

Bachelor thesis

Social, Health and Organizational Psychology



Mechanisms Enabling Individual Learning

A moderated mediation model

Investigating the role of participative leadership on the relationship between learning orientation and individual reflexivity, and in turn, on individual learning.

Alie Maria Naus
5528534

Reviewer: dr. Meltem Ceri-Booms.

Second Reviewer: Tom Damen MSc.

Date: August 23th, 2020

Word count: 5843

Abstract

Purpose – Present study examines if the relationship of learning orientation with individual learning is mediated by individual reflexivity, followed by an exploration of the possible moderating relationship participative leadership can have on this model. The study aims to identify the mechanisms enabling people to become more reflective on their skills and work by investigating whether learning orientation facilitates individual reflexivity which, in turn, leads to the change-oriented behaviour in individual learning.

Design and method – Data was collected through a questionnaire consisting of existing scales for each of the measured constructs. The questionnaire was conducted among people in the Netherlands, above the age of 18 that worked at least 20 hours at a paid job. The hypothesized moderated mediation model was tested using multiple linear regression and Hayes' PROCESS-macro (2017).

Findings – The significant results suggest that when people have learning orientation, their ability to learn individually increases. There is also a positive relationship found between learning orientation and individual reflexivity, which suggests that people who have learning orientation also use reflexivity. The last finding suggests that people who have learning orientation learn more individually because they use individual reflexivity. Therefore, in the studied model, there is a significant mediating role for individual reflexivity. There is no significant result found for the moderating relationship that participative leadership was expected to have on the relationship between learning orientation and individual reflexivity. Nor are there significant results found supporting that the indirect relationship between learning orientation and individual learning via individual reflexivity is moderated by participative leadership.

Originality – This study contributes to the knowledge about and adds proof for the relationship between learning orientation and individual learning. It also gives supporting evidence to the relationship between learning orientation and individual reflexivity, a relationship that has not been examined properly before. This research lastly contributes to the field of science by exploring the possible mediating role of individual reflexivity.

Keywords – Individual reflexivity, Participative leadership, Individual learning, Learning orientation.

Abstract

Doel – Deze studie onderzoekt of de relatie van leer-oriëntatie met individueel leren wordt gemedieerd door individuele reflexiviteit, waarnaar de mogelijke modererende relatie die participatief leiderschap kan hebben op deze relatie, geëxploreerd wordt. Dit onderzoek beoogt de mechanismen te identificeren die mensen meer reflectief maakt over hun vaardigheden en werk. Dit wordt gedaan door te onderzoeken of leer-oriëntatie individuele reflexiviteit faciliteert, om vervolgens tot veranderingsgericht gedrag of individueel leren te leiden.

Ontwerp en methode – De data is verzameld middels een vragenlijst die opgebouwd is uit bestaande schalen voor elk van de gemeten hoofdconstructen. Deze zijn afgenomen bij mensen in Nederland die boven de 18 jaar oud zijn en minstens 20 uur per week betaald werk verrichtten. Het modererend mediatiemodel waarvoor hypothesen zijn opgesteld, is getest middels multipale lineaire regressie en PROCESS-macro van Hayes (2017).

Resultaten – De significante resultaten suggereren dat mensen met leer-oriëntatie, ook een verhoogd vermogen hebben om individueel te leren. Er is tevens een positieve relatie gevonden tussen leer-oriëntatie en individuele reflexiviteit, dit suggereert dat mensen die leer-oriëntatie hebben, ook reflexiviteit gebruiken. Tot slot blijkt uit de resultaten dat mensen met leer-oriëntatie individuele reflexiviteit gebruiken, waardoor zij ook meer individueel leren. Om deze reden kan gesteld worden dat er in het onderzochte model een significant mediërende rol is gevonden voor individuele reflexiviteit. Er is geen significant resultaat gevonden voor de modererende relatie die participatief leiderschap verondersteld werd te hebben op de relatie tussen leer-oriëntatie en individuele reflexiviteit. Er is tevens ook geen significant resultaat gevonden die ondersteund dat de indirecte relatie tussen leer-oriëntatie en individueel leren via individuele reflexiviteit wordt gemodereerd door participatief leiderschap.

Originaliteit – Dit onderzoek draagt bij aan de kennis van en bewijs voor de relatie tussen leer-oriëntatie en individueel leren. Het geeft tevens ondersteunende wetenschappelijke bevestiging voor de relatie tussen leer-oriëntatie en individuele reflexiviteit, een relatie die niet eerder specifiek is onderzocht. Dit onderzoek heeft zich tot slot onderscheidde door te kijken naar een mogelijke mediërende rol van individuele reflexiviteit.

Kernwoorden – Individuele reflexiviteit, Participatief leiderschap, Individueel leren, Leer-oriëntatie.

Introduction

Organizations rely on their employees to work efficiently towards a certain goal, solve problems, create new knowledge, improve their performance, strive for maximum organizational success and carry out planned or ad-hoc tasks in a correct manner. These are highly demanding and complex processes. To be able to do so, it is of essence to keep validating and improving knowledge and skills. Research also shows that stagnation in learning often leads to lesser results (Kayes, 2006). Training and development have become more and more important in the increasingly complex organisational landscape. When it comes to striving for and maintaining individual- team- and organizational successes, the importance of learning is thus very big (Aguinis & Bradley, 2009).

A learning process is described as the producing and exchanging of new knowledge by communicating new ideas, insights, visions and changing perspectives in communication, while pursuing personal and organizational goals, according to Wals (2007). The aim of present study is to gain knowledge about individual learning and what variables relate to this construct, so organizations can facilitate, improve and deploy learning more effectively. Many studies have found a positive relationship between different forms of individual susceptibility towards learning, such as learning orientation, and individual learning (Choi & Jacobs, 2011; Klein, Noe, & Wang, 2006). However, there is very little research on what variables affect this relationship. Matsuo (2018) found significant results for individual reflexivity as a mediator in linking managerial coaching to team- and individual learning. Thereby finding theoretical as well as practical importance of reflexivity within teams to promote individual learning and the role of a certain form of leadership in this. This study tries to extend prior research by answering the following research question:

Is the relationship between learning orientation and individual learning (partly) mediated by individual reflexivity and does participative leadership moderate this relationship?

