

Learning Organization 2.0: An Empirical Study Of Contextual Adaptation in PT MMI Purwakarta

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Abstract

Business rapid development with technology advancement urges enterprises to create a sustainable competitive advantage. Being a Learning Organization (LO) becomes favorable, yet cultural backgrounds and the need to adapt with open innovation urge an adapted LO 2.0. This paper aims to study the application in Indonesia's industrial context, the underlying factors, and obstacles in a manufacturing plant at PT MMI. The preliminary interview involved four strategic managers, followed by an empirical study surveying the 130 employees using the adapted Learning Organization Questionnaire (LOQ). The analysis used descriptive statistics and a Confirmatory Factor Analysis (CFA). Its findings suggest that PT MMI successfully enhances the practice of LO 2.0 on its contextualized adapted approach, such as an innovative environment, effective information sharing, enhancing employee empowerment, supporting employees' self-development/mastery, and becoming a facilitative leader with a multi-stakeholder approach. Nevertheless, some factors with marginal mean scores on each dimension risk destabilizing the long-term learning practice in PT MMI, which the leaders should consider improving and strengthening.

Keywords: learning organization 2.0; learning organization questionnaire; confirmatory factor analysis; contextualized adapted approach; sustainable competitive advantage

1. Introduction

A dynamic business climate with financial instability, rapid technology evolution, and volatile trends requires organizations to upgrade its competitive advantages (Dekoulou & Trivellas, 2014) to become sustainable and innovative (Dorson & Nyamekye, 2020). Technology integration, inventions, or enhanced manufacturing (Khunsoonthornkit & Panjakajornsak, 2018) fosters innovative competencies (Hussein et al., 2016). Garvin (1993) described that being a Learning Organization (LO) covers the core dimensions of survival. It was drawn from the best organization's experience to tackle chaotic conditions and improve performance

activate innovation (Eijnatten & Putnik, 2004). Nevertheless, the doubt about its applicability (Eijkman, 2011), confusion & difficulties indicates unsuccessful adaptability (Grieves, 2008) in worldwide diverse backgrounds (Santa & Nurcan, 2016) because of its Western/America-centric style (Caldwell, 2009). It was found to be a barrier in the UAE (Siddique, 2017), Singapore (Retna & Jones, 2013), and the Chinese community (Hong et al., 2014), as Pedler & Burgoyne (2017) found insignificant through decades (Lee & Yoo, 2019). Rohrbeck et al. (2009) suggest an open innovation for LO with external and internal knowledge (Nielsen and Lundvall, 2003). Therefore, LO had to be updated to optimize (Pedler & Hsu, 2019), and Mak & Hong (2020) proposed adapted to the context and multiple stakeholder approaches called the LO 2.0.

The researcher focuses this study on Indonesia's industrial open innovation practices as the study of LO is still limited in its classical concept to enrich LO 2.0 literature on how it is used to achieve sustainable competitive advantage; because there is a dearth understanding of LO 2.0, its awareness and how to implement them. The author chooses PT Mitsuyoshi Manufacturing Indonesia (MMI) in Purwakarta with open innovation of the latest technology for automotive parts, dies, and design. The goal has a generic competitive value through monozukuri, preventive act, facilitative, and sources utilization in excellent information flow. It has professionals, size, vision, and mission factors (Parding & Abrahamsson, 2010) with a preliminary study to gain a deeper insight into PT MMI's LO 2.0 practice. The preliminary was a semi-structured interview as in Sayed & Edgar (2019) with Farrukh & Waheed (2015) model used by Hamdani & Susilawati (2018) in Garut. The participant included a Vice President and three strategic managers resulted in the following output: a) Employee awareness representing an innovative environment; b) Stakeholder support for good information sharing; c) Proactive learning process as means for employee empowerment; d) Employee commitment as means for self-development/mastery; and e) Top-down approach as for facilitative leadership. It suggests potential obstacles in the program, which motivated the researcher to delve deeper with the following questions:

1. How do employees perceive the implementation of Learning Organization 2.0 in PT MMI?
2. Which of the Learning Organization 2.0 factors underlying its adaptation in PT MMI?
3. Which Learning Organization 2.0 underlying factors hamper its adaptation in PT MMI?

2. Literature review

2.1. The Previous Study

In 2016, Prasiwi and Hadi's study in Surabaya used Watkins & Marsick's (2003) LO's seven dimensions framework in a qualitative case study interviewing six informants. Anggriani (2017), in her study in Makassar, used the five dimensions by Senge (2004) in a qualitative phenomenology study with seven informants. It was similar to Putri and Zulkarnaini (2019) "Penerapan Learning Organization

pada Badan Pengawasan Keuangan dan Pembangunan (BPKP) Perwakilan Provinsi Riau”, with the qualitative descriptive approach with data triangulation analysis from the five informants, institution data, and observation. Wahyu et al. (2019) studied the practice of LO in Malang using Senge (2004) and Marquardt (2002) constructs, combining learning dynamics, organization's transformation, people empowerment, knowledge management, and technology application in a qualitative data triangulation involving 38 corporate informants. Subiyakto et al. (2020) studied LO at the individual, group, and organizational levels following the innovativeness in public universities in South Kalimantan entitled "Revitalizing Public University Innovativeness through Learning Organization" using Hussein et al. (2016) nine dimensions in quantitative analysis.

