

# A Study on the Challenges of Organisational Learning in Perguruan Tinggi Cendana, Medan - Indonesia

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**Abstract.** The purpose of this study was to examine the possible challenges which were faced by the higher education. The study adopted quantitative research method. The data was collected through questionnaires from two hundred students, twenty employees, and twenty lecturers. Data was analyzed using data processing software which included stepwise regression method. The results found that collective learning and building trust were significant 0.000 level ( $R^2$  change = 0.007).  $\beta_1$  coefficient for collective learning was 0.417 ( $t_{237} = 7.155, p < 0.001$ ) and  $\beta_1$  coefficient for building trust was -0.187 ( $t_{237} = -3.209, p > 0.000$ ). It can be concluded that only collective learning and building trust were the significant predictors of organisational learning. The other challenges of OL namely, distributive leadership and dialogue did not match the regression equation and were not significant.

**Keyword :** Study, Education, Questionnaires.

## 1. Introduction

Organisational Learning (OL) enables the organisation to seek for new ideas and new opportunities for learning in order to be the “solely sustainable competitive advantage” in the competitive world[1]. Generally, organisations are experiencing the global and the market changing also the political and legal shifting as well as information technology development. Henceforth, organisations and their employees must know how to change. In order to change appropriately they must be able to analyze themselves, their processes, structures and their environments, be able to identify preferred and appropriate responses, and be able to implement them[2].

Despite the world undergoing rapid changes, higher education has to establish a new vision and paradigm. HE role is to create a qualified expertise and to be a center of excellence for knowledge creation as well as to develop human resources in regards to the development of a country. Creech described that HE is the vaccination formed to against the terrible impacts of globalization[3]. In addition, Chauhan stated that HE involves in every area of national development and deserves necessary attention[4]. Nonetheless, Dill and Garvin argued that Colleges and Universities are organisations that do not effectively engage in OL[5][6]. Garvin contended that in order to be a learning organisation, an entity has to obtain new ideas which orient to improvements in regards to how business runs[6]. He noted that while most of the

universities are able to generate and acquire new knowledge, they are believed to lack the knowledge implementation in the organisation activities. The reform of Indonesia's higher education has harvested resistances from various elements in the society which claimed to commercialize the higher education. Henceforth, to meet the integrity and sincerity of the academic community, the change is needed regardless of those transformations[7].

This study focused on Perguruan Tinggi Cendana, a higher education located at Medan – Indonesia which was established on 2003. With its vision of stepping forward International standard of world class education's quality; and its mission of creating 1000 entrepreneurs who possess a positive attitude and mindset, a responsible professionalism and productivity towards their life; it clearly states the serious concern of Cendana in developing Indonesia's education. However, due to global changing and yearly growing number of students, the challenges in adopting the OL philosophy among Cendana managements, employees, lecturers and students may affect the process of fulfilling its vision and mission.

### **1.1 Organisational Learning**

Since the 1950s, the concept of organisational learning (OL) has been examined and the cornerstone of literature has been elaborated theoretically, conceptually and empirically throughout the past decades[8][9]. However, an argument to conduct future research for a multidisciplinary approach is still emerged[10][11]. According to Argyris, OL is a process of detecting (cognitive) and correcting (action) errors[12]. To counteract these errors, Argyris and Schon identified individuals as the “agents” for learning in organisations[13]. As suggested by Fiol and Lyles that OL is “the process of improving actions through better knowledge and understanding”, it shall rely on the successful application of strategies that are embedded in the shared mental models of organisational members rather than the problem discovery or new solution conception as contended by Argyris[12][14]. When errors are armed with strategies, the chosen strategies have to be tested for success. By noting the succeed strategies and applying them for the future success, learning for organisational has been implemented[12].

