Transformative interaction capability: the mediating role between quality of work life and teamwork performance

Ika Nurul Qamari
Department of Management, Universitas Muhammadiyah Yogyakarta, Yogyakarta, Indonesia

Augusty Tae Ferdinand
Department of Management, Diponegoro University, Semarang, Indonesia

Christantius Dwiatmadja
Department of Management, Satya Wacana Christian University, Salatiga, Indonesia, and

Ahyar Yuniawan
Department of Management, Diponegoro University, Semarang, Indonesia

Abstract

Purpose – This paper aims to present a conceptual model of transformative interaction capability (TIC) to fill the research gap between the quality of work–life (QWL) and teamwork performance (TP). Statistical testing in the study used four variables, namely, QWL, TIC, team resilience (TR) and TP.

Design/methodology/approach – A conceptual model was developed and empirically tested through a survey. The 240 respondents in this study were made of supervisors, managers, directors and strategic staffs who were a part of new product development teams in service business companies. Note that there were banking, printing, publishing, training, financial institutions, outsourcing, projects and event organizing companies involved in this research. These companies were based in the Special Region of Yogyakarta and Province of Central Java Indonesia.

Findings – The research adapted the time interaction performance (TIP) theory, a theory of groups. It revealed that TIC was inserted in the research model. It was to mediate the influence of QWL on TP. Furthermore, the Sobel test results showed that TIC was a mediator of QWL and TP and was pertinent in improving TP.

Research limitations/implications – The three limitations of this study are as follows: first, the survey was conducted only in the service business industry in the Special Region of Yogyakarta and Province of Central Java, Indonesia; second, as this study focuses on TIC as the main mediator, it does not consider variables from other theories such as dominant logic service theory and social exchange theory; third, this research survey only captures the perception of the team.

Practical implications – From a practical perspective, the relationship between QWL, TIC and TP provides clues about how companies can pursue QWL to encourage TIC, which, in turn, affect TR and improve TP.

Originality/value – Using a theory of the TIP approach and theory of groups, the study proposing the concept of TIC can potentially improve TP.

Keywords Performance, Interaction, Service industries, Teamwork, Quality of work–life, Transformative interaction capability, Team resilience, Teamwork performance, Service business

Paper type Research paper

1. Introduction

Organizations with individuals and teams are surrounded by complex environments, competition and rapid changes (Stephens *et al.*, 2013; Meneghel *et al.*, 2016), requiring them to be able to positively, effectively and swiftly adapt to change. Quality of work–life (QWL) is crucial for the success of the company's strategies in dealing with various changes (Ouppara and Sy, 2012). In theory, the QWL involves providing opportunities for employees to make decisions about their work, design their workplace and effectively providing new products or services. It requires the management to treat workers with respect (Bahrami *et al.*, 2013; Nayak and Sahoo, 2015) and companies with QWL have been shown to positively impact teamwork performance (TP) (Benders *et al.*, 2001; Kuipers and De Witte, 2005; Taghavi *et al.*, 2014). Apart from that, TP is the result of team actions. A team can be evaluated, in terms of productivity, speed or ability to produce new and innovative results and in terms of process control or the knowledge it produces (Chiu *et al.*, 2016; Fagerholm *et al.*, 2015).

It should be noted that there have been contrasting results in the field of QWL and TP. Some research studies show a positive and significant relationship simultaneously; however, the others stated that there is no relationship (Asgari *et al.*, 2012; Davoudi, 2014). The differences raise interesting gaps in the field, particularly for QWL, to have a positive impact on the team.

By adopting the transformative interaction concept from Ferdig and Ludema (2005) and the capability approach by Robeyns (2005), the synthesis of a new concept of transformative interaction capability (TIC) as a consequence of QWL, which was expected to improve TP was executed. The relationship between each construct will be discussed in the literature review section. In general, this study aimed to propose a conceptual model on the role of QWL in improving TP within service industries in Indonesia.