2.2 . Theory Supporting the Study

a. The Learning Organization (LO)

Huysman (2000) describes an LO that draws the previous organization's experiences with specific adaptation in leadership, management, and structure (Daft & Marcic, 2001), while Argyris & Schön (1978) see the practice as the individuals as the agents for learning. Senge (2004) underlines the practice of the members continually expanding their capacity through system thinking, personal mastery, mental models, shared vision, and team learning; Huber (1991) proposed knowledge acquisitions, information distribution, interpretation, and organizational memory, whereas Pedler et al., (1991) suggest eleven characteristics of LO. Watkins & Marsick (1993) saw an LO as an integrated process that continuously learns within the individual, structural, and organizational levels with knowledge gain and financial performance measurements, along with Kerka (1995) on meaningful and continuously shared with different goals, individual performance, inquiry and dialogue, creativity, and awareness. Malhotra & Mellan (1996) suggest encouraging, recognizing, and rewarding openness, systemic thinking, creativity, efficacy, and empathy, which Huczynski & Buchanan (2001) perceived as facilitative stakeholders in problem-solving and continuous innovation. Daft & Marcic (2001) specified that leadership and management urge delegation to employees, participative communications, and adaptive culture. Phillips (2003) gives the practice of learning climate and culture, whereas Farrukh & Waheed (2015) adapted an alternative model of Innovation, Facilitative Leader, Information Sharing, Self-Development, and Empowerment.

b. The Learning Organization 2.0 (LO 2.0).

The development of LO underlines Mak & Hong (2020) proposes the LO 2.0 on a contextual-balanced approach considering Örtenblad's (2019) "collection of implicit assumptions about a particular setting, meaning and quality" to maximize the outcomes (Hong et al., 2014) including Social, Organizational, Cultural, and Industrial (SOCI) context and the multi-stakeholder perspective. The social context includes economics, education, employment, ethnics, religions, generations, and income with specified approaches. In contrast, the organizational contexts concerned the internal matters at the organizational level (Siddique, 2017), group level (Hueske & Guenther, 2015), and individual level with a unique adaptation (Caldwell, 2009). In the industrial context, adaptation to industrial sectors and

professions differed as Parding & Abrahamsson (2010) suggest a unique set of values influencing the learning process. The stakeholders' perspectives are the groups or individuals affected internally and externally (Lumencandela, 2020), including employees, owners, and managers. The external stakeholders, including customers, suppliers, creditors, governments, and society, create a sustainable competitive advantage by aligning the organization's goal (Ackermann & Eden, 2011). In contrast, the shareholders are liable for the impacts of its strategy (Chou & Ramser, 2019).

c. Learning Organization 2.0 for Organization's Competitive Advantage

LO in achieving competitive advantages depends on the organization's ability to constantly create, disseminate and integrate knowledge by fostering individual-collective learning and utilizing it to respond to changes and modify its action for strategic goals (Kontoghiorghes et al., 2005). It becomes a path to achieving organizational profitability and sustainability by fulfilling its demands, launching innovation, optimizing learning, and investing in new technology to sustain long-term value (Davis & Daley, 2008). Shamim et al. (2017) suggest that becoming an LO gives the company awareness of change to create a sustainable competitive advantage. Nevertheless, Fraj et al. (2015) proposed further verification for LO's impact on newly established organizations. Sustainable competitive advantages allow a company creates excellent values on specific strengths, either technological, financial, market advantages, or intellectual property (Porter, 1985). It is a constant pursuit to survive through an excellent relationship with stakeholders for environmental sustainability and social responsibility (Guimarães et al., 2017). Each organization requires a specified treatment to optimize its potential by looking for compatibility between its strengths and external forces covering all its competitive aspects, which Natalia & Ellitan (2019) prescribe that it must adapt to the ongoing industrial revolution 4.0 with lower cost, product differentiation, and market focus from the organization's intellectual capital.

