

Patterns of Internal Communication in the Implementation of Total Quality Management (TQM) at Manufacturing Organisations

SHARINA SAMSUDIN
CHE AZLAN TAIB
HANISSAH A. RAZAK
RUSHAMI ZIEN YUSOFF
Universiti Utara Malaysia

ABSTRACT

Organisations need to perform, productivity needs to be improved and organisations' activities need to be more effective, especially after the world economic crisis due to the Covid-19 pandemic. Therefore, the need for quality improvements is crucial in both manufacturing and service sectors. The main purpose of this paper is to present an analysis of internal communication patterns in TQM implementation in Malaysia's manufacturing organisations. This is a multiple case study done using qualitative in-depth interview technique of data collections with 14 informants representing five large manufacturing organisations. Open-ended questions in semi-structured interviews enabled informants to describe their answers based on themes. The study has been carried out in manufacturing organisations originating from three different continents; two Malaysian local organisations, two eastern and one western organizations, and all of them located in Malaysia. In selecting the informants, the study adopts a judgment type of purposive sampling techniques. Results show that the most preferable and reliable communication medium between superiors and subordinates is still face-to-face meetings, although we are in the era of technology and IR4.0. Meanwhile, telephones are popular among the administration staff. The preferable form of communication between internal-operational is formal, without denying that informal form of communication is also important.

Keywords: *Internal communication, organizational communication, multiple case study, systematic process analysis, TQM.*

INTRODUCTION

The main objective of this paper is to present the analysis of internal communication patterns in the implementation of Malaysia manufacturers' Total Quality Management (TQM). Malaysian organisations nowadays have to face bigger challenges of global competition and economic crisis especially after the era of Covid-19 pandemic. This phenomenon is not an exception for implementing TQM in manufacturing organisations. These organisations that have continued to operate after the National Recovery Plan was announced in June 2021 are still experiencing reduced productivity (FMM, 2021). Therefore, organisations should look into the possibility to improve internal communication as it is a prerequisite element for building successful TQM in organisations (Hwang, Yoon & Choi, 2021; Georgiev & Ohtaki, 2019). Its effect on employee commitment (Dühring & Zerfass, 2021), involvement, teamwork (Samuel & Matthew 2021), motivation and rewards (Durairatnam, Chong, Jusoh, Azam & Tham, 2020) and as well as leaderships (Widyanti, 2020), make it an important element of organisational success strategy (Georgiev & Ohtaki, 2019). Internal organisational communication patterns can be between superiors and subordinates, between peers, either through face-to-face, mediated and nowadays, communication is very popular through

online, although internally (Larson, Zuzul, Pahnke, Shah, Bourke, Caurvina & Priebe, 2021; Verčič, 2021).

Sharing organisational reports, proposals, policies, plans and giving instructions typically flow vertically between superiors and subordinates. Whereas, horizontal communication flows between workers, departments or units in the same hierarchical position or comparable status within the organisation who usually share information and coordinate organisational activities. Nowadays, mediated communication that comes together with an internet network has the capability of information to flow freely among those who can connect to it (Ewing, Men & O'Neil, 2019). Therefore, this advanced technology of communication has a great influence on the pattern of communication in the organisation. On a more recent note, the relevancy of mediated communication had surpassed constraints of physical communications or internet networks. The latest 'Connect 2021' keynote speech by Mark Zuckerberg organised by Facebook had solidified the commitment of the technology giant to pursue an 'ultra-immersive' form of mediated communication to the extent that the mediation element would operate largely unnoticed (Zuckerberg, 2021). The 'Metaverse' as Facebook company or now known as Meta, would call it, is claimed by the company to cause a seismic shift in the way we interact and communicate and therefore, change the way our organisations operate and how TQM is duly implemented in the near future. As wild and unrealistic as this sounds, for the future of interpersonal and intra-organisational communication, preparing our organisations for such changes would be crucial for the organisation's future, to say the least.

Likewise, Total Quality Management (TQM) aims to continually improve product, service and process improvement by focusing on customer needs and expectations to enhance customer satisfaction and organisation performance (Saffar & Obeidat, 2020). A quality circle is a volunteer group of workers who meet and discuss issues to improve any aspects of the workplace and make presentations to management with their ideas. Communication serves as a foundation for organising and planning all the TQM processes. All the essential information must be communicated to the managers, who in-turn need to communicate the plans to the rest of the employees. Implementing Total Quality Management (TQM) also requires effective internal communication among all levels of the staff pertaining to their job task and responsibility to achieve their goals.

The challenges posed towards manufacturing industry players in Malaysia are omnipresent in terms of competitive pressures resulting from development in industrial capabilities in neighbouring foreign countries, with increased production efficiency, product quality and lower overall production cost (Khan, Mustapha & Qureshi, 2020). In spite of that, the general consensus among mainstream commentators is that Malaysia will remain relatively competitive in the foreseeable future. Nevertheless, the latest infrastructures would need to be further developed and provided with substantive and sufficient resources in order to ensure and enhance the adoption of such technological capabilities which should spread thoroughly throughout the whole of Malaysia, and in the case of this particular study, throughout the Malaysian manufacturing industry. It is of the inclination of the researcher to emphasize the interrelatedness of the successfulness of TQM implementations and IR4.0 technological capabilities, which without the latter, the effectiveness and sustainability of TQM implementations would largely be undermined. Besides physical and fiscal infrastructure, the development of any novel technology, even before the introduction of IR 4.0 had been difficult and in need of a nudge from the public policies mandated by the government to force such adoption and cooperation from the respective stakeholder (Roca

& O'Sullivan, 2020). This is needed in order to ensure the competitiveness of Malaysian industries. Hence, TQM can be regarded as a philosophy of management that encompasses manufacturing organisations and could provide a wide, fertile and important area for empirical study on the pattern of internal communications which in turn can provide significant enhancements to the success of the TQM initiatives implemented.