2. Literature review and a hypothesis statement

2.1 Quality of work life in a teamwork

Organizations are inseparable from QWL as everyone is required to meet certain complex psychological needs to achieve optimal experience and function. The QWL refers to the ability of the members of an organization to fulfill their desires and needs through their personal experience with the company. Therefore, QWL relates to the employees' affective responses to the goals and characteristics of the organization (Ooi *et al.*, 2013). It should be noted that the QWL concept stems from Maslow's theory of motivation, also known as the basic physiological, safety, social, self-esteem and self-actualization theory. A person is motivated by his desire to achieve or maintain various conditions. This basic satisfaction is inherent and comes from certain intellectual desires.

The theory of motivation is not synonymous with behavioral theory. Motivation is only one of the determinants of behavior. While motivation usually influences behavior, factors such as biology, culture and situation can also be determinants (Maslow, 1943). The QWL is made of human development needs, categorized into two levels. The lower level needs of QWL are health and safety needs and economic and family needs. Meanwhile, the higher-

level needs of QWL are as follows: social needs, self-esteem needs, self-actualization needs, knowledge needs and aesthetic needs (Koonmee *et al.*, 2010; Marta *et al.*, 2013). The QWL required the organizational environment to meet the various needs of its employees for their welfare in the workplace. Pugalendhi (2010) defines the QWL as the overall climate of work and its impact on work, people and organizational effectiveness. In other words, QWL is employee relations with an integrated work environment.

Moreover, members of a team interact and coordinate tasks and responsibilities to complete a certain task (Fitzsimons *et al.*, 2016). In the spirit of QWL, each member will support each other, with team members aiming to maintain a safe and conducive work environment, actively participate and behave professionally (Dutta and Singh, 2015). Team members influence each other, help and cooperate in achieving planned goals and final results.

2.2 Transformative interaction capability
Robeyns (2005), in his study, describes the capability approach as a broad normative framework for evaluating the welfare and social arrangements of individuals, policy design and proposing a social change in society. It is used in various fields, including development studies, welfare economics, social policy and political philosophy. According to the capability approach, the ends of prosperity, justice and development must be conceptualized in terms of people's ability to function; that is, effective opportunities to take actions and activities that they want to be involved in and become what they want to be (Oosterlaken, 2009). The existence of a person and his actions are functions that together make life valuable. Functions include working, resting, being literate, being healthy, being part of the community, being respected, etc. The importance here is that people have the freedom or valuable opportunity (ability) to lead the kind of life they want, to do what they want to do and be the person they want to be.

The pattern of interaction in a team arises when members first meet each other and begin to coordinate their actions in the team. Early and ongoing patterns of interaction, during and outside the team can be a reflection of the people in the team (their personality and abilities), situations (tasks, pressures and time), structure (operating rules and procedures, agreements and norms) and leadership (control, respect, experience, feedback, reinforcement, etc.) and facilitation that may be available. Interaction patterns emerge when team members learn from each other's competencies, behavioral tendencies and interests with descriptive statements made by team members to each other or by observing the actual behavior inherent in the interaction (London and Sessa, 2007). The interaction during the initial meeting as direction and momentum is surprisingly difficult to change, even if the team starts "with the wrong step." Therefore, the team needs to understand and need awareness and common perception so that all team members can reach an agreement.

This paper proposes the TIC concept, which is defined as the team members' ability to interact, consequently empowering personal capacity and other members of the organization. It also refers to interactions that encourage the development of ideas of added value for the organization. It can be achieved through sensemaking building, transformative learning and knowledge-creating. In addition, TIC can potentially improve TP.

Sensemaking is the process of transforming the current state into a situation that can be understood explicitly in words and serve as a springboard for action (Weick *et al.*, 2005). Akgün *et al.* (2012) explained that sensemaking capability was the ability of the team to interpret, understand and build meaning on project information, technology and information related to the market. From these, the team should be able to act on that information to complete the project with the information gathered on meaningful patterns on customer

trends, competitor strategies and sectoral trends. There are two components in sensemaking building, which are the empowering ideas to interpret organizational needs and the complementation of the needs of the team.

