

## **Social Interacion and Total Quality Management as Antecedents of Knowledge Sharing and Organizational Performance**

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**Abstract:** *The first-year results of the study shows that the dimension of voluntary based solidarity and reciprocal interaction partially offer positive and significant impact on the culture of knowledge sharing and organizational performance. Furthermore, in an effort to increase the culture of knowledge sharing and organizational performance in higher education, the concept of Total Quality Management (TQM) practice is needed. This concept proves to be capable of supporting the culture of knowledge sharing and organizational performance of higher education significantly. The concept of TQM practice has four dimensions namely leadership, organizational culture, teamwork, and education-training. The conclusion is that the total quality management (TQM) plays a very important role in increasing the strength of the company's competitiveness. The support of knowledge sharing culture is an important component of a knowledge management system that can improve organizational performance*

**Keywords:** *Total Quality Management, Organizational Performance*

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### **I. Introduction**

Sharing knowledge culture is the basic problem in the implementation of knowledge management. According to (Burt, 1992), the competence to associate depends on a condition where the community is willing to share the reconciliation of norms and values together. If the ethical-normative common ground is found, the individual interest will follow the interests of the community. Research in the willingness to share knowledge has found that workers do not have the willingness to share their knowledge (Lu & Koch, 2005).

Result of the study from (Werdiningsih & Subekti, 2015). has successfully proved that the concept of voluntary-based solidarity and reciprocal interactions are able to foster a culture of knowledge sharing and organizational performance of higher education. Furthermore, the reason why the Total Quality Management (TQM) needs to be applied to higher education is to promote a culture of knowledge sharing, as in the education system work collectively and not individually. TQM will force good people to be better and incompetent people to be more competent as well. Moreover, by using TQM, appropriate educational quality target set on the quality of graduates can be obtained (Lawson, 2004).

According to (Sila, 2007), total quality management (TQM) plays a very important role in increasing the strength of the company's competitiveness. quality of graduates can be obtained Lawson (2004) states a number of areas in the implementation of TQM as stated in the clauses of ISO 9001: 2000 can significantly affect the formation of a culture of quality, such as: the involvement of top management; focus on the consumer; communications; human Resource Management; working environment and management; measurement, analysis and improvement. Furthermore, they also find that the positive organizational environment will form a culture based on quality. Therefore, the implementation of quality not only creates structures and processes that make the quality is more easily achieved by anyone, but also creates an environment where people become spontaneously motivated to apply quality by themselves.

The problem is how the effort to improve organizational performance through knowledge sharing culture that is supported by voluntary based solidarity and reciprocal interactions as well as the implementation of TQM practices which can improve knowledge sharing culture and organizational performance.

This study contributes new perspectives on the role of group solidarity and practical application of TQM in knowledge sharing and improves the organizational performance of higher education institutions. The knowledge sharing process requires the development of routine habit through some changes in attitudes and behaviors that have been believed and become the norm as well as the system of values of all members of the organization (Schein, 1992). Therefore, knowledge sharing does not only involve the individual interest but also all members of the group to share resources among members.

In an effort to improve organizational performance, implementation of quality is very important because the quality does not just create structures and processes that make the quality more easily achieved by anyone, but also to create an environment where people become spontaneously motivated to apply quality by themselves.

According to Crosby, absoluteness for quality are: (1) quality should be adjusted as conformance to requirements, not as a favor, nor privilege, (2) a system to produce quality is prevention instead of assessment, (3) the standard of work must be flawless, not "sufficiently approaching zero defects", (4) measurement of quality is a price discrepancy, not guidelines. According to a very prominent figure with the idea of this quality, management is the cause of at least 80% of quality problems in the organization. Hence, the only way to fix it is through management leadership.

In this study, there are 3 factors of organizational intervention to solve the problem of knowledge sharing, namely: interventions in increasing solidarity, attitudes toward voluntary, and intervention in the development of quality management. With the establishment of a knowledge sharing culture in the universities, private universities are expected to be able to catch up and compete in the world of education.