The aim of this study is to investigate the mechanisms by which learning orientation is related to individual learning, considering participative leadership and individual reflexivity, focusing on a moderated mediation model. This is done by reviewing literature and theories on learning orientation, individual reflexivity, individual learning and participative leadership and by proposing relevant hypotheses based on this. Then the quantitative methods used to

test these hypotheses are presented. Finally, the results are detailed and discussed from a theoretical and a practical perspective.

Literature review

This paper focuses on the role of reflexivity, learning orientation and participative leadership in relation to individual learning. The first variable that is expected to have a relationship with individual learning is individual reflexivity. According to the experiential learning model, reflection on experiences is of essence to gain knowledge and skills, and thus, to learn (Kolb, 1984). The concept of reflexivity in the present study is based on West's Reflexivity Theory, consisting of conceptual arguments that reflexivity is positively related to effectiveness and efficiency (1996, 2000). The concept focusses on a reflective way of examining strategies within organizations by using interventions (Konradt et al., 2016). In Gurtner et al. (2007) these interventions aimed at team reflection were tested on team processes and performance. However, contrary to their expectations while examining group reflexivity, Gurtner et al. (2007) found that individual reflexivity is in many perspectives' superior to group reflexivity when it comes to the amount of positive impact the form of reflexivity has on organizational interventions. Individual reflection helps gaining focus on useful strategies and therefore leads to more learning advantage. Since these results were found but not deeply examined in this specific research, it is valuable to gain more insight in what individual reflexivity has to offer in relation to individual learning, specifically as a mediator.

Learning is an extensively studied concept. Still there is a lot that we do not know about the way learning works. Learning is a combination of two things: the ability to cognitively or psychically gain new information or a skill, also referred to as the 'know-how', and the ability to understand the conceptual meaning of the gained information or skill, also referred to as the 'know-why' (Kim, 1998). In this study, however, learning is defined solely as the acquiring of knowledge or skills.

In this study, learning orientation is defined in line with Bunderson and Sutcliffe (2003) and Jha and Bhattacharyya (2013), as the extent to which an individual explores new knowledge and skills. Individuals with learning orientation seek increasement of learning, driven by interest and perseverance to develop themselves in the broadest sense to gain expertise (Jha & Bhattacharyya, 2013). Since learning orientation as well as individual reflexivity both lead to gaining knowledge, it can be expected that they relate. Specifically, people with learning orientation are expected to be more receptive to the positive advantages of individual reflexivity, since they are open to development. Individual reflexivity in turn can

be expected to be of help when it comes to increasing learning orientation, due to the need to gain knowledge and explore new strategies when being reflexive. Therefore, the following hypothesis was made:

Hypothesis 1: Learning orientation has a positive relationship with individual reflexivity.

Learning orientation aims to give insight in the complex process of gaining knowledge, insight and understanding, to improve organizational achievement (Nasution, 2011). Since learning orientation enables individuals to be receptive to and in search of new information, it should promote individual learning. In Thus, the following hypothesis is proposed:

Hypothesis 2: There is a positive relation between learning orientation and individual learning.

Since individual reflexivity promotes gaining new knowledge and skills in order to improve, it should also promote individual learning. Kolb's experiential learning theory even suggests reflexivity on experience is needed to learn, as he states: "Learning is the process whereby knowledge is created through the transformation of experience." (Kolb, 1984, p. 38). Also, if there is a positive relationship suggested between individual reflexivity and learning orientation and between learning orientation and individual learning, it could be that individual reflexivity thus also has a direct positive relationship with individual learning. To test the relationship of individual reflexivity with the outcome variable of individual learning the following hypothesis was made:

Hypothesis 3: There is a positive relationship between individual reflexivity and individual learning.

These hypotheses are needed to test the significance of the relations between these variables individually, before conducting any other tests. To get a better understanding of the relationship between learning orientation and individual learning and what influences this, it is of importance to study the relationship in more depth. Since the hypotheses suggest that individual reflexivity will have a positive relationship with both individual learning and learning orientation, individual reflexivity is expected to have a mediating role between these two variables. Individual reflexivity may affect the expected positive relationship between

learning orientation and individual learning, since reflection will help the learning process (Van Woerkom & Croon, 2008). It is already suggested that reflexivity is needed in order for an individual to learn (Kolb, 1984). This could signify that the relationship learning orientation is expected to have with individual learning, runs partially or fully via individual reflexivity. Individual reflexivity could thus to an extent participate in the transmittance of change from learning orientation to individual learning. Therefore, it is expected that individual reflexivity has a mediating role in this model. Specifically, mediating the relationship between learning orientation and individual learning. To see what influence individual reflexivity has in this relationship, we will examine to what extent the relationship is being mediated. Therefore, the following hypothesis has been formulated to test the mediating relationship:

Hypothesis 4: Individual reflexivity mediates the relationship between learning orientation and individual learning.

As underpinned in Van Woerkom and Croon (2008), learning shouldn't be studied solely as a cognitive process but should be examined in the context it takes place in. Since we have introduced variables regarding the individual-level factors in our first four hypotheses, it is now time to look at the context of the environment in which an individual learns. This study focusses on individual learning in the context of an organization, and specifically the role leadership could have on this.