TQM is regarded to be a well-known and one of the most critical and widely implemented management systems that can be used as a tool to increase sustainable competitive advantage while also becoming an important tool for the organisation to achieve quality recognition at the global level (Arslan, 2019).

Besides the crucial enhancement methods on the hard factors of TQM such as cost of quality, benchmarking, quality control tools, supplier management, documentation, customer management, quality processes and self-assessment (Abdullah & Tari, 2018), there are also the soft factors which are also part of the TQM process, which is equally important to be improved in order to create synergy with the hard factors, hence, ensuring that everything in the whole process will progress as planned (Georgiev & Ohtaki, 2019).

In addition, Yan, Zhang, Zhu and Fan (2019) had clearly noted that the soft quality factors are classified as 'highly important' especially in terms of their criticality in the overall TQM implementation phase. These soft elements had also been noted by many other scholars as crucial or important (Khanai, 2020; Ahmed & Idris, 2020). Scholars suggested that there are eight soft quality elements such as integrity, ethics, trust, training, teamwork, leadership, recognition and communication which must be given special consideration and focus in order to increase the probability of a successful TQM implementation.

In reference to the situations above, one of the methods of improving the success rate of TQM implementation without increasing cost excessively is by improving their practice of internal communication. The lack of reliable and effective internal communication may lead to decreased or lack of involvement, loyalty and commitment among staff members (Arunachalam & Palanichamy, 2017). These factors such as commitment, loyalty and involvement are regarded as a part of the critical success factors of TQM implementation that must be taken into serious consideration. As Lee and Kim (2021) and Mishra et al. (2014) stated in their respective studies, that an effective internal communication practice would gradually increase the trust and commitment level of employees, which will result in greater engagement of the employees to their respective tasks. This is very crucial in determining the success of TQM implementation (Mehta, 2021; Faisal & Zillur, 2015).

In light of this, The European Foundation for Quality Management (EFQM) Excellence Model that explains further innovation of quality management's soft factors including communication is needed to explain and guide this study especially on internal communication patterns.

LITERATURE REVIEW

The initial aim of an organisation's internal communication is to ensure that both superiors and subordinates have access to enough information and they have the same understanding in order for them to do work and increase productivity (Yuliaty, 2021). Theoretically, it is true that all parties will work together in a coordinated environment and be able to agree on the tasks assigned in order to help enhance the organisation's productivity. In practice, employees need to be treated equally, both managers and workers need to have some kind of reward which is not only extrinsic, but the one that is most important to practice is the

intrinsic reward before they can develop similar goals, validate the information shared and work towards it. These were discussed earlier in Mishra, Boynton and Mishra (2014) and later on by Men (2021) and Winton, Bean, Sargent and Maellaro (2021) who had similar views on the importance of face-to-face communications and as well as communication via internet that gives the new advantage to the effectiveness of internal communication practice nowadays.

As technology has become the backbone of most organizations especially in manufacturing companies including in Malaysia, communications activities are also expected to experience some changes. Chen and Wei (2020) mentioned that mediated communication through social media has become very important especially in multinational and dispersed organizations especially in disseminating information. However, they did not mention the importance of social media in communicating within the same centre. Although many other scholars agreed with the importance of effective internal communication, in practice, the efficiency or inefficiency of communication practices, be it a system or procedures and structures is often overlooked (Isah, Alhaji & Folaranmi, 2019). The pattern of the internal communication practices in these organisations might have changed due to some changes in communication technology and mediums of communication.

Within the vast literature available on organisational strategy, communication is widely known as a functional mechanism of coordination (Suzuki, Ando & Nishikawa, 2019). This can be interpreted as people communicating among themselves in a functional setting. In such situations, people practice the communication strategies either informally or formally, in an unplanned or planned setting. In the situation of a planned communication setting, normally there will be some guidelines that will guide the employees on the method of interactions that are permissible and those that are not. Organisations will also make available selected resources through means of communication, either mediated or face-to-face (Lartey & Randall, 2021).

The unification of these various elements will create a network or chain of communication or is called by the scholars as communication pattern and its contents and direction are subject to the hierarchical structure of the particular organisation, issues or power, rank, status and prerequisite often shadow the form of communication and how it flows through the various channels (Sommerfeldt, Yang & Taylor, 2019). In order to compensate for the deficiencies of the formal communication networks, the employees of an organisation will usually form informal communication networks (Verčič, 2021). There are many academic studies that have pointed out that improvements in communication can mobilize the ambient functioning of a particular organisation (Mikkelsen & Hasse, 2020) and it has become a popular and prominent topic within the human resources and organisational studies fields. Therefore, an articulate and careful design of communication pattern must be constructed for a wider usage by the management of an organisation, such as TQM, which was found to be deficient.

When elaborating on the functions of internal communication, Zerfass and Volk (2020) had made it clear that internal communication is important for both the success of the organisation and for the specific day-to-day operations. Based on their research, this is due to the fact that internal communication can trigger and enhance employees' intelligence and creativity in order to produce the expected result from them. Gara with La Porte (2020) and Ruck (2019) had also mentioned that the role of internal communication is to shed light to the relationship between varying pieces of information and for its critical function to provide

employees with the relevant and needed information from which they can perform their respective tasks.