Knowledge is data and information which are combined with the ability, intuition, experience, ideas and motivation of competent sources. There are two types of knowledge, namely tacit and explicit knowledge. Tacit knowledge is something that is stored in the human brain, while explicit knowledge is something that is contained in a document or a storage area other than in the human brain (Uriarte, 2008). Meanwhile, sharing is the process by which a resource is provided by the source and is received by the recipient penerima (Sharratt & Usoro, 2003).

Cabrera and Cabrera (2005) investigate the dilemma in the sharing of knowledge. Therefore, in their study of the dilemma in knowledge sharing, they suggest three organizational interventions to solve the problem of knowledge sharing, namely: interventions in the reward system, interventions in improving the reputation, and interventions in the development of quality management.

Knowledge sharing process is analogous to sending a message transmission on the communication process, for example from the sender to the recipient. As (H.-F. Lin, 2007) point out that in the process of successful knowledge transfer, knowledge receiver will get increased knowledge of its stock levels without reducing the knowledge stock of the sender.

The statement suggests that the addition to the stock of knowledge transfer will be improved to the recipient. So when two parties do active activities, the additional stock of knowledge will be gained by both sides of sender and receiver because of the interaction. The result of the study (C.-p. Lin & Joe, 2012) suggests that information sharing plays a full mediating role in the relationship between trust and relationship network and improve competitiveness.

Constant changes encountered by management create the movement which leads to the collaboration, cooperation, and team work, so the managers are demanded to collaborate and build an effective team (Robinson & Curry, 2005). This is because teams can produce more and better problem solving than individuals can do. To speed up decision-making in the organization, many companies currently change the organizational structure into an organizational structure based on teamwork (team based organization). This approach requires the empowerment and team work (Ray & Bronstein, 1995).

Commitment of leadership is an important factor which confirms the leader and the led within an organization in undergoing the assigned leadership responsibilities. In regard to leadership, it can be said that the commitment to perform means to bring the leadership into success together. In particular, commitment to perform can be defined as "commitment and determination to bring together the leadership into the coveted success." Based on this understanding, we can conclude that the commitment of leadership proves to be very important to the success of leadership in any organization.

This commitment is characterized by the presence of strong dedication to the discipline of work (dedicated to self disciplines, family disciplines, and organization disciplines), dedication to total quality, and dedication high performance management. Commitment of the leadership is what guarantees the realization of the efforts success to lead the optimal and high productivity.

### **Hypothesis Development**

As described by (Andrews & Delahaye, 2000; Nidumolu, Subramani, & Aldrich, 2001) knowledge sharing between people is a process that greatly contributes to individual and organizational learning.

1. Commitment of leadership significantly affects the culture of knowledge sharing.
2. Focus on customers significantly affects the culture of knowledge sharing.
3. Team work significantly affects the culture of knowledge sharing.
4. Education and training have significant effect on the culture of knowledge sharing.
5. Voluntary based solidarity significantly affects the culture of sharing knowledge.
6. Reciprocal interactions significantly affect the culture of knowledge sharing.
7. Voluntary based solidarity has significant effect on the performance of the organization
8. Reciprocal Interactions have significant effect on the performance of the organization
9. Culture of knowledge sharing has significant effect on organizational performance.

## II. Research Methods

This study population was the entire lecturers of private universities in the city of Semarang. The sampling technique was random sampling, with a total sample of 241 lecturers. This study employed estimation model of Maximum Likelihood (ML), with sample size of 100-200 (Kline, 2005). Data collection techniques used questionnaires and observation. Scale research data was Likert scale. The provision of scoring for each answer category was 1 to 7. In the measurement, this study used factor analysis and AlphaCronbach. For the validity test, the instruments used were 3 points which fell in the organization performance variable. While there were no other variables that fell. The resulting coefficient matrix component was greater than 0.5, and Cronbach Alpha coefficient was greater than 0.7, meaning that the data was consistent and able to describe the real situation. In conclusion the instruments used were valid and reliable.