In current research we focus on a form of leadership that is believed to positively relate to reflexivity and learning. It is a form of participative decision-making that in literature often is described as participative or empowering leadership (Chan, 2019). The variable of participative leadership is defined according to Wagner and Gooding (1987) in Koopman and Wiedersma (1998) as "joint decision making or at least shared influence in decision making by a superior and his or her employees" (p. 297). This variable is also closely related to managerial coaching, which is an active managerial form that helps employees improving their learning skills and performance (Ellinger & Bostrom, 1999; Matsuo, 2018). However, this study focusses solely on participative leadership, specifically because it includes a form of shared decision-making that managerial coaching does not focus on. Converse et al. (1993) found that the extent to which a team performs well is mainly dependent on how well-coordinated the team is. The decision-making environment, which in itself is dependent on many individual differences and challenges, plays a very important role in this. The concept

of team-decision-making has also been examined in the study of Arnold et al. (2000). This study shows that participative decision-making is very important for successful individual results, organizational results and team-focused results. This form of leadership is particularly interesting because of its emphasis on employee participation and growth and its positive relationship with work engagement and job satisfaction (Chan, 2019). Since Matsuo (2018) studied the role of managerial coaching in individual learning and the possible mediation individual reflexivity has on this, it is of added value to see if the inclusion of participative decision-making could affect the relationship he found.

Huang et al. (2006) states that the literature strongly suggests that participative leadership forms are likely to promote employee empowerment. Their study also proposes that empowerment mediates the link between participative work environment and positive work outcomes, such as learning. Tan et al. (2014) wrote that you can only enhance learning orientation when employees are empowered, suggesting that participative leadership thus could have a positive relationship with learning orientation. When it comes to learning, Tan et al. (2014) also found that leaders need to actively create an optimal work environment in which they use joint decision-making in order to motivate and help people to learn. This suggests that participative leadership can thus enhance learning orientation as well as individual learning. This is also suggested in Nonaka and Takeuchi's study (1995), in which they state that personal commitment is key in creating knowledge and that the management needs to have an active role in the process. Their study proposes that managers have the task to provide employees with a conceptual framework to help them make sense of their own experiences, in order to create knowledge. By doing so, leaders in an organization thus actively give employees tools to help them reflecting and learning (Nonaka & Takeuchi, 1995). This also adds to the believe that participative leadership could have a positive relationship with learning as well as reflexivity. In Van Grinsven and Visser (2011) it is suggested that employee empowerment leads to reflection and problem solving. Ellinger and Bostrom (1999) found that managerial coaching behavior can both facilitate and empower employees to learn and develop. Therefore, it could well be that participative leadership enables employees to have more learning orientation, individual reflexivity and individual learning.

The findings of these various studies highlight the possibility that participative leadership is a potential moderator for the effect of the relationship between learning orientation and individual reflexivity. It is thus suggested that higher levels of participative leadership will add to the positive relationship that learning orientation is expected to have

with individual reflexivity. It is also expected that participative leadership moderates the indirect relationship between learning orientation and individual learning, via individual reflexivity. Participative leadership is thus expected to have a moderating relationship, meaning low levels of participative leadership are expected to lower the strength of the relationship that learning orientation has with individual reflexivity. It is also expected that high levels of participative leadership will lead to a stronger relationship between learning orientation and individual reflexivity. Individual reflexivity, in turn, is expected to have a relationship with individual learning, so participative leadership is expected to have a moderating effect on the indirect relationship that runs between learning orientation and individual learning, via individual reflexivity. Deriving from this, the following two hypotheses were formed to test the moderating effect of participative leadership on individual learning:

Hypothesis 5: Participative leadership moderates the relationship between learning orientation and individual reflexivity.

Hypothesis 6: The indirect relationship between learning orientation and individual learning via individual reflexivity is moderated by participative leadership.

Because the model involves both team-level factors of participative leadership and individual-level factors of learning orientation, reflexivity and learning, the proposed model measures on a multi-level. The empirical test of the model is discussed in the following section.

Methods

Participants

The participants consisted of 126 people of which 41 men (32,5%) and 85 women (67,5%). The age differed from 19 to 62 ($M = 36.29$, $SD = 14.04$). The participants were acquired via online networks using a convenience sampling method and participated in this research voluntarily. Participants were invited to complete an anonymous online survey that included the measures for this study. A total sample of 228 people had been collected, and 126 of the surveys were valid for further data analysis for a response rate of 55,3%. The participants were mainly highly educated, with 73,8% of the participants having graduated in higher education (Of which 45,9% from University of Applied Sciences and 27,9% from University). Most of the participants were working in the field of “healthcare and wellbeing” (23%), followed by “ICT” (14,3%), “trade and services” (13,5%), and “education, culture and

sciences” (12,7%). The majority of the male respondents work in ICT (34,1%) and “engineering, production and construction” (17,1%), whereas the majority of female respondents work in “healthcare and wellbeing” (30,6%) and “education, culture and sciences” (15,3%).

The largest amount of this participant group has been working for 1 year (25,4%) for their current organisation, more than half of the participants (58,2%) have been working 3 years or less for their current organisation with $M = 6,29$ $SD = 8,13$. If you compare these numbers to statistics based on data retrieved from the Dutch working population, conducted by CBS (2016), you see that these averages are similar. The data from CBS states that 47% of their research population has been working 0 to 5 years for their current organization of which 29% has been working there 2 years or less. In our population you see that the averages are a bit lower, this could be explained by the current trend of *job hopping*, which is translated in an increased voluntary turnover: research found that there is a 7,6% increase in voluntary turnover since 2017 (Work Institute, 2019). Since the data from CBS is from 2016, the differences could be explained by these current developments.

Measurement instruments

The measurement instruments that were used were all existing questionnaires translated from English to Dutch for this study and checked by a third party who translated the Dutch versions back to English to see whether they were similar to the original English items. The participants filled in the following four questionnaires: Participative Leadership, Learning Orientation, followed by the Individual Reflexivity scale, and finally the Individual Learning scale.

Participative Leadership: The established scale by Arnold, Arad, Rhoades and Drasgow, 2000 was used. It was measured using six items on a 5-Likert-scale which ranged from “strongly disagree” to “strongly agree”. Cronbach’s alpha was $\alpha = .82$. An example item is “my leader encourages work group members to express ideas/suggestions”. Cronbach’s alpha could have been increased with the deletion of item 6 “mijn teamleider maakt keuzes die alleen zijn gebaseerd op zijn/haar eigen ideeën” to $\alpha = .84$. However, because this item is believed to have significant value for the entire questionnaire and is needed to measure participative leadership, and because Cronbach’s alpha was already high enough, the item was not deleted.

