measured on a seven-point Likert-type scale ranging from strongly disagree to strongly agree (Marsick & Watkins, 2003; Yang, 2003)

Now you will be asked to rate your organization based on the way you perceive learning takes place there.

1. In my organization, people are rewarded for learning.
2. In my organization, people spend time building trust with each other.
3. In my organization, teams/groups revise their thinking as a result of group discussions or information collected.
4. My organization makes its lessons learned available to all employees.
5. My organization recognizes people for taking initiative.
6. My organization works together with the outside community to meet mutual needs.
7. In my organization, leaders continually look for opportunities to learn.