The obtained data was then analyzed using the analysis of Structural Equation Modeling (SEM) through the system AMOS-19:00. SEM is a set of statistical techniques that allows testing of a series of relationships simultaneously. Some of the required steps were: 1). development of theoretical models; 2). Development of path diagram; 3). flowcharts conversion into the equation; and 4). evaluation criteria of Goodness-of-fit, and 5). Interpretation of results (Ferdinand, 2006).

## III. Results

Tabel 1 : Identity Respondent

Gender	Total	%
Male	134	67.22%
Female	65	32.78%
Age	Total	%
20 - 29	-	0.00%
30 - 39	48	24.07%
40 - 49	92	46.47%
50 - 59	53	26.56%
> 60	6	2.90%
Education	Total	%
S1	-	0.00%
S2	180	90.46%
S3	19	9.54%
Academic Role	Total	%
Professor	3	1.66%
associate professor	81	40.66%
Lector	87	43.57%
Expert assistant	28	14.11%
Instructor	-	0.00%
Working Period	Total	%
5 - 10	6	2.90%
11 - 15	27	13.69%
16 - 20	32	16.18%
21 - 25	40	19.92%
26 - 30	72	36.10%
35 - 40	9	4.56%
> 45 years old	13	6.64%

Source: The Processed Data

Based on table 1, it can be concluded that most respondents have the following characteristics: Men over 40 years old has 15 years of work experience, master degree (S2), and academic positions as lecturers. The characteristics of the respondents strongly support the goal of this study which is to identify the factors that influence the culture of sharing knowledge and organizational performance. The analysis of researcher toward the lecturer sampled in this study are as follows:

1. Most respondents have been mature to be able to make mature decisions (aged 40 years old and above) and are not easily influenced by others in the development of knowledge and willingness to share knowledge and improve organizational performance.
2. Most respondents have work experience over 15 years. Therefore, they have understood the duties and responsibilities as a lecturer. They have the knowledge and experience to create a culture of knowledge sharing and thereby increase the competitive advantage of the organization.
3. Most respondents have master degree which really supports in the development of a culture of sharing knowledge in this study.

**Sem Analysis**

After repairing the model by removing data outliers, then the result of processing full model SEM after improvement can be seen in figure 2.

**Model Feasibility Test**

Test of model feasibility shows that this model fits the data as seen in the following table:

Figure 1: Full Model SEM Revision

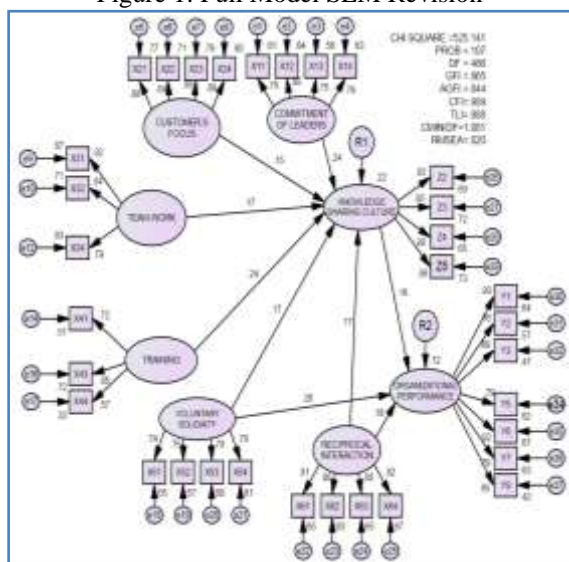


Table 2 : Test of Model Feasibility

criteria	Cut of Value	result	Category
Chi-Square	Kecil	525,141	good
Probability	≥ 0,05	0,107	good
TLI	≥ 0,95	0,988	good
CFI	≥ 0,95	0,989	good
GFI	≥ 0,90	0,865	good
AGFI	≥ 0,90	0,844	good
CMIN/DF	≤ 2,00	1.080	good
RMSEA	≤ 0,08	0,020	good

Source : The result of Data Analysis

The results of dataprocessing analysis shows that all the constructs are used to establish a research model, in the SEM model full analysis process after being repaired have met the criteria of goodness of fit which has been determined.