From the point of view of organisational communication, the research had adopted an organisational communication model produced by Te'eni (2001), which puts a strong emphasis on three different constructs of organisational communication processes which are namely; communication medium, message form and goal-based communication strategies. This particular concept of research will uncover the relevant trends and patterns of the whole population group that was studied. The research had an objective of balancing the social and cognitive-communication strategies and to synergize the old and new measures of size, formality and message form.

From the subsequent result of the study, we can see that people will prefer to opt for a varying mix of messages, media and strategies when they are practising strategic rather than operational communication. The selected recommendation made based on the theories of organisational communication must be re-assessed in order to ensure a better understanding of the complex and new communication behaviour in the organisations currently operating in this present era. These findings possess high similarity to Kramer, Lee and Guo (2019) who had noted in his study that concerns among employees were high about the combination of strategies used such as organisational norms, relationships, image and demonstrating technology use and the suitable and balanced professional-personal life.

Thelen (2020) critically studied another issue regarding internal communication which had utilized a triangulation approach that encompassed structured interviews. This methodology was also utilized by Quinn and Hargie (2004) to study the issues of internal communications at Royal Ulster Constabulary (RUC), in which they had adopted the international communication audit questionnaires and also adopted a critical incident approach to further develop the study. The subsequent result of the interview had produced seven different categories in terms of how the people who participated in the study felt about communication in their subdivision. Among others are willing to share information, perceived as open to new ideas, able to coordinate work and able to clarify expectations.

Briefings and meetings which are considered as formal channels were perceived as an administrative tool and the bulk of the findings showed problems in communicating (Coric, Vokić & Verčič, 2020). A small difference was discovered earlier by Worley and Doolen (2006) on the similarity of the internal communication issue. They had discovered that moderate support for communication activities inside of organisations towards implementing lean manufacturing was making a positive effect on communication, which mainly involved lines of communication and the respective management. They had studied two different variables; communication within the respective management and their management support. In addition to that, their findings also demonstrated that the majority are practising poor communication (64.6 per cent). This percentage involves the communication among departments and the communication that is crucial in order to facilitate the production flow throughout the factory.

They had also discovered substantive and strong proof that shows that the dissemination of information to every single employee regarding lean manufacturing did not happen except among the management teams. This can be interpreted as the workers only happen to receive work-related information or instructions on what to do while neglecting the crucial part of knowing the main purpose of doing it. Regardless of that, Naknoi (2012) in Thailand, had conducted a study on the organisational communication pattern at Thaksin

University. The study had produced findings that demonstrated the majority of the respondents was in agreement with the fact that the executives had supplied them with clear information and the respondents also agreed that the executives can and must commit themselves to the enhancement of public relations by way of media and disclose and declare any issues or problems which had happened and any information regarding changes made in relation to all staff members.

In terms of increasing the confidence and motivation of workers, supervisors in each and every department must increase the frequency and effectiveness of the discussion sessions. This finding had been supported by Ewing, Men and O'Neil (2019) who had conducted interviews with 27 different senior-level internal communication practitioners who were then actively serving in global companies. They had claimed that internal social media have a strong ability to influence employee engagement, providing a swift response especially in conveying and explaining policies and training related information. They are of the belief that social media which acts as internal communication mediums are fast becoming a trend of the future and are dynamic in nature.

The evolution of social media usage in formal organisational settings were also investigated by Li and Kent (2021) using the theory of social media.

In terms of communication patterns, Mikkelson and Hesse (2020) stated that communication practices by all levels of employees in organisations are basically known as the general patterns of communication that can easily be identified. This communication pattern that is practiced by organisations can facilitate and enhance the effectiveness of organisational functions (Colazo, 2020). Both researchers agreed that by studying communication patterns in the organisation, organisational practitioners could learn to improve organisational functions, understand the employees in the workplace and create a new approach to improve organisational performance.

TQM has been increasingly in the spotlight across many different industries. Various past studies had cited and mentioned that TQM is highly ranked in a management agenda to push and achieve higher profits, enhance product quality, increase the number of customers and clients without disregarding the enhancement of employees' satisfaction and steady cost reduction (Sahoo, 2020; Shafiq, Lasrado & Hafeez, 2019). Furthermore, Dawabsheh, Hussein and Jermsittiparsert (2019) had stated in their study that effective and suitable implementation of TQM can serve as an effective and powerful vehicle on which organisations are empowered to achieve better business performance. Hence, a large number of organisations in manufacturing and services providers have committed substantial attention and resources to ensure a successful implementation of TQM. However, the study also claimed that organisations that had failed in their attempt to achieve the potential benefits of TQM had subsequently abandoned the TQM program that was previously initiated. The key principle mentioned by the study for the failure was the deficient understanding of the meaning of TQM for each particular organisation and how the ineffectiveness of TQM implementation has the possibility to cultivate scepticism on TQM itself.

Looking at the issues that arose lately, leading frameworks and theories available, it is timely to investigate the organisations internal communication patterns that will improve the TQM's implementation, particularly with regards to manufacturing organisations. Hence this study had been carried out to understand the pattern of internal communication practised by manufacturing organisations in Malaysia.