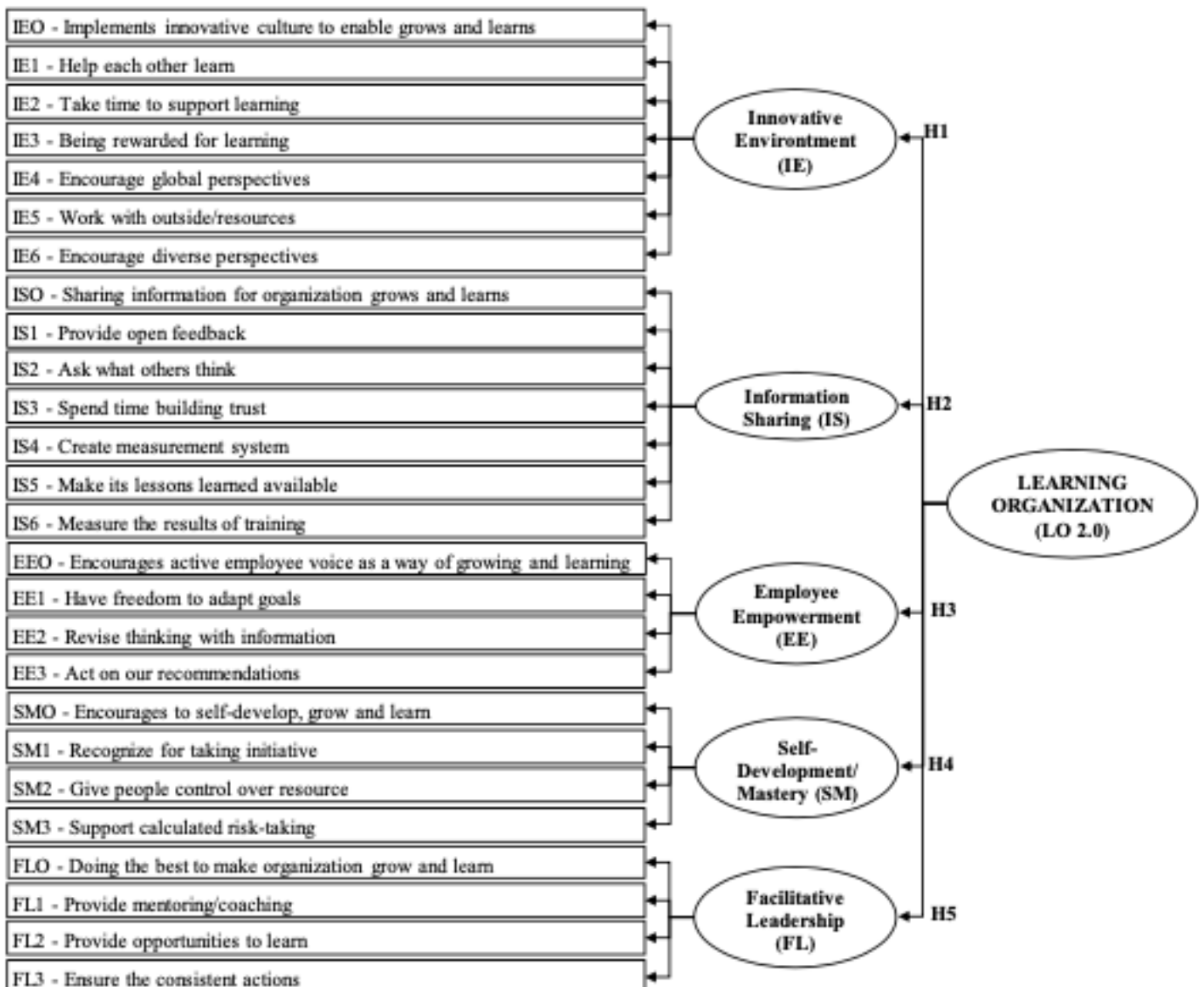
2.3. Measuring the Learning Organization 2.0

The studies on measuring LO in Yaman (2020) include the Dimensions of the Learning Organization Questionnaire (DLOQ) by Yang et al. (2004) optimally assesses LO-related research (Kim et al., 2017), based on a theoretical framework of organizational learning, workplace learning, learning climate and learning structure by Örtenblad (2019). It consists of 21-item in seven dimensions with two performance measures (Yang et al., 2004) and has been contextualized in South Korean culture by Song et al. (2009) using a structural model. Although some researchers have studied its effectiveness and validity, the LOQ requires further insight to explore the context of the organizational background (Sayed & Edgar, 2019). In other countries, contextualization has taken place in Germany (Kortsch & Kauffeld, 2019), Greece (Goula et al., 2020), and Turkey (Yaman, 2020), wherein in Indonesia, most of the studies are concerned with the mediating variable (Kristanti, 2020), impact on behavior (Anwar & Niode, 2017), organization performance (Gantar & Tielung, 2018), innovation and engagement process (Subiyakto et al., 2020). Taken from those studies, this study integrates the LOQ

with Indonesia's adapted dimension, and the cultural context adopts Farrukh & Waheed's (2015) framework with the adapted 21 items of DLOQ on Song et al. (2009) as a higher-order structured model shown in Figure 1. Which PT MMI has put the concept of LO 2.0 to achieve its competitive advantages requires empirical investigation with these hypotheses:

- H1: Innovative Environment as a Learning Organization factor is suitable for adaptation in PT MMI.
- H2: Information Sharing as a Learning Organization factor is suitable for adaptation in PT MMI.
- H3: Employee Empowerment as a Learning Organization factor is suitable for adaptation in PT MMI.
- H4: Self-Development/Mastery as a Learning Organization factor is suitable for adaptation in PT MMI.
- H5: Facilitative Leadership as a Learning Organization factor is suitable for adaptation in PT MMI.