Probability value in this analysis indicates a value above the significance border which is 0.107 (p> 0.05). This value indicates that there is not any difference between the prediction covariance matrix with the estimated covariance matrix.

The analysis shows that the model measurement has generally met the criteria of fit because the value of the probability and RMSEA are in the recommended value and some other criteria of fit such as GFI, AGFI, TLI, and CFI indicate the better criteria of fit because it is above 0.90. Therefore, the model measurement can be used for further analysis. To get a good model, the problem deviations from the assumptions SEM will be tested first.

**IV. Test Of Hypothesis**

After conducting SEM assumption tests, it indicates that the analysis can be continued for the full model that has been designed in empirical models, then it is followed by test of hypothesis. The established empirical model results in 7 empirical hypothesis.

Data processing results using AMOS 19:00 has produced standardized regression weights. The values are used to perform the test of hypothesis as shown in Table 3.

Table 3: Regression weight

Causal Relation	Loding	S.E.	C.R.	P
BBP ← KP	.268	.087	3.068	.002
BBP ← KF	.134	.064	2.097	.036
BBP ← KS	.176	.079	2.239	.025
BBP ← PP	.341	.117	2.920	.004
BBP ← VBS	.172	.082	2.102	.036
BBP ← IR	.153	.071	2.151	.031
KO ← VBS	.171	.072	2.390	.017
KO ← IR	.132	.062	2.105	.035
KO ← BBP	.135	.064	2.111	.035

Source: The processed primary data

Based on the analysis of the data, it is shown that 9 hypothesis are qualified to be accepted because they have value of  $p < 0.05$  and value  $cr > 1.96$ . Therefore, there is not any reason for rejecting 9 alternative hypothesis.

Table 4 :The result of test of hypothesis

Hypothesis	Result
Commitment of leadership significantly affects the knowledge sharing culture	Sig
Focus of the customers significantly affects the knowledge sharing culture	Sig
Team work significantly affects the knowledge sharing culture	Sig
Education and training significantly affects the knowledge sharing culture	Sig
Voluntary based solidarity significantly affects the knowledge sharing culture	Sig
Reciprocal Interactions significantly affects the knowledge sharing culture	Sig
Voluntary based solidarity significantly affects organizational performance	Sig
reciprocal interaction significantly affects organizational performance	Sig
knowledge sharing culture significantly affects organizational performance.	Sig

Source : Data Analysis

## V. Discussion

### Hypothesis 1: The higher the commitment of the leadership, the higher culture of knowledge sharing.

Commitment is closely related to dedication. This term is used to describe the attitude to specialize something exaltedly, or something that has the highest goals. The relation of dedication in leadership means to specialize more based on the commitment to bring leadership in reaching its highest goal, for example the success.

In terms of leadership, first of all, the leader and the led must have a high commitment to the trusted one, who are believed to be the source of success. Integrated quality is a passion and a way of life for the organizations that implement them.

Significance of leadership to transform TQM should not be underestimated. Without leadership, at all levels of the institution, the upgrade process can not be achieved and realized. Commitment to quality should be the primary role for a leader because TQM is a process of top-down.

### Hypothesis 2: The higher focus to the customers, the higher the the knowledge of sharing culture.

Futuristic business strategy always puts the customer position as the higher dimensions and power. The best service is not born from the formulation of the managers and directors meeting of a company. The best service is how far an organization understands the customers' demand yesterday, today and in the future. Because in the era technology and information, the opportunity of changes in customer perception can be as fast as lightning because competitors are more observant in taking care of your customers; the decline of internal company service; more interesting price in the market; the offer of more flexible payment system.

Good service is the service that best suits the demand of customers, especially the regular customers or customers who are in primary positio or VIP.

### Hypothesis 3: The stronger the Team work, the higher the culture of knowledge sharing.

Team work can be interpreted as cooperation. Teamwork is a form of group work with complementary skills and committed to accomplish the mission that has been agreed to achieve common goals effectively and

efficiently. It must be realized that teamwork is an amalgamation of various individuals to be one entity in achieving the goal of the team. A team really need willingness to finish the job hand in-hand. It could be that one person does not get the job done or not an expert in the work X, but it can be done by other team members. This is what is meant by teamwork, the burden is shared for a common purpose and complementarity among others.