Learning Orientation: The scale developed by Bunderson and Sutcliffe (2003) was used. The learning orientation scale also consisted of six items, such as “the extent to which I look for opportunities to develop new skills and knowledge” and was conducted on a 5-Likert

scale which ranged from “strongly disagree” to “strongly agree”. Cronbach’s alpha was $\alpha = .85$.

Individual Reflexivity: For individual reflexivity the established scale of West (2000) was used. It was measured on a 5-Likert scale ranging from “strongly disagree” to “strongly agree”. The scale consisted of five items of which an example item is “I often review my approach to getting the job done”. Cronbach’s alpha was $\alpha = .79$.

Individual Learning: The established scale by Matsuo (2018) was used. It consisted of three items and was measured using a 5-Likert scale ranging from “strongly disagree” to “strongly agree”. An example item is “I am improving work process efficiently in relation to my tasks”. It had Cronbach’s alpha of $\alpha = .67$. This could have been increased to $\alpha = .70$ with the deletion of item 3, “mijn prestaties worden zeer gewaardeerd binnen de organisatie”. However, because this scale only consisted of three items and because it is believed that the item does contribute to measuring individual learning, it was decided to not remove it from the questionnaire.

Research design

To determine the required number of participants for this specific research design of moderated mediation, a power-analysis was conducted and that resulted in a suggested total sample size of 129 participants. This analysis was conducted through G*Power 3.1 (Faul et.al., 2007; Faul et.al., 2009), with an a priori power analysis, using the statistical test of linear multiple regression with a fixed model R squared deviation from zero. The input parameters used were 0.15 for the effect size, an alpha error probability of 0.05, a power of 0.95 and 4 predictors.

First the participants read a page with an introduction of the survey and ethical information such as that they can quit the survey at any point and that their individual results will stay anonymous. Afterwards they had to agree or disagree with the terms and depending on their answer they either went on to the demographic questions or got directed to the end of the survey. The demographic questions contained items such as their sex, level of education, work field, number of years they had worked for their current organisation and the number of months they have worked for their current boss. After that they filled in the survey. For most people, excluding seven participants who took longer than 40 minutes, it lasted an average of 7 minutes to complete the entire survey.

Results

In this research there was no missing data. The hypotheses for this study were as followed: (1) there is a positive relation between learning orientation (LO) and individual reflexivity (IR); (2) there is a positive relation between LO and individual learning (IL); (3) there is a positive relation between IR and IL; (4) IR mediates the relationship between LO and IL; (5) participative leadership (PL) moderates the relationship between LO and IR; (6) the indirect relationship between LO and IL via IR is moderated by PL. This is shown in Figure 1.

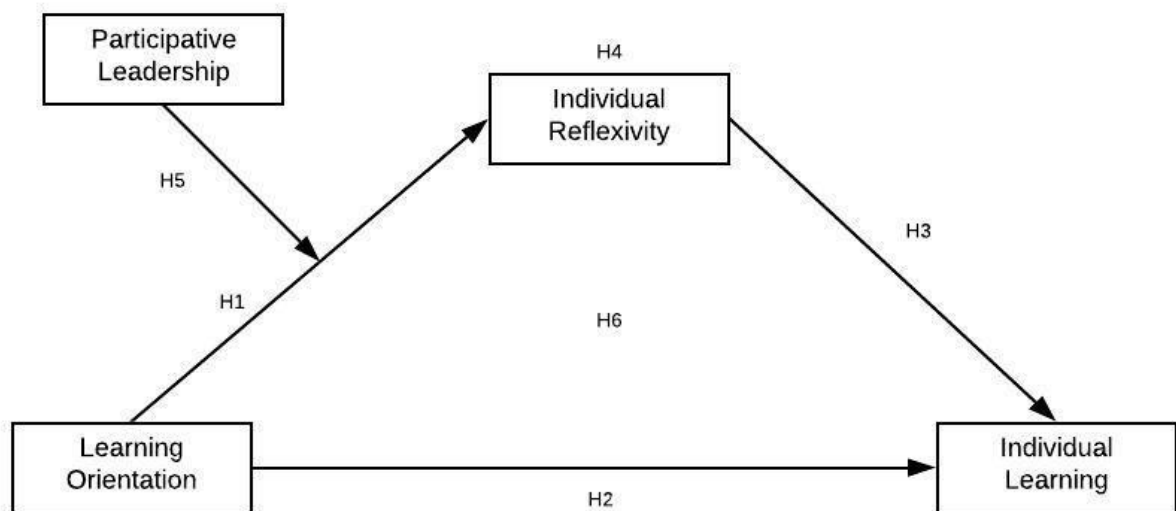


Figure 1. A model of the hypotheses.

Before interpreting the results, a number of assumptions were tested, and checks were performed. First, boxplots indicated that each variable in the regression was normally distributed and free from univariate outliers. Second, an inspection of the normal probability plot of standardised residuals and the scatter plot of standardised residuals against standardised predicted values indicated that the assumptions of linearity and homoscedasticity of residuals were met. There was a slight negative skewness for participative leadership, learning orientation, and individual reflexivity, since the skewness is higher than two times the standard error of Skewness ($SE = .216$). However, there was normality for individual learning. Third, Mahalanobis distance did not exceed the critical χ^2 for $df = 3$ (at $\alpha = .001$) of 16.27 for any cases in the data file, indicating that there were no multivariate outliers. Finally, multicollinearity was controlled for as none of the Pearson correlation of the independent variables exceeded the .7 mark.

To test the first three hypotheses, a hierarchical linear regression was conducted. Conducting this for hypothesis 1 gave the following results: on step 1, sex and age accounted for 1.7% of the variance in IR, $R^2 = .017$, $F(2, 123) = 1.047$, $p < 0.001$. On step 2, LO was added to the regression's equation, and accounted for an additional 17.3%, $\Delta R^2 = .173$, $\Delta F(1, 122) = 26.03$. In combination, the three predictor variables explained 19.0% of the variance in compliance, $R^2 = .190$, adjusted $R^2 = .170$, $F(3, 122) = 9.52$, $p < 0.001$, with $\beta = .421$ for LO in model 2. These results correspond with hypothesis 1, therefore the hypothesis is confirmed.