### **1.2 Distributive Leadership**

In the 1950s, distributive leadership concept was firstly discussed in social psychology literature and eventually obtained acceptance in the late 1990s, especially in the school improvement literature[15][16]. Distributive leadership engages the leadership functions of a school being shared by many senior teaches in ways that lighten the workload principals through shared responsibility and strengthen the school community in order to make the workload manageable[16]. Distributive leadership concerns on the ability to adapt with new organisational forms, namely ‘learning organisations’ and networks. In spite of many researchers’ dedication in writing about OL for more than two decades[13][17][18], there is a need to develop deeper interpretations about the involved leadership when it is distributed, about the different ways of how school should function and act, and about the action form of operational images in distributive leadership[19].

### **1.3 Collective Learning**

Many researchers agreed that a collective learning process synergies an interactive communicative action learning[20]. In addition, collective learning discovers knowledge sharing and understanding pertaining to something which was still new and not clearly understood among the interacting people. Generally, it is categorized as a common capacity for action and competence, as well as, part of an OL cycle[21]. Golub observed that collective

learning means a social process which synergies many intellectual minds in overcoming a problem, and a social stimulation which mutually engages people in a shared endeavor[22]. This mutual discovery, meaning-making, and feedback may guide to better perception and eventually create the results that people truly desire. Essentially, collective learning exists when the whole group turns to be more knowledgeable and reliable about a particular issue[23].

#### **1.4 Dialogue**

Dialogue is defined as both relationship and cultural knowing. Here, dialogue is contrasted with discussion whereby debate, problem-solving, decision-making and conclusion are mostly prioritized by the participants[24]. A dialogue is both an honest conversation in which partners are solely open to others' different point of view and an acknowledgement that they allow themselves to be surprised and influenced by one's utterance[25]–[27]. Viewed as a first step in OL, dialogue has made a possible change in the cultural rules about communication and interaction due to the evolution of new shared mental models that get across the subcultures of the organisation[24]. In organisation studies, the practice of dialogue considers important especially in understanding the difficulties and possibilities of learning and change and in promoting people's knowledge through intersubjective transformation [28].

#### **1.5 Building Trust**

Lawler found that the implication of trust is seen on the implementation of self-managed work groups[29]. An empirical study done by Edmondson illuminated that members of work teams with high levels of trust engage greater in learning behaviors than other teams[30]. This may impact on the individuals and groups' ability to fulfill organisational tasks without close supervision [31]. In short, trust and cooperation are positively related and explicitly made[32]. Nevertheless, the absent of trust creates the degree of uncertainty affecting the unpredictability of one's behavior[32]. Its limit and inefficiency may cause an adversarial attitude within the relationships, a deficient in performance, and the loss of respect. Nonetheless, trust is essential to enable the knowledge acquisition and dissemination in OL. In other words, trust is an essential requisite for institutional change[33].

#### **1.6 Hypotheses**

Hypothesis is a proposition for a phenomenon which is tested for verification against the empirical evidence [34]. The main objective of the study is to examine the significance and importance of each challenge to OL. The hypotheses of the study are the challenge of distributive leadership, collective learning, dialogue and building trust will be positively related to organisational learning.

## **2. Methodology**

The researcher adopted quantitative research method. Cluster sampling was applied in this study, whereby the population was divided into groups, such as blocks and a sample of the group was drawn by researcher to interview[35]. The sampling of the study consisted of twenty lecturers, twenty employees, and two hundred students. Primary data is collected from questionnaires with Likert 5 degree spectrum designed. The data collected through

questionnaires was analyzed using data processing software which included stepwise regression method.

### 3. Result and Discussion

Below table was the output produced by data processing software using stepwise regression method. The table provided a correlation matrix amongst the variables. Viewing the value of Pearson's correlation coefficient, the collective learning has a large positive correlation with organisational learning ( $r = 0.405$ ). The one-tailed significance of collective learning is significant ( $p < 0.001$ ), with 240 numbers ( $N = 240$ ) of cases contributing to each correlation.

The model summary (table 1) showed that the dependent variable (outcome) is organisational learning. The best predictor of organisational learning that entered first is collective learning. After which, building trust is entered and neither is removed. When no more other variables are entered or removed, the final models to predict organisational learning are collective learning and building trust.