METHODOLOGY

This particular study had utilized a qualitative in-depth interview technique of data collection. The utilization of this technique is relatively popular in that a large number of organisational communication researchers have used it to get more detailed information from the informants' point of view, experiences and perspectives (Applebaum, Holenstein, Mishra & Shayevitz, 2019; Mikkleson & Hesse, 2020) on internal communication (Thelen, 2020; Way & Tracey, 2012; Abdullah et al., 2019 and Jones, Firth, Hannibal & Ogunseyin, 2019). The true test of the strength of qualitative research is that the intended meanings that lie in a specifically identified group of respondents or informants can be duly expressed in its entirety and as truthfully as possible. This is due to the fact that the open-ended questions in the conducted interviews had enabled respondents to convey and describe their respective answers, and the dynamics process of interviewing enables respondents to convey their opinions and experiences on the area of research themselves while at the same instance the researcher will only retain minimal control by way of the interview questions to cater the research objectives. Therefore, the decision to opt for a qualitative research design for this particular study which a part of it is to observe the internal communication pattern is duly justified.

Two companies had been chosen as a pilot study sample to test the instrument. Questions were formed for a semi-structured interview type in order to extract information regarding the practice of communications, its forms and mediums in TQM implementation. The instrument was then revised and corrected based on the response of the informants. The new set of interview questions were then further discussed and validated by two experts in the communication field and as well as one by an expert in TQM before the study began for the instrument validity. The study was carried out in Malaysia, where the researcher is based. The actual study is located at five other manufacturing companies originating from three distinct geographical continents, two of whom are Malaysian local organisations, one western and two eastern organisations. In the selection process of the prospective informants to this research, this study had utilized a judgment type of purposive sampling techniques as stated by Utomo and Darma (2020). The sampling judgment type involves the choice of subjects who are deemed to be in the optimum position to provide the relevant information that is required and suitable for the research. The researchers had deemed these five manufacturing companies are of high suitability for inclusion in this particular study based on the various relevant accreditations received by the respective companies from the International Organization for Accreditation (ISO). Therefore, the researchers had been inclined and satisfied to classify these five chosen manufacturing companies as 'successful', especially in terms of, but not bound to TQM and TQM implementation. In the end, the study manages to get in a total of 14 credible informants from the five participating organisations.

All the representatives' informants of the participating organisations were the quality steering committee members from several managerial positions who were in charge of planning, disseminating and sharing the TQM related information. At the beginning of every single interview session, a concise and brief introduction was constructed and presented to the respondents in order to explain the purpose of the study and a simplified definitive explanation of internal communication patterns and practice was presented. This had been performed in order to make certain that there is a uniform understanding of the subject matter on the respondents' side. The questions which were asked pertaining to the pattern of communication was to answer the first research question of the whole study. The

informants were to elaborate and describe the process of sharing and disseminating of relevant information regarding the implementation of TQM to their respective subordinates; the internal communication pattern of their respective organisations for the specific purpose of implementing TQM was then further divided or classified into three distinct forms namely; informal-internal operational communication, formal-internal operational communication and personal communication. Whereas, the communication mediums were further classified into two categories namely; mediated communication and face-to-face communication.

After the completion of every single interview session, as well as the completion of the transcription of the interviews, the data were subsequently classified or labelled based on the procedure of qualitative content analysis by Powell and Renner (2003). It was tabled to get a clear picture of the pattern of communication practice based on TQM critical success factors. A copy of the transcription was forwarded to the respective informant for approval before the process of analyzing the data for the purpose of content validity. The analysis started with the identification of the significant statements to the objectives of study, meaning that all the unrelated statements were sorted out. This is parallel with Yin (2003) who recommended grouping and regrouping the themes until a satisfactory result is achieved. The clean data were then grouped under a similar concept and the statements were sorted under the identified and developed themes. These were done until all the organisations had almost similar emerging themes, which means the data were already saturated. For the purpose of reliability of the data, the study did a non-participative observation using a simple checklist.

RESULTS

The analysis of the multiple case study to see the pattern of internal communication in the implementation of TQM at manufacturing organisations in Malaysia has identified two forms of communication and mediums of communication based on where the organisations are from. Informants had supplied the researchers with descriptions of the process of sharing and disseminating information related to TQM to every single staff of the respective organisations. A simple observation using a checklist also helped to validate some information mentioned by the informants.

Formal internal operational communication is the most frequently described communication form by the managers of the organisations to their respective subordinates in both of the organisations of local origin. As for the communication mediums, interpersonal physical face-to-face are the most frequent medium of communication used by the team leaders to share and disseminate information regarding TQM, information related to the respective organizations' vision and mission and also to cultivate awareness of the ongoing TQM initiatives to every single member of the said organisations. In a different term, the majority of leaders of these organisations used a formal type of communication to disseminate and share TQM related information to their subordinates.

These are some examples of statements practised by the two local organisations' informants representing their organisations.

Management always takes the opportunity to explain about mission and vision of quality initiatives to all, especially over face-to-face meetings or assembly briefings.... (Local organisation: Informant 1)

Our top management “turun padang” every month, one of the reasons is to instill TQM awareness among employees and explain our organisations’ initiatives on quality improvement.

(“turun padang” means to come down to see face-to-face with subordinates on the ground). (Local organisation: Informant 2)

Managers are the mediator between the organisation and all employees to share information on quality...normally, it involves the HR department to plan TQM related activities or programs to create awareness such as competitions, games & talks. (Local organisation: Informant 3)

Informal internal-operational communication was mostly applied in informal discussions and personal related issues. These are normally done through physical face-to-face interpersonal communication or telephone calls.