Apart from that, transformative learning aims to create new understanding and practice of advanced learning. This quality is increasingly needed by individuals, teams, companies and communities. Advance learning comprised of cognitive, emotional and social factors. Moreover, Mezirow (2006) defined transformative learning as a process where individuals and teams change the problem frame of reference (mindset, habits of thought and a perspective of the meaning) regarding a set of assumptions and expectations to be more inclusive, discriminatory, open, reflective and easily socialized. Hoggan (2016) supported this, explaining that transformative learning refers to the processes that irreversibly affect a person's experiences, conceptualization and interaction with his environment. The significant changes require experience and conceptualization to be oriented toward the future. Meanwhile, the existence of interactions for the sake of transformation requires active learning. Transformative learning can be identified by two indicators, namely, future orientation and active learning.

Knowledge creating is carried out to fill a knowledge gap of an organization or workgroup. This activity creates knowledge through knowledge conversion, knowledge building and knowledge linking. Knowledge creation helps companies develop new products and services to respond to market needs swiftly (Hong *et al.*, 2016). Organizational knowledge is usually monitored by collective efforts of teams, for example, a service development team. Previous research shows that team-level knowledge positively influences organizational performance in terms of product development, customer relationship management and income. Therefore, it is crucial to strengthen the team's knowledge creation process to improve organizational performance (Chae *et al.*, 2015). The indicators for the dimension of creating knowledge are:

- developing new knowledge and competencies; and
- collaborating to produce integrated knowledge.

As mentioned before, in QWL, team members influence each other, help and cooperate to achieve planned goals and final results. It will encourage sensemaking, transformative learning and facilitate knowledge creation. Teamwork is not only for creating and sharing ideas but also for helping employees to understand their colleagues' working behavior and their thought process (Myers and Sadaghiani, 2010). Hence, the hypothesis proposed is:

H1. QWL is positively related to TIC.

2.3 Teamwork performance
A team is a group of two or more people who are assigned tasks in the form of certain roles or functions dynamically or interdependently and are adaptive to goals or objects or general missions, with a limited lifetime (Savelsbergh *et al.*, 2010). Teamwork is made of interrelated thoughts, actions and feelings of each team member. Each one of them should carry their weight in the team, and join forces to assist coordination, adaptive performance and value-added task objectives (Salas *et al.*, 2005; Sun *et al.*, 2017). High-performance teams will achieve optimal productivity, which is reflected in the quality and quantity of tasks completed. A high-performance team is also capable of providing the best results as a form of commitment to high-quality standards (van de Brake *et al.*, 2018).

Sundstrom (1999) categorized six types of teams with various requirements and tasks, which are as follows: management, service, production, project, action and parallel teams. Nonetheless, the literature review revealed that the types of teams were significantly diverse. Some teams are involved in different tasks; other teams share similar tasks. Therefore, it is necessary to focus on the actual tasks that the team does to understand the processes that lead to team effectiveness. As the work team always has certain performance goals, this research would adhere to the concept of task performance (Hackman, 1987). The concept discusses the extent to which a team fulfills its objectives, and how well its output fulfills the team's mission. From this, the team's performance is seen from the perception of the team's general work performance.

Moreover, every successful business is run by an effective team. It is achieved by building behavior and attitudes that are in accordance with the shared perception of effectiveness. The team is effective if it meets and exceeds the needs of the team (Jambekar and Pelc, 2007). Hoggan (2016) asserts that transformative interaction refers to processes that produce significant and irreversible changes in the way a person experiences, conceptualizes and interacts with his environment. The descriptors "experience, conceptualization and interaction" show how the transformative results described can affect a person. Based on Hoggan's study, to produce significant changes, experience and conceptualization are needed to be oriented toward the future. The existence of interaction so that transformation occurs, it is necessary to be active in learning. There is a mutualistic role carried out by each individual in a team or group and in the organization. In addition, the team members tend to be proud of themselves if they succeed in completing all tasks on time, achieving goals and completing work. The presence of members with the ability to interact will powerfully improve team performance, hence the following hypothesis:

H2. TIC is positively related to TP.