Understanding and supporting each other is the key to the success of teamwork. Never neglect this understanding and support. Although common understanding of the differences and disputes between individuals happen, the team must immediately get rid of it first. If not, the existence of the team will obviously be disrupted. Even in one team, someone from different backgrounds divisions can sometimes have disputes. Therefore, it is important to uphold the sense of togetherness as a team member on top of everything.

Meanwhile, establishing and building a solid team work is certainly not an easy job. A solid team work will create maximum results in a team.

Knowledge sharing as an organizational culture affects on enhancing the effectiveness of team work in the organization. With the high solidarity in maintaining the organization image and high cooperation as well as mutual understanding among members, knowledgesharing culture can be increased. Strong cooperation among the members will be able to assist each other in completing a job and has an influence on the ability of each personnel in performing their duties as well as their functions as lecturer who must transform the knowledge to students

**Hypothesis 4: The more the education and training are conducted, the higher culture of sharing knowledge.**

Education and training are important elements that must be considered in order to improve the insight, knowledge, and ability of a lecturer. By sending a lecturer for the seminar discussion within the scope of regional, national and international regularly according to their background knowledge and expertise, the insight and critical thinking will be improved. Additionally, providing the opportunity to continue their study will eventually improve their knowledge and expertise.

**Hypothesis 5: the higher voluntary based solidarity, the higher knowledge sharing culture.**

Mutual assistance, sharing, voluntary, and willingness to share knowledge is a behavior that illustrate the added value of employees, which is one form of prosocial behavior, a positive constructive, and meaningful social behavior. This assistance is free and voluntary which means the behavior does not require any particular role or job description under the contract of organization; but as a personal choice. The behavior is known as organizational citizenship behavior/OCB (Organ, 1988; Robinson & Curry, 2005). OCB is a modern concept in organizational behavior. OCB is important in achieving organizational success because the antecedence allows employees to work well. OCB in the company can help improving the performance of a task or organizational performance (Somech & Drach, 2004).

Solidarity is characterized by the identity, complementarity, exchange, affinity and recovery, and integration bond developed in individuals, between individuals and social units where the individual is located (R. S. Baker, Corbett, Koedinger, & Wagner, 2004; Waterman, 2001).

**Hypothesis 6: the higher the reciprocal interaction, the higher culture of sharing knowledge.**

Social interaction is a complex process, conducted by every individual in organizing and interpreting the perception of other people in a social environment. Social interaction can also be understood as a process conducted by a person to express his or her identity to others, and to receive recognition for the self-identity, forming the difference between a person's identity with others (Allo Liliwari, 2005). Meanwhile, according to Alvin and Helen reciprocal Goudner, it is a reciprocal relationship which requires action and reaction.

Bandura states that many aspects of personality function involve the interaction of that person with others. Therefore, an adequate theory of personality should be taken into account, especially in the social context in which the behavior is obtained and maintained. Social learning theory of Bandura is based on the concept of co-determination (reciprocal determinism) without reinforcement, and self-regulation.

Reciprocal factor explains human behavior in the form of continuous reciprocal interactions among cognitive, behavioral and environmental determinants. Someone influences his behavior by controlling the power of the environment, but he is also controlled by environmental forces. Reciprocity is an important concept in Bandura's social learning theory. Social learning theory uses determinist as the basic principle for analyzing the psychosocial phenomena at various levels of complexity, from the development of intrapersonal to interpersonal behavior and interactive functions of the organization and social systems.

The findings of Bock et al., (2005) explains that the relationship of reciprocal influences individual attitudes toward knowledge sharing behavior which means that the higher the mutual relationship, the better the

attitude toward knowledge sharing behavior.(Chennamaneni, 2006).shows that the perception of reciprocal benefit significantly affectsthe attitudes toward knowledge sharing behavior.