Figure 1. Research Model Adopted from Song et al. (2009) & Farrukh & Waheed (2015)



3. Research Method

This study's primary investigation first validates the instruments through validity and reliability assessment involving 31 respondents outside PT MMI through an online platform. The primary data mining used clustered sampling method due to the small sample size directly distributed the form in a three-day response to ensure the respondent's actual perspective (DeCarlo, 2018). The instrument of LOQ uses Yang et al. (2004) 21 items adjusted to the five dimensions of LO 2.0 (Leufven et al., 2015) with five additional statements for each dimension with a total of 26 items on a five-point Likert scale (one is strongly disagreed to five is strongly agreed). The researcher scored 990 in TOEC (ETS), 82 in TOEFL IBT (ETS), and more than ten years of English experience interpreting those items into Bahasa Indonesia accompanied by the original English version. The instrument validity through Pearson's correlation justifies the value for all items was >0.355 (standardized r -table $N=31$, at α 5%), and the correlation ranged from 0.548 (Q16) to 0.938 (Q26), significant to be considered valid (Dekoulou & Trivellas, 2014). The reliability ensures the instrument's consistency in measuring the concept of the given responses involving a multipoint-items scale, in which the coefficient is >0.70 , while the output was at 0.977, justifies the instrument as reliable for this study (Sekaran & Bougie, 2013).

The descriptive analysis shows influential trends in perceiving the subject's condition to identify the characters from its central tendency and dispersion (Sekaran & Bougie, 2013). The first-order confirmatory factor analysis (CFA) verifies the response's offending estimates, construct validity, reliability, and normality to ensure all variables have no contradictory effect, which Fuchs and Diamantopoulos (2009) underline three indicators: a) the negative error variance, b) standardized loading factor (SLF), and c) standard-error value where Geldhof et al. (2014) suggested less informative for the analysis. The construct validity checked the observed and latent variables' relationship significance on t -value, and the SLF which must be >1.96 (CI 95%) and the SLF is >0.50 ($N=130$) (Hair et al., 2010). The construct reliability inspects model consistency with its observed variables in any circumstances by looking at the Construct Reliability (CR) and Variance Extracted (VE) (Fornell & Larcker, 1981). The CR value consists of an SLF and measurement error with $CR >0.70$ and $VE >0.50$ (Ghozali & Fuad, 2014). The normality test ensures the data fulfilled standard normal distribution in a univariate and multivariate test on the skewness and kurtosis z -values, in which the univariate's value >0.05 and multivariate value <0.05 (Kim, 2013).

The second order CFA used fitness indexes of Chi-square (χ^2), root-mean-squared error approximation (RMSEA), root-mean-square residual (RMR), standardized RMR (SRMR), goodness-of-fit index (GFI), adjusted GFI (AGFI), non-normed fit index (NNFI)/ Tucker-Lewis's index (TLI), and comparative fit index (CFI) (Yang et al., 2004). The χ^2 test's p -value must be >0.050 , and divided by the degree of freedom must <3.00 (Marsh & Hocevar, 1988). RMSEA measures the deviation of the parameter with its covariance matrix, which Byrne (1998) determined the perfect below 0.05 and good below 0.08. Steiger (1990) describes RMR and SRMR show the proportion of residual mean from the variance and covariance matrix, in which a fit model is <0.080 . The GFI compares the hypothesis with the null model

with a good fit >0.90 marginal >0.80 . In contrast, AGFI adjusts the null model degree of freedom with the estimated models, justifying a good fit of >0.90 marginal >0.80 (Marsh et al., 2014). The NNFI/TLI had a cut-off value of 0.90 and marginally fit >0.80 (Cai et al., 2021). The CFI results of good fit >0.90 marginal fits >0.80 (Olobatuyi, 2006). Afterward, the structured-model analysis tests the hypothesis in three parameters: a) the SLF, b) the t-value, and c) the R² (Hox et al., 2017). The t-value assesses the connection significance of each path among variables and must be higher than $|1.96|$ (α 5%) in this study (Dandagi et al., 2016). The R² indicates the magnitude of the independent variable's ability to explain the endogen variable, which the higher, the more valuable the dimensions affected the explained variable values >0.70 (Grapentine, 2000).

4. Result and Discussion

4.1. Respondent's Profile

The 130 respondents consist of male majority (95%) with 20-25 years old (43%) and 26-30 years old (36%), showing a potential personnel competitive advantage. However, most of the <5 years (63%) experienced challenges PT MMI to optimize and coordinate with the other 37% of experienced workers to help the company educate their junior. The educational background with more than three-quarters (85%) are High School Educated with practical-skilled workers becomes a potential advantage to enhance fresh ideas in the environment. In comparison, 84% of the employees handled the shop floor process as an operation team, and the staff was 15%; thus, PT MMI needs a specified approach to make excellent operations through continuous skill development and empowerment. The respondent's beliefs are majority Islam (94%), with the other religious groups for society's positive fulfillment, and a third (37%) of Purwakarta workers, Karawang (21%), and Bekasi (14%) with Sudanese background.