2.4 Team resilience

Resilience is the ability to survive and rise from challenges, stresses or stressors. Resilience can be observed when challenges occur and operate on the individual and team level. Team resilience (TR) is the ability of the team to survive and overcome challenges in a way that team performance and cohesion can be maintained (Alliger *et al.*, 2015). In dealing with various organizational problems, a team should be able to survive to reach the goal. The primary purpose of resilience is to find strength from various resources. It enables employees to increase their skills in overcoming problems, allowing organizations to thrive despite difficulties (Meneghel *et al.*, 2016). Furthermore, managers and human resource management practitioners can benefit from understanding the methods to improve TR to achieve positive team results.

Moreover, resilience can be in the form of considering alternatives and experimenting with new solutions to problems, maintaining virtue. Resilience is pertinent in responding directly to an event or shock (Bright *et al.*, 2006). For example, an individual shows a degree of resilience through forgiveness and learning from pain when he creates a positive relationship with an offender (Bright *et al.*, 2013). Likewise, teams collectively display courage by staying composed through difficulties and adapting to changes well. Resilience is not only the result of virtuous behavior but also an important facilitator in becoming virtuous (Stephens *et al.*, 2013).

As a process, group learning involves activities in which individuals acquire, share and combine knowledge through exchange of experience with one another. It shows that group learning has taken place, including changes in knowledge, both implicit and explicit, that

occur as a result of the collaboration (Argote *et al.*, 2001). Learning deepens and expands the ability of the team to swiftly adapt to changes, use new skills, knowledge and behaviors and become an increasingly sophisticated unit (Sessa *et al.*, 2011). Thus, learning in teams is a continuous cycle that includes the recognition of learning needs, readiness for learning, learning processes and practical applications to increase the team's resilience. Resilience research has focused not on disruption and dysfunction, but on what happens in the lives of successful team members, academically and socially. Even when facing a bad life situation. The resilience paradigm further requires us to take a closer look at what is happening in a team consistently and the company's environment, which is very effective at impacting performance, to find out how to embed the resilience process into all team members. As with resilience research conducted by Nicoll (2014), it seems to suggest two main, interrelated factors that lead to positive social adjustment and highest academic success. Therefore, the proposed hypothesis is:

H3. TIC is positively related to TR.

Meanwhile, previous results prove that TR is related to team performance. Some demonstrated that a high level of TR could lead to the best performance. It is in accordance with previous research conducted at the individual level (Luthans *et al.*, 2005) and team level (Chapman *et al.*, 2018; Sharma and Sharma, 2016). Concerning this, the hypothesis is:

H4. TR is positively related to TP.

2.5 The mediating role of transformative interaction capability
This study examines the role of TIC in mediating the relationship between QWL and TP. In QWL, team members will always interact and learn. It is a process of reflection and continuous action. Various interaction activities are characterized by asking questions, seeking feedback, experimenting, reflecting on results and discussing errors or results of unexpected actions. Some reflections of the team's capacity to always be involved are realized by sensemaking building, transformative learning and knowledge-creating.

Team learning is crucial for the team to adapt to changing environments and maintain high performance, as well as improving TP (Abrantes *et al.*, 2018). In addition, some studies associated TIC with TP (Huang and Li, 2012; Santos *et al.*, 2015). Therefore, the hypothesis proposed is:

H5. TIC mediates the influence on the QWL to TP.

3. Method
3.1 Subjects and procedures
The subjects in this study were strategic staff, supervisors, managers and directors involved in the new product development team or projects for at least one year. There were 26 service businesses in the field of banking, printing, publishing, training, event organizing, outsourcing, logistics and projects in the Special Region of Yogyakarta and the Province of Central Java Indonesia. The companies, which are the object of this research are in the same geographical area and are a service industry in a holding company. Note that the new product development team in the service business is vulnerable to changes in the environment. It is because, for this team, business success is based on customer values,

innovation implemented in shipping services and good relations with partners and customers (Langvinienė and Daunoravičiūtė, 2015) (Table 1).