Conducting a hierarchical linear regression for hypothesis 2 gave the following results: on step 1, sex and age accounted for 12.4% of the variance in IL, $R^2 = .124$, $F(2, 123) = 8.680$, $p < 0.001$. On step 2, LO was added to the regression's equation, and accounted for an additional 8.4%, $\Delta R^2 = .084$, $\Delta F(1, 122) = 12.933$. In combination, the three predictor variables explained 20.8% of the variance in compliance, $R^2 = .208$, adjusted $R^2 = .188$, $F(3, 122) = 10.66$, $p < 0.001$, with $\beta = .293$ for LO in model 2. These results confirm hypothesis 2.

In testing hypothesis 3 the following results came forward from the hierarchical linear regression: on step 1, sex and age accounted for 12.4% of the variance in IL, $R^2 = .124$, $F(2, 123) = 8.680$, $p < 0.001$. On step 2, IR was added to the regression's equation, and accounted for an additional 8.4%, $\Delta R^2 = .084$, $\Delta F(1, 122) = 12.97$. In combination, the three predictor variables explained 20.8% of the variance in compliance, $R^2 = .208$, adjusted $R^2 = .188$, $F(3, 122) = 10.67$, $p < 0.001$, with $\beta = .293$ for IR in model 2. These results correspond with the expectations, therefore hypothesis 3 is confirmed.

Table 1

Summary of Means, Standard Deviations, Intercorrelations, and Cronbach's alphas of the

<i>Variable</i>	<i>M</i>	<i>SD</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
1. Participative leadership	3.79	.598	.82	-	-	-
2. Learning orientation	3.73	.586	.204*	.85	-	-
3. Individual reflexivity	3.43	.637	.013	.427**	.79	-
4. Individual learning	3.91	.537	.359**	.336**	.331**	.67

variables (N = 126).

Note. * $p < .05$; ** $p < .01$.

A moderation analysis was conducted using Hayes PROCESS model 1 (2012) to test for hypothesis 4. This interaction turned out to be non-significant, $b = -.008$, $t(126) = -.058$, $p = 0.954$, rejecting the hypothesis.

For a significant mediation effect, four steps are necessary. The first step is that the independent variable should correlate with the outcome variable. Second, the independent variable should be correlating with the mediating variable. Third, the mediating variable should be significantly and directly correlating with the outcome variable. These first three steps are supported by the results of hypotheses 1, 2 and 3. And fourth, as a whole, the independent variable should be insignificant or drop in significance and/or strength when the independent and mediating variables are added to the regression (Alfes et al., 2013). A mediation analysis was conducted using PROCESS model 4 to test for hypothesis 4 (Hayes, 2012). There was a significant indirect effect of LO on IL through IR, ($\beta = .080$, $p < .001$). The mediation of LO significantly predicts IL: ($\beta = .457$, $p < .001$). The mediation of LO and IR shows us that LO significantly predicts IL with IR in the model; ($\beta = .189$, $p < .05$). Since the addition of IR results in a drop in strength, it can be concluded that IR does mediate the relationship between LO and IL. This confirms hypothesis 4.

The moderated mediation model was tested with PROCESS model 7 (Hayes, 2012) to assess moderated mediation while controlling for age and gender, and examined six conditions: (H1) significant effect of LO on IR; (H2) significant effects of LO on IL; (H3) significant effect of IR on IL; (H4) the effect of LO, on IL, via IR and (H5) significant interactions between PL and IR on IL. The last condition, which is the essence of moderated mediation (H6), establishes whether the strength of the mediation via IR differs across the two levels of the moderator (Muller et al., 2005; Preacher et al., 2007 in Ng, Ang & Chan, 2008). Moderated mediation is demonstrated when the conditional indirect effect of LO on IL via IR, differs in strength across low and high levels of PL (Ng, Ang & Chan, 2008).

The results for hypothesis 1, 2, 3, and 4 support the first four conditions of moderated mediation. Condition 5 however was not confirmed by the moderation analysis, nor by the moderated mediation analysis, as the value zero falls in between the lower and upper bound of LO on IR, PL on IR, and the interaction effect on IR, $p > 0.05$ (Figure 2). This also did not support condition 6, therefore the hypothesis is rejected.

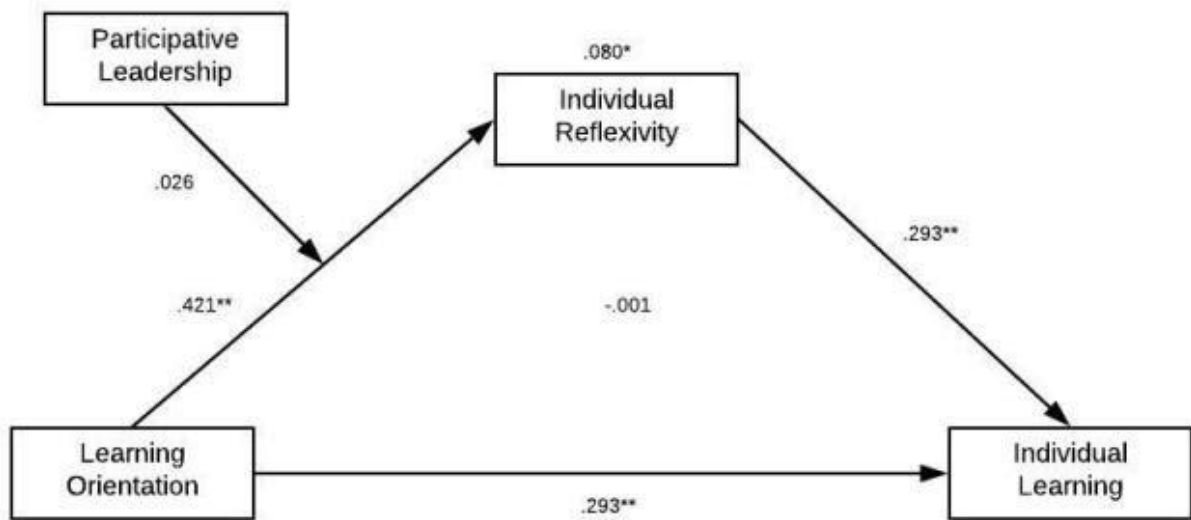


Figure 2. Hypothesis model: Standardised coefficients Beta for model 2.