4.2. Descriptive Analysis

- a. Innovative environment's response ranged from 3.78 to 4.18, showing the employees agreed on statements IE0 (3.88), IE3 (3.78), IE4 (3.84), and strongly agreed on statements IE1 (4.07), IE2 (4.18), IE5 (4.03), and IE6 (4.11). The highest mean score of IE2 supports Mrs. DW's (Head of HRD, PPC, & Logistics) statement, which translates to "In my team, "just keep learning!" learn, this knowledge would be useful either here or wherever out there, it would be useful for you later on." On the other hand, IE3 criticized the practice of PT MMI's innovative environment, with a deviation of 0.93 showing some respondents' disagreement. This phenomenon was disclosed by Mr. SL (Head of QA, QMR, Commercial & Production) as the company halted the improvement competition program as the pandemic strumming to a limited rewarding program.

- b. Information Sharing's response ranged between 3.62 and 4.32, showing that most of the respondents agreed with the statements IS1 (3.86), IS2 (3.92), IS3 (3.82), IS4 (3.62), IS5 (3.74), and IS6 (3.70) and strongly agreed on IS0 (4.32). The standard deviation of IS4 (0.89), IS5 (0.87), and IS6 (0.80) indicate respondent disagreement with those statements. PT MMI's GA & Legal Head, Mr. DD, have a way to pursue its employee's active shares and involvement in the development. He said, "Information about any events was always delivered to me. ...I can still give suggestions, what should we do. GA is not only about the individual, but the whole department has to develop...", "oh, it has to be Pak Dedi! Not like that. Everyone has the same abilities like that".
- c. Employee Empowerment responded "agree" on EE1 (3.87), EE2 (3.68), and EE3 (3.50), and strongly agreed with EE0 (4.05) statements; with the deviation of EE2 (0.96) and EE3 (1.01) indicates employee disagreement. PT MMI empowers the personnel on job rotation as Mr. SL's statement translated: "In Quality, there is empowerment program. We have some of our friends involved in engineering (department). They support die making". Furthermore, Mr. SL also restricted that a riskier task should be taken only by those with sufficient skill level under the direction of the department head.
- d. Self-Development/Mastery had scores from 3.72 to 4.19, which shows the employee agreed on SM1 (3.72), SM2 (3.88), SM3 (3.96), and strongly agreed on SM0 (4.19). SM0 had shown that PT MMI successfully executed its corporate mission in the interview session. Mr. JD (Vice President) describes *monozukuri* as a Japanese philosophy to perfect craftsmanship, which is the company spirit that drove their successful continuous learning program. In the same way, Mr. SL emphasized that their skill development program had come on a standardized four-level skill matrix. Furthermore, the standard deviation of SM1 (0.81) shows that, in particular, the respondents disagreed with this statement. The lowest level indicates a basic knowledge of its particular specialties, and the highest level possesses the most profound understanding of that skill.
- e. Facilitative Leadership has the lowest response at 3.80 (FL1) and highest at 4.15 (FL0) with agreed on FL1 (3.80), FL2 (3.88) statements, while they strongly agree with FL0 (4.15) and FL4 (4.07) statements. However, the deviation on FL1 (0.83) indicates that some respondents disagree with the FL1 statement. Mrs. DW, during the interview session, demonstrates the practice of facilitative leaders as translated to, "Come on we learn together, we would found where were the errors occur, let us solve them together..., I keep on intense communication with A and B, what if we share the assignment".

4.3. Structured Model Analysis

a. Confirmatory Factor Analysis (1st-Order CFA)

The first measure on offending estimates avoids fallacies of neither negative error variance nor an SLF >1.0. The process on LISREL 8.8 for all the items (IE0-6, IS0-6, EE0-3, SM0-3, and FL0-3). The outcome indicates there was no Negative Error Variance in all of the observed variables, and the SLF values ranged from 0.36 (IS4) to 0.89 (SM2), which justifies there were no offending variables for Validity and Reliability analysis. Invalidity assessment three items failed the test as its SLF value was insufficient; those are IE6 (0.43) of Innovative Environment, IS4 (0.36) of Information Sharing, and EE3 (0.45) of Employee Empowerment; which are excluded from the reliability assessment and the higher order model. All of the items passed proceeded to the reliability test and gave a significant result. Each CR and VE value of the dimensions IE (0.8, 0.5), IS (0.9, 0.5), EE (0.8, 0.5), SM (0.8, 0.5), FL (0.8, 0.5) satisfy the minimum requirement justify those dimensions is sufficient with the proposed model. The third assessment for 1st-order CFA was the normality test of the univariate and multivariate test. Univariate test traced the p-value of skewness & kurtosis of each statement resulting in a series of values that falls >0.05. All statements ranged from 0.056 (IS0) to 0.806 (IS6). The multivariate test ensures that the data fulfill the standard normal distribution within a maximum of 0.050; of which the data fulfill the normal distribution (p-value 0.000<0.050). Therefore, only 23 items of the five dimension's data proceeded to the higher order CFA.