In the team itself, normally team leader uses their interpersonal skills and personal relationships to motivate their team members, leaders will talk to their members personally either face-to-face or by phone. These are their team initiatives...not from the manager. (Local organisation: Informant 1)

The eastern based companies, on the other hand, include online communication as an additional medium of communication besides the formal internal operational communication, such as monthly assemblies and various types of meetings as the most applied forms and channels of communication to disseminate information pertaining to the organisation’s TQM initiatives and quality improvement.

Leaders/managers will explain fully to all employees the objectives of any process implemented or if it requires changes and on how to make their workflow better. And what they will gain from the change through meetings. (Eastern organisation: Informant 1)

...planning stage starts with leaders from the assistant managerial level and above having a face-to-face meeting to discuss TQM related matters. (Eastern organisation: Informant 2)

Leaders conveyed information internally through face-to-face over meetings and also online. (Eastern organisation: Informant 1)

In the second stage 7 QCC tools, continuous improvement process (Kaizen), periodic quality meetings are held a minimum of once a month, chaired by our Production Manager. (Eastern organisation: Informant 2)

Informal internal-operational communication normally done through face-to-face discussions among team’s members and led by opinion leaders. Both Eastern organisations agreed that informal communication is also needed in certain cases of work-related issues. This is frequently used to support formal communications.

Workers are always allowed to discuss informally with their supervisors should they need further clarification on certain things...it should not be a problem...it can be done informally. (Eastern organisation: Informant 1)

Similar findings were also found from the western organisations in terms of form of messages and channels of communication to disseminate information regarding TQM which was also formal internal operational communication. Moreover, in terms of mediums of communication, they mentioned face-to-face meetings and reviews as a platform for formal communications. Online communication was important especially in communicating between branches.

GM is the chairman of the TQM steering committee...we have formal meetings among the steering committee members to discuss quality issues almost every day. (Western organisation: Informant 1)

Department heads meeting to review department employee welfare, safety and health and security issues related to quality management.
...we have monthly meetings with our headquarters in US online...meaning that we have to stay late at night for the meeting. Other than that, we also depend on online meetings from time to time with our colleagues here....
(Western organisation: Informant 2)

Informal internal operational communication for western organisations was normally face-to-face interpersonal communication or through telephone calls. These informal communications were seen to be important to support the informal communication.

After the short briefing, team leaders will straight away have a small group discussion with the team members for about five minutes, normally at mamak nearby (outside restaurant). (Western organisation: Informant 3)

The GM "TeaTalk" shows the commitment of the organisation and management team to listen informally to employees' criticisms, suggestions and inputs especially on personal and quality matters. As we know, personal things might affect quality as well.... (Western organisation: Informant 2)

Table 1 is the summary descriptions of pattern of communication in terms of forms and mediums in all the manufacturing organisations based on continents;

Table 1: Forms and mediums of communications in TQM Manufacturing organisations in Malaysia

Organisation	Form	Activities	Medium
Local	Formal internal-operational communication	Formal meetings Weekly briefings On-job trainings Morning prayers	Face-to-face Phones E-mails Intercom
	Informal internal-operational communication	Face-to-face interpersonal	Face-to-face Telephones
Eastern	Formal internal-operational communication	Formal meetings Monthly assembly Morning prayers	Face-to-face Telephones E-mails
	Informal internal-operational communication	Discussions	Face-to-face
Western	Formal internal-operational communication	Formal meetings Report reviews Morning prayers Conferences	Face-to-face Telephones E-mails, Intercom Video conference
	Informal internal-operational communication	Discussions Managers "Tea-talk"	Face-to-face Telephones

DISCUSSION

The study had uncovered the fact that formal-internal communication is the communication form most used for all the six critical success factors of TQM mentioned earlier in this paper. Nevertheless, the informal-internal operational communication had also been found to be a crucial supporting communication form to enable smooth communication with their respective subordinates in order to increase the successfulness of the TQM implementation further. Personal communication however, has only appeared two times in the whole of the analysis, and is used primarily for the objective of enhancing training and education and strengthening teamwork in both the local manufacturing organisations.

As for the communication mediums, the majority of their day-to-day activities which were conducted internally regarding TQM were utilizing face-to-face communications such as discussions, morning prayers, formal meetings and assemblies. Besides that, mediated communication such as the usage of emails and telephones are of high frequency in terms of usage among the management level staff.

Local

For the two local organisations, formal-internal operational communication is the most frequently described communication form used by the leaders of the organisations to disseminate TQM messages to their respective subordinates. Face-to-face channels are the most frequently used mediums of communication by the leaders in both of the local organisations in order to share information related to TQM and its implementation, and to share information about their vision and mission, and is also used to cultivate awareness of the ongoing TQM initiatives to every single member of the organisation. To put it in a different term, leaders would prefer to use formal types of communication such as formal face-to-face meetings to disseminate information to their respective subordinates.

Eastern

Similar to the two local organisations, the eastern organisations also used face-to-face formal-internal operational communication. This is also the most frequently described communication form used by the leaders of the organisations to their subordinates. Face-to-face channels are the most frequently used medium of communication by the leaders to share the information related to TQM and its implementations, vision and mission, and the method preferred to be used in announcing the quality achievement of the organisations to all its respective members.

Western

A similarity continuum can be observed from the findings of the local and eastern manufacturing organisations when the western organisations also practised formal-internal operational communication, while also describing their major medium of communication as informal face-to-face communication. The managers of these western organisations had spent a substantial amount of time for discussions in the form of 'tea-talk' to discuss their day-to-day operations and in order to obtain prompt feedback in the course of implementing the various TQM initiatives, especially regarding the feedback from the lower management teams. Nevertheless, face-to-face formal-internal operational communication is still the major and main communication form used to disseminate information to all levels of workers although they had agreed about the fact that mediated communication via the internet is becoming ever more important and indispensable.