Discussion

This study purposed to add new knowledge to the field of research and work, specifically doing so by investigating a moderated mediation model, including the variables of learning orientation, individual reflexivity and participative leadership in relationship to individual learning. The results that were found, have theoretical as well as practical implications and will be discussed here.

Theoretical Implications

The results present us three main theoretical implications. The first one is providing supporting evidence on the relationship between learning orientation and individual learning. The results of this study have added value to this respected field of research, grasping and measuring the concepts of both individual learning and learning orientation and finding significant results for this relationship. When you look at existing theory, Martinez (1999) focused on the role learning orientation could have in explaining the nature of learning, rather than the relationship between these variables. The study of Bell and Kozlowski (2002) only found significant relationships for learning orientation for high ability individuals but found no effect for low ability individuals.

The second theoretical implication is the significant relationship that has been found between learning orientation and individual reflexivity. Many authors have suggested that (some form of) facilitation of reflexivity will stimulate learning and innovation (e.g. Wals et al. 2004; Keen et al. 2005; Bos & Brown 2012 *in* Beers & Mierlo, 2017). The results of current study support these suggestions and contribute new proof to this relationship. In Bos and Brown (2012) for example, a positive relation is suggested, yet the construct of reflexivity is not measured nor studied. Also, the research field is mainly dominated by studies regarding team reflexivity and therefore these results also add specified knowledge regarding reflexivity of individuals in relationship to learning orientation (Gurtner et al., 2007). Practically, these positive relationships underpin that people who have learning orientation – who are thus more motivated to develop new knowledge and skills -also use reflexivity. Since they are positively related, an increase in learning orientation leads to an increase in the use of individual reflexivity. This in turn, leads to an increase in individual learning since individual reflexivity partially facilitates the positive relationship learning orientation has with individual learning. Our results suggest that people with learning orientation have more individual learning, partly because they use reflexivity. However, Voss et al. (2006) looked at reflexivity in a more comprehensive way and referred to this specific relationship as second-order reflexivity (Voss

et al. 2006). Their paper found that reflexivity is strongly related to institutionalized feedback relations. By doing so Voss et al. (2006) findings underline that reflexivity is a much more complex concept than has been measured and assumed in current paper.

Our results generally support a relationship between learning orientation and individual reflexivity and between learning orientation and individual learning, partially direct and partially mediated by individual reflexivity. However, looking at the scope of the field of research and existing literature, the generalizability of our findings to other contexts remains an empirical question.

There is no significant result found for a moderating role that participative leadership was expected to have on the relationship between learning orientation and individual reflexivity, nor its moderating role on the indirect relationship learning orientation has with individual learning, mediated by individual reflexivity. However, looking at the literature, individuals' value orientation may play a role in this. Chen and Aryee (2007) state that this orientation will affect the interpretation an individual has regarding leadership behaviour. They also found significant results for a mediating role of self-concept and thus underline its motivational implications, specifically underpinning the self-concept based motivational theory of Shamir (1991). They state, that work-related behaviour may be driven by seeking validation of components of the self-concept rather than it being solely goal-oriented. That could thus mean that participative leadership is open for interpretation and therefore does not lead to significant outcomes. Additionally, following these theories, it could be suggested that learning orientation is related to and mediated by other, more internally focused motivational processes than participative leadership.

Practical Implication

The results of the first theoretical implication suggest that the ability to acquire skills and knowledge increases when people are motivated to learn. This leads to the practical implication that organizations should recognize the importance of learning orientation. They can do so by considering a prospect employees' learning orientation in the recruitment process, to focus more on attracting and selecting employees who already have learning orientation. For existing employees, organizations can support the increase of learning orientation by implementing more challenges in daily tasks, triggering them to become more motivated to learn new skills, or work with a reward system to promote this behaviour.

The second and third theoretical implications lead to the second practical implication that can be deduced from these results. These findings suggest the importance for

organizations to promote individual reflexivity. Organizations can put this into practice by integrating reflexivity in the organizational culture. They can do so by making reflexivity a mandatory or suggested part of meetings or reports. They can support employees in this by providing training courses to help increase the skills to work with and knowledge about reflexivity. Investing in implementing and training reflexivity skills is of great added value for the employees as well as for the organization, because this would increase individual learning, which leads to greater job satisfaction and performance (Wright, 1997).

Limitations and future research

Next to the practical and theoretical implications, present research has also found limitations and suggestions for future research.

The first limitation of this study could be researching a too homogenic population. The participant group mainly consisted of highly educated respondents, with 73,8% of the participants having graduated in higher education. This is much higher than the actual national average of 30% in 2017 (Centraal Bureau voor de Statistiek, 2018). The discrepancy between the characteristics of the participant group and the actual population could implicate that the sample was too homogenic and the results may not be completely representative for the whole working population. Therefore, it is recommended that future research focusses on a better represented sample of the working population.

The second limitation found is an inconstancy in the answer options in the demographic section of the survey. The question regarding the period of time a participant had been working at their current organization asked for an answer given in months, while the follow-up question, regarding the time working under their current boss, asked for an answer given in years. This difference led to misinterpretation among a large group of participants and made the data concerning the time they worked for their current boss no longer interpretable and was therefore excluded for all participants. The data regarding the duration of their employment at their current organization however was useful and therefore was not excluded. The duration a participant works for their current boss may have an influence on the measured relationships, specifically the role of participative leadership, since a boss is usually the person to propagate this. Not properly measuring this, might have be of influence in the reason participative leadership turned out to be non-significant in the proposed model. Therefore, the suggestion is that future research includes this question using standardized answer options. This to prevent misinterpretation and to still take this duration factor that was left out of the results for this study, into account.