b. Second-Order Confirmatory Factor Analysis (2nd CFA)

The second-order analysis CFA forms the complete structured model through fitness justification. It is then analyzed for its SLF, t-value, and the R2, the results used for hypothesis testing. The fitness analysis justifies the model's Chi-squared (χ^2), RMSEA, RMR, SRMR, GFI, AGFI, CFI, and NNFI/TLI. The following Table 1 presents the summary of indices scores from the LISREL 8.8, where some indices assign the model as not a good fit (the χ^2 and AGFI). The χ^2 value was insufficient as it was sensitive to the sample size, which this study had relatively small, while the other indices justify the model as a sufficiently good fit and marginally fit. Table 2 shows the result of structured model analysis evaluating the model's relationship parameter for hypothesis testing.

Table 1. Fit Indexes Summary

Item	Value	Remarks	Item	Value	Remarks	Item	Value	Remarks
χ^2 (p-value)	328.05 (0.000)	Not Fit	SRMR	0.053	Good Fit	GFI	0.82	Marginal Fit
df	216	Good Fit	RMR	0.034	Good Fit	AGFI	0.77	Not Fit
χ^2/df	1.52	Good Fit	RMSEA	0.063	Good Fit	NNFI / TLI	0.98	Good Fit
						CFI	0.98	Good Fit

Source: Data processed by the author

Table 2. Hypothesis Testing Summary

Relation	SLF	t-value	R ²	Remarks	Explanation
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Learning Organization 2.0 → Innovative Environment	0.95	10.18	0.91	Significant (Accept H1)	PT MMI successfully adopts the LO 2.0 practice by providing an innovative environment through sustainable explorative and experimentative activities.
Learning Organization 2.0 → Information Sharing	1.00	8.92	1.00	Significant (Accept H2)	PT MMI adapt Information Sharing with its item, making the company a successful Learning Organization through an open information flow and sharing platforms.
Learning Organization 2.0 → Employee Empowerment	0.92	9.31	0.84	Significant (Accept H3)	PT MMI adapts the Employee Empowerment sophisticatedly to become a Learning Organization achieving its competitive advantage.
Learning Organization 2.0 → Self-Development/ Mastery	0.96	6.91	0.92	Significant (Accept H4)	Self-Development/Mastery is a relevant factor in making PT MMI an LO 2.0 by several adaptations and modifications by the corporate management.
Learning Organization 2.0 → Facilitative Leadership	0.98	9.86	0.96	Significant (Accept H5)	Facilitative Leadership is suitable for its implementation in PT MMI to become a Learning Organization 2.0 with its modified application and interpretation.

Source: Data processed by the author

4.4. Discussion

How do employees perceive the implementation of Learning Organization 2.0 in PT MMI?

The descriptive summary from the survey shows a sufficiently positive point of view toward the practice of LO 2.0, which means the employees perceived PT MMI as a proper learning organization environment and maximized the outcome (Hong et al., 2014). The result shows PT MMI can adapt the LO 2.0 concept in its respective sector as suggested by Mak & Hong (2020) on the adapted context of LO 2.0 practice on social, organizational, cultural, and industrial perspectives. PT MMI is a male-majority manufacturing floor, mostly young employees under 30 years old, with a large portion of vocational graduates, which requires a specified approach on adaptation (Örtenblad, 2019). In the organizational context, most of the employees were new entrants in the labor market responsible for the operational success in PT MMI (Caldwell, 2009). Most PT MMI employees are Islam who came from the surrounding cities such as Purwakarta, Karawang, Bekasi, Sumedang, and Subang, which under this framework, the Sundanese cultural background influenced the employee perspective in PT MMI's LO 2.0 practices.

Which of the Learning Organization 2.0 factors underlying its adaptation in PT MMI?

a. Innovative Environment (IE).

The hypothesis supports Pedler et al. (1991) innovative activities, creating learning opportunities for the organization using collaborative and team learning (Watkins & Marsick, 1993), embracing creativity, and a continuous improvement program (Huczynski & Buchanan, 2001). Furthermore, this result shows that PT MMI's innovative activities, such as the Jhisuken program, enable the exploration of all improvement potentials, both from the internal and external factors involved in PT MMI's value chain process. That also means that PT MMI's employees are highly aware of learning and improvement, as Mr. DD stated during the interview.

Therefore, PT MMI must maintain and improve the method based on its cultural value, making employee awareness well petrified in the organization.

b. Information Sharing (IS).

That result strengthens Watkins & Marsick (1993) on building a system that captures knowledge and shares them, also Huber (1991) on information distribution of the organization's memory. Daft & Marcic (2001) also describe the communication strategy as part of sharing strategy to enhance the learning process. These outcomes persist the activities in PT MMI on using development tool package to enable the sharing process. This activity comes in the form of weekly employee bonding to open discussion on what is going on in the week and work plan for the upcoming week (Mrs. DW). The daily Asakai program and support from all stakeholders by active participation described by Mr. SL in the interview, to be adequate to open and share the recent updates. The SWOT induction program, A3 report, NCR & 5R activities, and daily journal become effective and efficient media to enable information sharing, as added by Mr. DD on the follow-up session.

c. Employee Empowerment (EE).