The column of  $R$  described the values of the multiple correlation coefficients between collective learning and building trust (predictors) and organisational learning (outcome). The simple correlation between collective learning and organisational learning is 0.405. The column of  $R^2$  measured the amount of the variability in the outcome that is accounted by the predictors[36]. The value of the first model is 0.164, meaning collective learning accounts for 16.4% of the variation in organisational learning. By including one more predictor in the second model, the value increases to 0.199 or 19.9% of the variance in organisational learning. If collective learning accounts for 16.4%, hence, building trust accounts for an additional 3.5% ( $19.9\% - 16.4\% = 3.5\%$ ). Thus, the inclusion of one new predictor has explained quite a small amount of the variation in organisational learning.

**Table 1.** Stepwise Regression Model Summary

Model	Variables Entered	Variables Removed	Method
1	Collective Learning	.	Stepwise (Criteria: Probability-of-F-to-enter $\leq$ 0.050, Probability-of-F-to-remove $\geq$ 0.100).
2	Building Trust	.	Stepwise (Criteria: Probability-of-F-to-enter $\leq$ 0.050, Probability-of-F-to-remove $\geq$ 0.100).

To be able to know how well the model generalized, the adjusted  $R^2$  provided the idea whether its value is the same or very close to the value of  $R^2$ [36]. The final model possessed a small difference of 0.7% (the difference between the values is  $0.199 - 0.192 = 0.007$  or 0.7%). This shrinkage described that if the model is descended from the population instead of a sample, it may account for approximately 0.7% less variance in organisational learning. Using Stein's formula, the model is cross-validated to the  $R^2$  to get some idea of its likely value in different samples[37]. This equation can be applied by replacing  $n$  with the number of respondents (240) and  $k$  with the number of predictors (2). The value of adjusted  $R^2$  (0.183) is very similar to the observed value of  $R^2$  (0.199), indicating that the cross-validity of this model is very good.

The next output comprised of an Anova (table 2) which tested whether the model is significantly fit of prediction of the outcome variable. The table is split into two models: collective learning with two coefficients (one for the predictor and one for the constant); collective learning and building trust (one for each of the two predictors and one for the constant)

**Table 2.** Analysis of Variance

	<b>Model</b>	<b>Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
1	Regression	338.493	1	338.493	46.636	0.000 <sup>a</sup>
	Residual	1727.440	238	7.258		
	Total	2065.933	239			
2	Regression	410.409	2	205.204	29.376	0.000 <sup>b</sup>
	Residual	1655.525	237	6.985		
	Total	2065.933	239			

The F value, of the first model (collective learning) is 46.636, which is significant at  $p < 0.001$  (due to the value in the column labeled *Sig.* is less than 0.01). While the second model (collective learning and building trust), the value of F is lower than the first one (29.376), which is also significant with a probability less than 0.01. These results explained that there is less than a 1 % chance that an F value would happen if the null hypothesis were true. Hence, the regression of the first model (collective learning) was more significant in better predicting the organisational learning in comparison to the second model (collective learning and building trust).

The regression coefficients are shown in table 3. Here, the table provided the details of the model parameters (the beta values) of both models. However, the parameters of final model are taken into concerns due to the inclusion of two predictors. These *b*-values represent the individual contribution of each predictor to the multiple regression models as shown in the equation:

$$\begin{aligned} \text{Organisational learning}_i &= b_0 + b_1\text{collective learning}_i + b_2\text{building trust}_i \\ &= 25.07 + 0.33\text{collective learning}_i - 0.14\text{building trust}_i \end{aligned}$$

The *b*-values are defined as the relationship between organisational learning and each predictor. The *b*-values of collective learning is positive (0.329), representing positive relationships. The tolerance for all variables included is close to one, thus, this value indicates that as collective learning increases by one, organisational learning increase the estimated score by 0.329. However, the *b*-values of building trust is negative (-0.140), indicating negative relationships. As such, if building trust decreases by one, organisational learning decreases the estimated score by -0.140. This means that on the measure of organisational learning, students, employees and lecturers referred by the building trust do worse.