Across the said continents, we can clearly observe that generally, the form of communication practice used in various organisations is formal internal-operational communication, which is conducted face-to-face, which is the preferred medium of communication, in either assemblies, meetings or even briefings. This communication form received additional support from the informal-internal operational communication and personal communication to resolve particular problems or issues that arose subject to certain specific communication functions. Face-to-face communication had largely remained dominantly utilized for internal communications among employees and between the employees and their respective management teams.

Therefore, all the five manufacturing organisations, had not caused so many differences or variability in the preferred form of communication practice throughout the organisations. On an additional note, the choice of formal internal-operational communication as the most preferred form of communication practice among the manufacturing organisations in Malaysia could possibly be attributed to the nature of work, demographic factors and structure of the organisations. These could possibly need further investigations in the future.

Online mediated communication via the internet which is supposed to be the pillar of organisational communication especially in this particular era of IR 4.0 is far from being what had been widely portrayed and popularized in the mainstream mass media. Even though all of the organisations studied in this particular paper, from various continents, are of the category of large manufacturing organisations, the fact is that online mediated communication via the internet had not yet superseded informal and most importantly the formal face-to-face communication. Nevertheless, mediated communication had been used by the management team to communicate amongst themselves, to convey information to the head office and disseminate policies and relevant documents for the purpose of references via their respective websites and private online portals.

Online mediated communication and its respective adopters in this particular study must then be investigated and critically analyzed in order to get a clearer picture of the corresponding results as compared to the overall sentiment and perception that is portrayed by the mainstream media regarding online mediated communication adoption by manufacturing organisations especially towards IR4.0.

By using non-participatory observations utilizing a checklist on the communication artefacts and activities, the majority of the banners and posters which the members of the organisations hung on their dedicated wall spaces and fences were up-to-date, informative and clear in every organisation. The researchers can also observe the availability of conducive common rooms for the usage of the employees especially for mundane activities such as recess time or tea-break informal chatting. The only issues taken by the researchers was with the daily, monthly and weekly achievement notifications that the employees posted on notice boards. These achievement notifications were overtly small and clustered too closely together, denying any meaningful usage of it. On a more positive note, the researchers also observed that at one of the eastern organisations, was present within their working spaces, a brilliantly cheerful “wall photos’ album”, which was constructed and painted by their respective staffs which displayed the ‘family day’ conducted by the organisation. This space is created with the purpose to cultivate the feeling of team spirit, togetherness and bonding amongst the employees.

CONCLUSION

Previous literature had uncovered that online mediated communication is rapidly succeeding and replacing face-to-face communication especially in the organisational settings, as mentioned earlier by Te’eni, Kramer and Ewing. Nevertheless, based on the results from the interviews conducted and the respective findings, this study clearly reveals that the utilization of online mediated communication is limited and relatively insignificant in all of the participating manufacturing companies across the various continents in view of the process of implementing TQM. These presently used mediums and forms of communication pattern might lengthen the amount of time needed to produce significant progress in the implementation of TQM in the manufacturing sector in Malaysia in particular, and especially TQM implementation in mass production, digital technologies and smart interactive platforms.

In a different term, there is a great need for the manufacturing organisations to embrace, personalize and use online mediate communication in their various activities, such as monitoring their processes, training their employees, disseminating information and getting the relevant and much-needed feedback from the various parties within the organisation. Undoubtedly, face-to-face formal-internal communication is believed to be the most suitable form of communication and online mediated communication is becoming an increasingly integral part of the overall communication. In addition to the effectiveness of TQM implementation, the advent of technological advancement, especially in terms of the so-called ‘Metaverse’ as introduced by Meta, which is the latest new Facebook feature will become a crucial aspect and must be considered.

This study also found that face-to-face communication organisations were practised with a high degree of effectiveness across the various TQM and the various practitioners of this form of communication were successful in achieving their desired goals. The formal internal-operational communication practices are the most frequently used form or type of

communication, which is used in formal meetings, assemblies and briefings. The mediated communication mediums are largely more widely used among the administrative staff. The general observation regarding the communication artefacts is that the majority of the participating organisations had portrayed a satisfactory grasp of the method of disseminating TQM implementation related messages which are deemed to have improved the employees' spirit of togetherness and teamwork.

BIODATA

Sharina Samsudin is a senior lecturer at the Department of Communication at the School of Multimedia Technology and Communication, Universiti Utara Malaysia. Her expertise is mainly in Organizational Communication, Persuasion and TQM. Email: sharina@uum.edu.my

Che Azlan Taib is an Associate Professor of Quality Management and Strategic Quality at the School of Technology Management and Logistics, Universiti Utara Malaysia. He has wide experience in training and consulting regarding Quality Management, Production Management and Strategic Quality. Email: c.azlan@uum.edu.my

Hanissah A. Razak is a senior lecturer at the School of Business Management at the College of Business, Universiti Utara Malaysia. Her expertise is in Management and Organizational Behavior. hanissah@uum.edu.my

Rushami Zein Yusoff is a Professor of Quality Management and possesses vast experience in the academic arena domestically as well as internationally. He is currently the Chief Executive Officer of UECSB, which is a subsidiary of Universiti Utara Malaysia. Email: rzy278@uum.edu.my