This research is in accordance with previous studies such as Cabrera and Cabrera (2005) who show that expectation in recieving reciprocity will form a positive attitude towards knowledge sharing and then is positively associated withthe intention and knowledge sharing behavior. Research results of Hendriks (1999)and Weiss (1999) conclude that the relationship of reciprocity or mutual giving and receiving knowledge (resiprocal) can facilitate the sharing of knowledge if people see that the added value depends on the extent to which the sharing of knowledge between them.

Therefore, it can be concluded that the culture of knowledge sharing is an essential component of the knowledge management system(Alavi & Tiwana, 2002). Davenport and Prusak (1998)define knowledge sharing as a process that involves the exchange of knowledge between individuals and groups. Previous studies such as Bock, Zmud, Young-Gul, and Jae-Nam (2005); Cabrera and Cabrera (2005)reveal that the principle of mutual giving and receiving of knowledge as the basis for sustainable knowledges sharing.

#### **Hypothesis 7: The higher voluntary based solidarity, the higher organization performance**

Voluntary is generally understood as a social and communal activity that can improve social capital, strengthen communities, and assist in delivering the services that are previously costly or not available(Putman, 2006).Voluntereing in the context of social behavior not only focuses on the aspects of helping others without material rewards, but also emphasizes that the help is free of interest (free will).

The concept of voluntary-based solidarity illustrates the active involvement of individuals through group in givingeffect to the environment in the culture of knowledge sharing. (R. S. Baker et al., 2004; Waterman, 2001) finds that solidarity is characterized by the existenceof identity, complementarity, exchange, affinity and recovery, and integrative solidarity which are developed in individuals, between individuals and social units where the individual exists (R. Baker, Holloway, Thomas, Thomas, & Owens, 2004)

The test results based on the concept of voluntary based solidarity (VBS) on the organizational performance (KO) shows significant results, as evidence from the value of the critical ratio (CR) of 2.390 and a probability of 0.017. The value fits the qualified acceptance of the hypothesis, so the effect of the voluntary based solidarity concept (VBS) on the organizational performance (KO) proves to be significant. Estimation coefficient ( $\beta$ ) of 0.205 is positive which illustrates that the higher the voluntary based solidarity concept, the higher the performance of the organization.

Social and communal activities can improve social capital, strengthen the community in providing services where previously is costly Putman (2006).

#### **Hypothesis 8: the higher reciprocal interaction, the higher organizational performance**

Social cognitive approach emphasizes that people, the environment and behavior are in constant interaction with each other and influence each other reciprocally. This approach is a combination of cognitive elements and behaviorism. The concept stated by Homans implies that the interaction is an action which is taken by a person in the interaction as a stimulus for the actions of other individuals who become their partner. Thibaut and Kelley state that social interaction as event influences each other when two or more people are present together, they create a result one another or communicate with each other. So in the interaction, the actions of each person aims to influence other individuals.

The results support the findings of (Musick, Wilson, & Bynum, 2000). in which the activities have a positive impact in the individual sense of belonging physically and psychologically, create social networks, enhance career opportunities, and reduce the feeling of being alone. Based on the description, it can be concluded that the culture of knowledge sharing requires reciprocal interaction to transfer knowledge from the source to the recipient. The study from(Kwok, Gao, & Sheng, 2005-2006) indicates the presence of a variety of ways in the process of knowledge sharing.

#### **Hypothesis 9: The higher the culture of knowledge sharing, the higher organizational performance.**

The results of the study support the findings of H.-F. Lin (2007).Chao-Sen, Cheng-Jong, and Tsai (2012)where all the results have concluded that knowledge sharing has positive and significant effect on organizational performance. The conclusion is that research is increasingly showing evidence of the benefits of science and learning process for personal and organizational quality improvement and success in the process of knowledge sharing to facilitate reciprocal relationship between individuals, such as knowledge sharing and mutual support among employees.

The findings from this study is that the knowledge sharing is important to create conditions so that innovative ideas can be captured, shared and upgraded to new knowledge.

## **VI. Conclusion**

This study shows a link between the four concepts which are constructed in this study, namely: 1). the concept of TQM practice consists of 4 dimension: leadership commitment, focus on customers, team work, education and training, 2). Voluntary based solidarity; 3). Reciprocal Interactions and 4). The concept of knowledge sharing culture.