To know whether the predictor makes a significant contribution to the model, it firstly needs to conceptualize the *t*-tests. The predictor makes a significant contribution to the model if the association among the *t*-tests and a *b*-value is significant (if *Sig.* is less than 0.05). If the value of *Sig.* is getting smaller (and the value of *t* is getting larger), there is a greater contribution of the predictor. For this model, the collective learning ( $t_{(237)} = 7.155, p < 0.001$ ) and the building trust ( $t_{(237)} = -3.209, p > 0.000$ ) are all significant predictors of organisational learning. By observing the magnitude of the *t*-statistics, the collective learning had a bigger impact; however, the building trust had less impact.

Despite the importance statistics of the  $b$ -values and their significance, the standardized beta values (labeled as Beta,  $\beta_1$ ) that measured in standard deviation units have provided an insight about the importance of a predictor in the model. The standardized beta values for collective learning and building trust aren't identical (0.417 and -0.187) representing that collective learning had a higher degree of importance in the model in comparison to building trust. This result seeks support in the literature Nonaka and Takeuchi[38]. They emphasized that a collective learning process with a knowledge creation cycle can encounter individuals and groups within an organisation and between organisations to share tacit and explicit knowledge, to create and justify the concepts and prototypes, as well as to ensure cross-level knowledge to other organisational levels and boundaries. Further, this learning initiative stems from a high level of building trust among members of work teams which in turn engages greater learning behaviors than other teams [30]. Thus, both collective learning and building trust emerged as significant challenges of organisational learning.

A summary of the excluded variables in which data processing software considered to enter is provided below (table 3). By observing the parameters of the final model, distributive leadership had a low  $t$ -statistics of 1.255, was not significant,  $p > 0.05$ . Therefore, this predictor was not entered into the model. Likewise, the  $t$ -statistics of dialogue is -0.437, was not significant,  $p > 0.05$  and this predictor were neither entered into the model.

**Table 3.** Excluded Variables

	Model	Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
1	Distributive Leadership	0.114 <sup>a</sup>	1.437	0.152	0.093	0.560
	Dialogue	-0.141 <sup>a</sup>	-2.398	0.017	-0.154	0.997
	Building Trust	-0.187 <sup>a</sup>	-3.209	0.002	-0.204	0.996
2	Distributive Leadership	0.098 <sup>b</sup>	1.255	0.211	0.081	0.557
	Dialogue	-0.034 <sup>b</sup>	-0.437	0.663	-0.028	0.575

In summary, organisational learning was regressed towards the four challenges of OL (distributive leadership, collective learning, dialogue and building trust) using stepwise regression method in order to test the hypotheses. It is evident from analysis that collective learning and building trust were significant 0.000 level ( $R^2$  change = 0.007).  $\beta_1$  coefficient for collective learning was 0.417 ( $t_{(237)} = 7.155$ ,  $p < 0.001$ ) and  $\beta_1$  coefficient for building trust was -0.187 ( $t_{(237)} = -3.209$ ,  $p > 0.000$ ). Nevertheless, the other challenges of OL (namely, distributive leadership and dialogue) did not match the regression equation and were not significant.

#### 4. Conclusion

Among all challenges, there existed two important challenges of organisational learning in the organisation. The overall findings of the study are found slightly similar to the literature. Some literature Argyris, Dixon, Coopey, de Laat and Simons supported that collective learning and building trust are the significant challenges of organisational learning. The study encouraged the management to involve themselves to learn in a collective basis in order to

achieve a collective intended outcome in the context of educational system. Further, Edmondson stated that a learning which is done under a high level of trust may engage a greater learning behavior. However, the findings also suggested that the presence of both predictors may not guarantee a boost in the organisation's learning ability. Therefore, an evaluation in a regular basis may help to recognize the possible challenges that appeared in the learning system.

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