REFERENCES

- Abdullah, A., Ismail, M., Yaacob, M. R., Kamarudin, M. K., Alwi, M. A. M., Muhammad, M. Z., & Hilaluddin, N. (2019). A qualitative approach towards the understanding of managerial employees in Islamic organizations. *Jurnal Ilmiah Peuradeun*, 7(3), 589-600.
- Abdullah, M. M. B., & Tari, J. J. (2018). Hard quality management and performance: The moderating role of soft quality management, *International Journal for Quality Research*, 11(3), 587-602.
- Ahmed, A. O., & Idris, A. A. (2020). Examining the relationship between soft total quality management (TQM) aspects and employees' job satisfaction in "ISO 9001" Sudanese oil companies. *The TQM Journal*, 33(1), 95-124.
- Applebaum, B., Holenstein, T., Mishra, M., & Shayevitz, O. (2019). The communication complexity of private simultaneous messages, revisited. *Journal of Cryptology*, 34(2), 1-45.
- Arslan, M. (2019). Evaluating the maturity level of TQM benefits in Pakistan. *International Journal of Productivity and Quality Management*, 28(2), 143-159.
- Arunachalam, T., & Palanichamy, Y. (2017). Does the soft aspects of TQM influence job satisfaction and commitment? An empirical analysis. *The TQM Journal*, 29(2), 385-402.
- Chen, X., & Wei, S. (2020). The impact of social media use for communication and social exchange relationship on employee performance. *Journal of Knowledge Management*, 24(6), 1289-1314. <https://doi.org/10.1108/JKM-04-2019-0167>
- Colazo, J. (2020). Changes in communication patterns when implementing lean organizations. *International Journal of Quality & Reliability Management*, 38(1), 296-316.
- Ćorić, D. S., Vokić, N. P., & Verčić, A. T. (2020). Does good internal communication enhance life satisfaction? *Journal of Communication Management*, 24(4), 363-376.
- Dawabsheh, M., Hussein, A., & Jermsittiparsert, K. (2019). The triangular relationship between TQM, organizational excellence and organizational performance: A case of Arab American University Palestine. *Management Science Letters*, 9(6), 921-932.
- Dühning, L., & Zerfass, A. (2021). The triple role of communications in agile organizations. *International Journal of Strategic Communication*, 15(2), 93-112.
- Durairatnam, S., Chong, S. C., Jusoh, M., Azam, S. F., & Tham, J. (2020). People-related TQM practices, intrinsic motivation and quality performance: Empirical study in Sri Lankan apparel industry. *European Journal of Social Sciences Studies*, 5(1), 147-173.
- Ewing, M., Men, L. R., & O'Neil, J. (2019). Using social media to engage employees: Insights from internal communication managers. *International Journal of Strategic Communication*, 13(2), 110-132.
- Faisal Talib, & Zillur Rahman (2015). Identification and prioritization of barriers to total quality management implementation in service industry. *The TQM Journal*, 27(5), 591-615.
- FMM Press Statement. (1 March 2021). FMM-MIER business conditions survey 2H2020 reveals manufacturing activity picked up conservatively in 2H2020 and outlook for 1H2021 remains challenging. FMM-MIER Report.
- Gara, G. L., & La Porte, J. M. (2020). Processes of building trust in organizations: internal communication, management, and recruiting. *Church, Communication and Culture*, 5(3), 298-319.

- Georgiev, S., & Ohtaki, S. (2019). Critical success factors for TQM implementation among manufacturing SMEs: Evidence from Japan. *Benchmarking: An International Journal*, 27(2), 473-498.
- Hwang, G. H., Yoon, H. J., & Choi, M. (2020). Soft TQM practices and employee outcomes: A mediational analysis. *Quality Management Journal*, 27(3), 147-158.
- Isah, L. M., Alhaji, K. M., & Folaranmi, K. A. (2019). Impacts of effective communication towards performance of construction organization. *Path of Science*, 5(8), 3001-3008.
- Jones, J., Firth, J., Hannibal, C., & Ogunseyin, M. (2019). Factors contributing to organizational change success or failure: A qualitative meta-analysis of 200 reflective case studies. In R. G. Hamlin, A. D. Ellinger, & J. Jones (Eds.), *Evidence-based initiatives for organizational change and development* (pp. 155-178). IGI Global.
- Khan, N., Mustapha, I., & Qureshi, M. I. (2020). Review paper on sustainable manufacturing in ASEAN countries. *Systematic Literature Review and Meta-Analysis Journal*, 1(1), 7-29.
- Khanai, S. N. (2020). The effect of TQM on organizational performance in manufacturing organizations. *RVIM Journal of Management Research*, 12(1), 32-38.
- Kramer, M. W., Lee, S. K., & Guo, Y. (2019). Using communication technology to manage uncertainty during organizational assimilation: Information-seeking and information-giving. *Western Journal of Communication*, 83(3), 304-325.
- Larson, J., Zuzul, T., Pahnke, E. C., Shah, N. P., Bourke, P., Caurvina, N., & Priebe, C. E. (2021). *Dynamic silos: Modularity in intra-organizational communication networks during the Covid-19 pandemic*. Cornell University. <https://arxiv.org/abs/2104.00641>
- Lartey, F. M., & Randall, P. M. (2021). Indicators of computer-mediated communication affecting remote employee engagement. *Journal of Human Resource and Sustainability Studies*, 9(1), 82-92.
- Lee, Y., & Kim, J. (2021). Cultivating employee creativity through strategic internal communication: The role of leadership, symmetry, and feedback seeking behaviors. *Public Relations Review*, 47(1), 101998.
- Li, C., & Kent, M. L. (2021). Explorations on mediated communication and beyond: Toward a theory of social media. *Public Relations Review*, 47(5). <https://doi.org/g9hc>
- Mehta, S. (2021). A study on TQM development, performance and sustenance in service industries through effective communication, critical success factors and market orientation. *VIVA-Tech International Journal for Research and Innovation*, 1(4), 1-6.
- Men, L. R. (2021). Evolving research and practices in internal communication. In L. R. Men & A. T. Verčič (Eds.), *Current trends and issues in internal communication* (pp. 1-18). Palgrave Macmillan.
- Mikkelson, A. C., & Hesse, C. (2020). Conceptualizing and validating organizational communication patterns and their associations with employee outcomes. *International Journal of Business Communication*, 1(26). <https://doi.org/g9hd>
- Mishra, K., Boynton, L., & Mishra, A. (2014). Driving employee engagement: The expanded role of internal communications. *Journal of Business Communication*, 183-202.
- Naknoi, C. (2012). Staff's opinion on the organizational communication pattern for becoming an autonomous university: The case of Thaksin University. *Journal of Communication*, 62(1), 13-18.
- Powell, E. T., & Renner, M. (2003). Analyzing qualitative data. *Program Development and Evaluation*.