The hypothesis reinforces LO 2.0 within an eastern culture with adapted justification, as in Song et al. (2009). In the study by Phillips (2003), empowerment had become a cultural characteristic of the organization by rewarding the workforce. Similarly, as Malhotra & Mellan (1996) described, employee recognition became a strong management act. It also enhances delegation of powers and organization success to become a Learning Organization (Daft & Marcic, 2001), which PT MMI implements through a QCC activity employing all workers to participate and enhance their knowledge. PT MMI underlines that employees' proactive learning was essential to successfully enhance the empowerment process as the employee actively engages in the learning platform, learning program, and continuous improvement events. The organization also provides proper rewards and recognition systems encouraging active participation (Mr. SL in the preliminary interview). Furthermore, the director describes that by actively engaging in such a program, the recruits are quickly blended, encouraged their innovation and resilience, and understand the organization's goals as stated in its vision and mission. Thus, PT MMI prepares its human capital for all measures and readiness to support its activities by empowering employees.

d. Self-Development/Mastery (SM).

Accepting SM supports Senge's (2004) personal mastery, which describes personal knowledge and skill development through a continuous learning process. On the same line, Argyris & Schön (1978) mention that an individual's act was the learning agent of the organization, improving the competitive advantages. Pedler et al. (1991) prescribe that self-development is open for everyone to activate their learning process. As the individual grows, they would enforce at the group level, and from the group, the level would then significantly develop the whole organization (Watkins & Marsick, 1993). On that matter, Mr. DD describes that employees' commitment to their job must be unquestionable. Once the commitment has arisen, the individual development would succeed in adapting, and the chain effect would be impactful. In this matter, PT MMI maximizes the usage

of Skill-Matrix development tools, which consists of four levels of mastery: fundamental, basic, intermediate, and advanced. The member's attitude development, mental foundation, and mindset to give the best performance also become the basic PT MMI induction program package during the recruitment process.

e. Facilitative Leadership (FL).

The hypothesis supports Watkins & Marsick (1993) on providing Strategic Leadership to create an effective learning process and an active leadership role fostering an excellent role model for the organization's members (Phillips, 2003; Senge, 2004). According to Kerka (1995), a facilitative leader enables dialogue and inquiry in the internal organization, which according to Mrs. DW, she saw as a way to resolve any conflicts and redundancy. In a broader view, PT MMI enforces a top-down approach in this early phase to catch up with its vision and goals (Mr. JD, VP). Furthermore, Mr. DD and Mr. SL agreed upon the vital practice of the leaders being serving-oriented and facilitating the member to enhance their skills and learning process. They also stated that a leader who can facilitate their members, motivate, guide, and become a mentor for the workers in their circle, becomes the foundation for the learning organization process in PT MMI.

Which of the Learning Organization 2.0 underlying factors hamper its adaptation in PT MMI?

a. Innovative Environment.

On the descriptive analysis of Innovative Environment items there were some disagreements with the IE3 statement because they felt that the organization was not doing enough to support the learning environment, regarding the rewarding practice towards the employee. Pedler et al. (1991) described that reward flexibility becomes one of the critical structures on building characteristics of an LO. Malhotra & Mellan (1996) and Phillips (2003) also emphasize that employee recognition and rewarding processes are essential parts of being an LO in this modern world. Thus, PT MMI could expand its rewarding process to the Grouped QCC and individual 5R program, Suggestion System, and any additional awarding events.

b. Information Sharing.

The IS4, IS5, and IS6 statements justified that some employees disagreed upon the practice. IS4 evaluates the individual performance system; IS5 about the learning materials availability; and IS6 measures training process output openness. The results depict the employee perceiving its performance evaluation and measurement process was too centralized and limited, resisting employees' self-assessment and holding the learning process. Furthermore, it also regards the learning material that needs to be enriched and elaborated, as the employees should take additional materials outside the institution (Mr. SL, during the interview). These conditions entail PT MMI's management to openly share and give supportive feedback appropriately to optimize their Information Sharing process. That was in line with Watkins & Marsick's (1993) on system establishment to capture and share learning, Kerka's (1995) on linking individuals with organizational performance, and Phillip's (2003) on a proper measurement

system to support the learning process. Thus, suggests PT MMI for not only limit evaluation on A3 reports and NCR assessment but the skill assessment should be openly shared and appropriately evaluated.

c. Employee Empowerment.