The third limitation can be argued to be a small sample size. Current study did not provide proper evidence for a moderated mediation. This can have various reasons. After running a new G-power analysis including the two control variables and an interaction model, the analysis showed that the possible effects were very small and therefore could only possibly be significant with a larger sample. The G-power analysis conducted through G*Power 3.1 (Faul et al., 2007; Faul et al., 2009) suggested a sample of 647 participants instead of 129. This could explain why the results were not significant for participative leadership. However, this means that the current model, even with a very large participant group, only provides very little effects for a moderated mediation. Therefore, it is recommended for future research to use a bigger sample and also to investigate other possibilities to measure a moderated mediation to be able to find stronger effects.

Other variables may be of influence and interest to examine as well in the context of the presented model in future research. According to literature the perceived self-efficacy of an individual and discrepancy reduction and production could play a role in the studied relationships. Bandura and Locke (2003) state that reactive discrepancy reduction helps in realizing goal challenges. Bandura (1991) suggests, in line with the social cognitive theory, that people are highly motivated by discrepancy reduction. However, people tend to also proactively motivate themselves by setting challenging goals (Bandura & Locke, 2003). In Konradt et al. (2016) it is briefly discussed that perceived self-efficacy is a deterrent for individual discrepancy reduction. So, for future research it might be useful to look into the effects of proactive discrepancy production system as well as reactive discrepancy reduction system in the role of motivation and the achievement of desired outcomes in relation to self-efficacy. Bandura and Locke's (2003) study suggests that perceived self-efficacy is an independent contributor in performance accomplishments and the level of motivation. Therefore, it could suggest a relationship with individual learning as an outcome variable as well as it could be of influence in the motivation or adaptiveness of one's learning orientation.

Lastly, future research could investigate the relationship between participative leadership and individual learning in more depth. The results of the PROCESS model 7 (Hayes, 2012) suggested there is a positive relationship between the two variables. This suggested relationship between managerial coaching and individual learning is in line with the findings of Matsuo (2018). Since managerial coaching and participative leadership have common ground, it would be interesting to investigate a possible significant direct relationship between participative leadership and individual learning.

References

- Aguinis, H., & Kraiger, K. (2009). Benefits of training and development for individuals and teams, organizations, and society. *Annual review of psychology*, *60*, 451-474. doi: 10.1146/60.110707.163505.
- Alfes, K., Shantz, A.D., Truss, C. & Soane, E.C. (2013). The link between perceived human resource management practices, engagement and employee behaviour: a moderated mediation model. *The International Journal of Human Resource Management*, *24*, 330-351. doi: 10.1080/09585192.2012.679950
- Arnold, J. A., Arad, S., Rhoades, J. A., & Drasgow, F. (2000). The empowering leadership questionnaire: The construction and validation of a new scale for measuring leader behaviors. *Journal of organizational behavior*, *21*, 249-269.
- Bandura, A., & Locke, E. A. (2003). Negative self-efficacy and goal effects revisited. *Journal of applied psychology*, *88*, 87. doi: 10.1037/0021-9010.88.1.87
- Bandura, A. (1991). Self-regulation of motivation through anticipatory and self-regulatory mechanisms. In R. A. Dienstbier (Ed.), *Perspectives on motivation: Nebraska Symposium on Motivation* (Vol. 38, pp. 69–164). Lincoln: University of Nebraska Press
- Beers, P. J., & van Mierlo, B. (2017). Reflexivity and learning in system innovation processes. *Sociologia ruralis*, *57*, 415-436. doi: 10.1111/soru.12179.
- Bell, B. S., & Kozlowski, W. J. (2002). Goal orientation and ability: Interactive effects on self-efficacy, performance, and knowledge. *Journal of Applied Psychology*, *87*, 497-512. doi: 10.1037/0021-9010.87.3.497
- Bos, J. J., & Brown, R. R. (2012). Governance experimentation and factors of success in socio-technical transitions in the urban water sector. *Technological Forecasting and Social Change*, *79*, 1340-1353. doi: 10.1016/j.techfore.2012.04.006

Bunderson, J. S., & Sutcliffe, K. M. (2003). Management team learning orientation and business unit performance. *Journal of Applied Psychology*, 88, 552. doi: 10.1037/0021-9010.88.3.552.

Centraal Bureau voor de Statistiek (2018). *CBS Trends in Nederland 2018 – Maatschappij – Cijfers - onderwijs*. Retrieved from <https://longreads.cbs.nl/trends18/maatschappij/cijfers/onderwijs/>

Centraal Bureau voor de Statistiek. (2018, April 23). *1 op 3 werkt 10 jaar of langer bij dezelfde werkgever*. Retrieved from <https://www.cbs.nl/nl-nl/nieuws/2018/17/1-op-3-werkt-10-jaar-of-langer-bij-dezelfde-werkgever>

Chan, S.C.H. (2019), "Participative leadership and job satisfaction: The mediating role of work engagement and the moderating role of fun experienced at work", *Leadership & Organization Development Journal*, 40, 319-333. doi: 10.1108/LODJ-06-2018-0215

Choi, W., & Jacobs, R. L. (2011). Influences of formal learning, personal learning orientation, and supportive learning environment on informal learning. *Human Resource Development Quarterly*, 22, 239-257. doi: 10.1002/hrdq.20078

Converse, S., Cannon-Bowers, J. A., & Salas, E. (1993). Shared mental models in expert team decision making. *Individual and group decision making: Current issues*, 221, 221-46.

Ellinger, A.D. and Bostrom, R.P. (1999), "Managerial coaching behaviors in learning organizations", *Journal of Management Development*, 18, 752-771. doi: 10.1108/02621719910300810

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39, 175-191. doi: 10.3758/bf03193146

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41, 1149-1160. doi: 10.3758/brm.41.4.1149

Gurtner, A., Tschan, F., Semmer, N. K., & Nägele, C. (2007). Getting groups to develop good strategies: Effects of reflexivity interventions on team process, team performance, and shared mental models. *Organizational Behavior and Human Decision Processes*, *102*, 127-142. doi: 10.1016/j.obhdp.2006.05.002.