- Quinn, D., & Hargie, O. (2004). Internal communication audits: A case study. *Corporate communication. An International Journal*, 9(2), 146-158.
- Roca, J. B., & O'Sullivan, E. (2020). Seeking coherence between barriers to manufacturing technology adoption and innovation policy. *International Journal of Production Economics*, 230, 1-15.
<https://www.sciencedirect.com/science/article/pii/S0925527320301900>
- Ruck, K. (Ed.) (2019). Internal communication and the associations with organizational purpose, culture and strategy. In, *Exploring internal communication* (pp. 3-13). Routledge.
- Saffar, N., & Obeidat, A. (2020). The effect of total quality management practices on employee performance: The moderating role of knowledge sharing. *Management Science Letters*, 10(1), 77-90.
- Sahoo, S. (2020). Exploring the effectiveness of maintenance and quality management strategies in Indian manufacturing enterprises. *Benchmarking: An International Journal*, 27(4), 1399-1431. <https://doi.org/10.1108/BIJ-07-2019-0304>
- Samuel, E. H., & Matthew, O. T. (2021). Examining team communication and mutual support as drivers of work performance among team members. *Asian Research Journal of Arts & Social Sciences*, 13(4), 45-54.
- Shafiq, M., Lasrado, F., & Hafeez, K. (2019). The effect of TQM on organizational performance: Empirical evidence from the textile sector of a developing country using SEM. *Total Quality Management & Business Excellence*, 30(1-2), 31-52.
- Sommerfeldt, E. J., Yang, A., & Taylor, M. (2019). Public relations channel “repertoires”: Exploring patterns of channel use in practice. *Public Relations Review*, 45(4), <https://doi.org/10.1016/j.pubrev.2019.101796>
- Suzuki, M., Ando, N., & Nishikawa, H. (2019). Intra-organizational communication and its consequences. *Management Decision*, 57(1), 71-85.
- Te'eni, D. (2001). A cognitive-affective model of organizational communication for designing IT. *MIS Quarterly*, 25(2), 251-312.
- Thelen, P. D. (2020). Internal communicators' understanding of the definition and importance of employee advocacy. *Public Relations Review*, 46(4), 1-11.
- Utomo, I. G. W., & Darma, G. S. (2020). Measuring optimization of digital military programs: an innovation of information and communication systems in industrial digitalization 4.0. *International Research Journal of Engineering, IT and Scientific Research*, 6(2), 39-46.
- Verčič, A. T. (2021). The impact of employee engagement, organizational support and employer branding on internal communication satisfaction. *Public Relations Review*, 47(1). <https://doi.org/10.1016/j.pubrev.2021.102009>
- Way, D., & Tracy, S. J. (2012). Conceptualizing compassion as recognizing, relating and (re) acting: A qualitative study of compassionate communication at hospice. *Communication Monographs*, 79(3), 292-315.
- Widyanti, R. (2020). Do leadership style and organizational communication increase to organizational commitment? Study among hospital staff. *HOLISTICA—Journal of Business and Public Administration*, 11(2), 17-24.
- Winton, B. G., Bean, B. R., Sargent, M., & Maellaro, R. (2021). Embedding effective communication and formal rewards into corporate culture: A path to organizational agility. *Organization Development Journal*, 39(2), 21-35.

- Worley, J. M., & Doolen, T. L. (2006). The role of communication and management support in lean manufacturing implementation. *Management Decision*, 44(2), 228-245.
- Yan, J., Zhang, K., Zhu, W., & Fan, Y. (2019). An empirical framework for soft CSFs of TQM in Chinese manufacturing companies. *The TQM Journal*, 31(3), 377-399.
- Yin, R. K. (2003). *Case study research: Design and Methods* (3rd ed). Thousand Oaks, CA: Sage Publications.
- Yuliaty, F. (2021). The importance of organizational communication in improving employee performance: A case study of the regional revenue management agency of the city of Bandung. *International Journal of Science and Society*, 3(1), 361-370.
- Zerfass, A., & Volk, S. C. (2020). Aligning and linking communication with organizational goals. *The Handbook of Public Sector Communication*, 417-434.
- Zuckerberg, M., (2021). Connect 2021 keynote: Our vision for the metaverse. *Facebook*.