The statements on EE2 and EE3 justify a crucial for employee's delegation on sourcing control and their calculated risk-taking action. In this context, PT MMI, as a high-precision manufacturing industry, stressed out such actions to be precautiously taken due to the regulations that PT MMI subscribed to, such as IATF 16949 and ISO 9001 (Mrs. DW). Despite those conditions, Daft & Marcic (2001) and Farrukh & Waheed (2015) suggest that these factors were crucial for employee equality affecting the result of LO 2.0 in PT MMI's competitive advantage. Aside from that, Mr. JD claimed that PT MMI was a newly established institution, which the core management still took control of all actions. Mr. SL further enclosed that the job rotation program limited the employees to take sufficient time on mastering its section, leading to insufficient skill for self-action. In addition, the demographic of PT MMI's high-skilled personnel was insufficient to cope with a large number of less-experienced workers; higher the risk for open delegation on its business process. Unfortunately, the pandemic situation forces PT MMI to optimize its operation, restricting employee empowerment programs. Considering that, PT MMI should review its job rotation program to provide time for employees to learn and master the department; increasing skilled workers to enable better risks calculation on taking care of their given tasks. In addition, Mr. JD deemed that an effective QCC and *Jhisuken* program could build more skilled leaders enabling empowerment and optimization.

d. Self-Development/Mastery.

Regarding Self-Development/Mastery's statement of SM1 shows that some of the respondents disagree with the practice. According to Kerka (1995), achieving specified goals is part of a Learning Organization's learning process, thus suggesting PTMMI review its practice. Most managers such as Mr. SL, Mrs. DW, and Mr. DD stated that PT MMI employed a quality goal known as "*Sasaran Mutu*" for each department as a standardized goal for all individuals to achieve. This item accounts for the freedom for the group to adapt their goals with the company as needed. Shown from these phenomena, Parding & Abrahamsson (2010) suggest that in the industrial context, each sub-group of professionals had their unique values, which PT MMI had not wholly fulfilled. As it was a restriction in the empowerment program, Mr. JD underlines that this condition emerges as the company was still in the early stage of its operation. Furthermore, Mr. DD underlines that most of the employees were newcomers; thus, he was still assisting and building their commitment to better align with PT MMI's vision and mission.

e. Facilitative Leadership.

The Facilitative Leadership's marginal statement on FL1 accounts for leader's facilitative activities on guiding and training its members as the demographic in PT MMI shows the leadership positions were just 1% with four strategic managers. Although the management elaborates its top-down approach, it is still insufficient to sincerely serve all employees of subsidiaries the leader should

handle. In addition, PT MMI employs a horizontal- structure minimizing the middle positions, which require experienced personnel to support the foundation hand-in-hand (Mr. JD), which the organization lacks lowering the facilitative program effectiveness. On tackling that condition, PT MMI management is working on building new leaders through improvement projects; which Hueske & Guenther (2015) urge engagement and open boundaries among the employer, employee, and the executive board. Örtenblad (2019) underlined that the guiding function and other facilitative acts to align the vision to the whole member. On doing so, leaders such as Mrs. DW held an interactive session with her team and Mr. DD did a weekly session to regain touch. Unfortunately, these activities were halted due to the pandemic stream.

5. Conclusion and Implications

PT MMI becomes a Learning Organization 2.0 with a sustainable competitive advantage on a unique value of the frameworks. It also concludes that the LOQ was adaptable to investigate PT MMI's learning process. The employees' perspective was relatively positive upon the implementation of the preliminary study findings that the concept of LO 2.0 is the roadmap for PT MMI. The five adapted dimension becomes essential that all of them supports the practice sufficiently with employee awareness, stakeholder support, proactive learning, employee commitment, and a top-down approach. Nevertheless, the barriers occur if the stakeholders fail to improve, destabilizing its learning environment in the long term. These findings urge PT MMI to act on evaluating and developing its practice, which recently the pandemic and other factors have challenged this Indonesian detail-oriented metal-processing manufacturing plant. The practical approach for organizational development, in which PT MMI implements these dimensions, nurtured the organization's vision, mission, and values.

This study suggests future development for employees, practitioners, corporates, and academics across Indonesia's socio-cultural boundaries for the industrial institution to sustain its competitive advantage. In which the employee as the smallest cell on LO 2.0, commitment, awareness, attitude, and empowerment became pillars of the process, which also benefits the employee. Mr. SM described that in PT MMI, employees are encouraged to be involved in all activities, such as QCC, Jishuken, QCP, and 5R. The implementation should consider collective ideas in group actions to activate engagement and enable shared vision. Corporations should act and make a decisive plan. PT MMI divided its 30 years roadmap into five-yearly goals, enabling evaluation of the learning process, progress, and results on each phase urge to embrace internal and external stakeholders on adapting, modifying, and adjusting its values. In the future, a vast sample size would validate the contextual and adapted approach of LO 2.0 practice in Indonesia, reducing noise and resulting in a more rigid empirical support for the framework. It also reduces the research gap and strengthens the LO 2.0 theory with a variation on cultural background, industrial sectors, and leadership characteristics. Furthermore, many forms of LO 2.0 adaptation in Indonesian culture could enhance better treatment for the employees, corporates, governments, academics, and society.

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