Hayes, A. F. (2012). *PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling*. Retrieved from <http://www.afhayes.com/public/process2012.pdf>

Huang, X., Rode, J. C., & Schroeder, R. G. (2011). Organizational structure and continuous improvement and learning: Moderating effects of cultural endorsement of participative leadership. *Journal of International Business Studies*, *42*, 1103-1120. doi: 10.1007/s10490-006-9006-3

Ingram, J., D. Maye, J. Kirwan et al. (2015) Interactions between niche and regime: an analysis of learning and innovation networks for sustainable agriculture across Europe. *Journal of Agricultural Education and Extension*, *21*, 55–71. doi: 10.1080/1389224X.2014.991114.

Jha, S., & Bhattacharyya, S. S. (2013). Learning orientation and performance orientation: Scale development and its relationship with performance. *Global Business Review*, *14*, 43-54. doi 10.1177/0972150912466443.

Kayes, D. C., & Burnett, G. (2006). G.: Team learning in organizations A review and integration. *In: OLKC 2006 Conference*.

Kim, D. H. (1998). The link between individual and organizational learning. *The strategic management of intellectual capital*, *41*, 62.

Klein, G. A., & Thordsen, M. (1989). *Recognitional decision making in C2 organizations*, presented at the 1989 Symposium on Command and Control Research. National Defense University, Washington DC.

Klein, H. J., Noe, R. A., & Wang, C. (2006). Motivation to learn and course outcomes: The impact of delivery mode, learning goal orientation, and perceived barriers and enablers. *Personnel psychology*, *59*, 665-702. doi: 10.1111/j.1744-6570.2006.00050.x.

Kolb, D. A. (1984). Experience as the source of learning and development. *Upper Saddle River: Prentice Hall*.

Konradt, U., Otte, K. P., Schippers, M. C., & Steenfatt, C. (2016). Reflexivity in teams: A review and new perspectives. *The Journal of psychology*, *150*, 153-174. doi: 10.1080/00223980.2015.1050977

Koopman, P. L., & Wierdsma, A. F. M. (1998). Participative management. *Personnel psychology: Handbook of work and organizational psychology*, 297-324.

Leeuwis, C. & Aarts, N. (2011). Rethinking Communication in Innovation Processes: Creating Space for Change in Complex Systems, *The Journal of Agricultural Education and Extension*, *17*, 21-36, doi: 10.1080/1389224X.2011.536344.

Martinez, M. A. (1999). *An investigation into successful learning: Measuring the impact of learning orientation, a primary learner-difference variable, on learning*. 1-167. Brigham Young University.

Matsuo, M. (2018). How does managerial coaching affect individual learning? The mediating roles of team and individual reflexivity. *Personnel review*, *47*, 118-132. doi: 10.1108/pr-06-2016-0132

Nasution, H. N., Mavondo, F. T., Matanda, M. J., & Ndubisi, N. O. (2011). Entrepreneurship: Its relationship with market orientation and learning orientation and as antecedents to innovation and customer value. *Industrial marketing management*, *40*, 336-345. doi: 10.1016/j.indmarman.2010.08.002.

Ng, K. Y., Ang, S., & Chan, K. Y. (2008). Personality and leader effectiveness: A moderated mediation model of leadership self-efficacy, job demands, and job autonomy. *Journal of Applied Psychology*, *93*, 733. doi: 10.1037/0021-9010.93.4.733

- Orasanu, J. (1990). *Shared mental models and crew decision making*, 46. Princeton.
- Shamir, B. (1991). Meaning, self and motivation in organizations. *Organization studies*, 12, 405-424. doi: 10.1177/017084069101200304
- Somech, A. (2006). The Effects of Leadership Style and Team Process on Performance and Innovation in Functionally Heterogeneous Teams. *Journal of Management*, 32, 132–157. doi: 10.1177/0149206305277799
- Tan, C. S. L., Smyrnios, K. X., & Xiong, L. (2014). What drives learning orientation in fast growth SMEs?. *International Journal of Entrepreneurial Behavior & Research*, 20, 324-350 doi: 10.1108/IJEBR-02-2013-0032
- Tett, R. P., & Burnett, D. D. (2003). A personality trait-based interactionist model of job performance. *Journal of Applied psychology*, 88, 500. doi: 10.1037/0021-9010.88.3.500.
- Van Woerkom, M., & Croon, M. (2008). Operationalising critically reflective work behaviour. *Personnel Review*, 3, 317-331. doi: 10.1108/00483480810862297
- Van Grinsven, M., & Visser, M. (2011). Empowerment, knowledge conversion and dimensions of organizational learning. *The learning organization*, 18, 378-391. doi: 10.1108/09696471111151729
- Wals, A.E.J. ed. (2007) *Social learning towards a sustainable world* (Wageningen, The Netherlands, Wageningen Academic Publishers). doi: 10.3920/978-90-8686-594-9.
- West, M. A. (2000). Reflexivity, revolution and innovation in work teams. *Advances in interdisciplinary studies of work teams*, 5. doi: 10.1016/s1572-0977(2000)7
- Work Institute. (2019). *Trends, Reasons & A Call to Action: Insights from over 250,000 Employee Interviews*. Retrieved from <https://info.workinstitute.com/hubfs/2019%20Retention%20Report/Work%20Institute%202019%20Retention%20Report%20final-1.pdf>

Wright, D. L. (1997). *The effects of organizational and individual learning on job satisfaction and organizational commitment*. Louisiana: Louisiana Tech University

Xiong Chen, Z., & Aryee, S. (2007). Delegation and employee work outcomes: An examination of the cultural context of mediating processes in China. *Academy of Management Journal*, 50, 226-238. doi: 10.5465/amj.2007.24162389