Based on these four concepts, 9 hypotheses tests have been constructed, and the results of this study concluded to be significant as shown in the below:

## **VII. Implications**

The empirical test toward the conceptual model is conducted to academic institutions in private universities (PTS) in Semarang. The results of the study prove the existence of a significant effect of relationship between the four concepts, namely TQM practice; Voluntary based solidarity; Reciprocal interaction and knowledge sharing culture.

The implications of this study conclude that organizational knowledge is a valuable asset (Lopez et al, 2011), known as intangible assets (Goel et al 2010). Knowledge within the organization should continue to grow as the organization grows. This is related to the condition of human resources within the organization. Organizations are often faced with the challenge of how to make knowledge on every individual in the organization to be optimized, developed and distributed properly to all levels of the organization according to capacity, duties, and functions of each individual.

History has proven that educational organizations can advance and persist well if they have the ability to manage knowledge because knowledge is able to contribute to the development and improvement of the organization to survive and innovate (Chadha & Kapoor, 2009). A culture of knowledge sharing is the process of sharing information, ideas, advice, and expertise between individuals that are relevant to the organization (Bartol & Srivastava, 2002). Knowledge that can be shared is explicit knowledge and tacit knowledge (Neish & Mann, 2010). Explicit knowledge can be shared with verbal communication, whereas tacit knowledge can be shared through socialization, observation, and apprenticeship. Therefore, the recipient of knowledge should have the maximum opportunity to do it themselves.

Application of TQM in educational institutions is a good thing. Philosophically, the concept of TQM emphasizes and search for continuous improvement. Juran (1992) state that the quality of leadership leads to cover three managerial functions, namely:

1. Planning quality; This function includes the steps of: identification of customers, identification of customer's needs, development of products based on customer needs, development methods and work processes to produce products that meet or exceed customer expectations, and change the results of the planning into action.
2. Quality control; several steps within this function are: evaluating the actual performance, comparing the actual performance with the objectives, and conducting corrective action to address the performance difference which exists.
3. Quality Improvement; several steps in this function include: establishing infrastructure to improve quality on an ongoing basis, identifying the process or method that requires improvement, forming a team in charge of the project improvements, and providing the resources and training needed to improve the team, to diagnose the problem and to identify the cause, find solution, and make improvements to the problem.

Leadership in the quality of education has a very important role in relation to the empowerment of teachers and staff to work together in a solid team. Therefore, a quality education leader must have the following criteria:

1. Involving teachers and all staff in problem solving activities, using scientific methods, principles of quality, and process control.
2. Understanding that the commitment to improve the quality does not match with the management from top to bottom (top-down) and Implementing a systematic and continuous communication between everyone involved in the school.
3. Developing problem-solving skills as well as the negotiations in order to resolve the conflict.
4. Possessing an attitude of help without having to know all the answers to every problem and without feeling inferior.
5. Asking their opinion about things and about how to perform tasks and not just convey how they should behave.
6. Conveying information as much as possible to help the development of management information and increase their commitment.
7. Providing learning materials quality concepts such as team building, process management, customer service, communication and leadership.



### **VIII. Suggestion For Further Study**

Suggestions for further research are obtained from the analysis and data collection from respondents. For the fourth constructs studied TQM practice; Voluntary based solidarity; 4 concept of reciprocal interaction and knowledge sharing culture. From the empirical test results, it shows the value of being mediocre. Researchers see that the study has some limitations and can be improved through a variety of ways, including:

1. Improving the quality of content for communication with respondents, mainly related to the knowledge of personal expertise.
2. Creating a system that motivates members of the organization to share knowledge, especially knowledge of personal expertise.

Recommendations for further research are:

1. Extending the research object not only to the educational environment but also to the world of business and bureaucracy with appropriate modification of the object of research questionnaires.
2. Investigating more about the variable TQM practice in universities with the support of other concepts such as decision-making processes and employee development efforts undertaken by the institution.

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