Furthermore, the initial data were collected through a pilot study to ensure the quality of the instrument (questionnaire) used. The initial stage was for face validity by distributing questionnaires to five management practitioners for their opinions on the content of the questionnaire. The views were then used to revise the questionnaire. This method was taken to ease the respondents' understanding related to language and terms used in the questionnaires. Next, 50 respondents were used to test the validity and reliability of the instruments of all indicators in this study. A total of 37 questionnaires were returned. The test results showed that the value of the corrected item-total correlation was above the critical value for the correlation degrees of freedom 37 and $\alpha = 0.05$. It was 0.325 as a guideline for the minimum value to be declared valid. In addition, the reliability test used Cronbach's alpha with the rule of thumb ≥ 0.7 (Cho and Kim, 2015; Hair *et al.*, 2010). The variables were all declared as valid and reliable.

Then, the sample selection technique used was purposive non-probability sampling, namely, judgment sampling. Judgment sampling chose the respondents, and they were supervisors, managers and directors. A total of 300 questionnaires were distributed, 263 questionnaires were returned, but only 240 questionnaires could be used. There were 23 data discarded because they included outlier data. The response rate was 80%, which included 123 men (51.25%) and 117 women (48.75%). Moreover, 72.92% of the respondents were college graduates; 150 respondents (62.50%) had a Bachelor's degree, 21 respondents (8.75%) held a Master's degree and four respondents (1.67%) had a Doctoral degree. The research respondents who had been involved in the new product development team for 5 to 10 years made a total of 90 respondents (37.50%) and those who were involved in teams with 2 to 6 members made a total of 99 respondents (41.25%).

Each scale was displayed on question items and measured by using an anchored scale (Nunnally and Bernstein, 1994) with intervals from 1 to 10 in the form of a numerical scale.

	Gender					*Tenure*	
Men			123	<2 years	34	5 < 10	88
Women			117	2 < 5	65	10 < 15	27
						≥15	26
	Age					*Business unit*	
20 < 25	35	35 < 40	51	Banking	51	Financial institutions	108
25 < 30	53	40 < 45	22	Printing	23	Outsourcing	7
30 < 35	43	45 < 50	22	Publishing	17	Projects	9
		≥50	14	Training	12	Event organizing	13
	Position				*Number of team members*		
Strategic staffs			87	1			3
Supervisors			94	2-6			99
Managers			39	7-8			52
Directors			20	≥12			86
	Qualification				*Status*		
High school	45	Master	21	Married			174
Diploma	20	Doctoral	4	Single			61
Bachelor	150			Widower			5

Source: Author's data processing

The leftmost side of the scale indicated a "strongly disagree" option and the right-hand side of the scale showed "strongly agree".

4. Data analysis and test results

The data were analyzed using a structural equation model with AMOS 24.0 software to test a series of relationships between variables in the research model (Hooper *et al.*, 2008). Apart from that, the mediating effect of the variables was tested using the Sobel test analysis (Hayes, 2015). The results of the validity and reliability tests such as construct reliability, variance extracted and discriminant validity, are presented in Table 2.

Loading factors from each construct demonstrated the results that reflect variables. It can be seen from the value of the reliability construct ≥ 0.7; extracted variance value ≥ 0.5; and the discriminant validity value was ≥ 0.7. It can be observed that all results of the data processing indicated the required number, as in the QWL discriminant validity value was 0.742; TIC 0.746; TR 0.738; TP 0.747.

4.1 Measurement model testing

This research model examined the relationship between four variables with five hypotheses. In addition, the structural models were analyzed and the results are presented in Figure 1. In confirmatory factor analysis (CFA), the overall index of goodness-of-fit showed that most of the measurement models were satisfactory; the normalized chi-square (chi-square/degrees of freedom) demonstrated that the lower the value, the better the model. Meanwhile, the calculation results showed that normed fit index (NFI), comparative fit index (CFI), goodness-of-fit index (GFI) and Tucker–Lewis index (TLI) all exceeded the recommended value of ≥ 0.9, except for the adjusted goodness-of-fit index (AGFI) of less than 0.9. The root mean square residual (RMR) results were smaller than the recommended value of ≤ 0.05. Furthermore, the root mean square error of approximation (RMSEA) was in the range of the cut-off value between 0.03-0.08 (Arbuckle, 2016).

4.2 Hypothesis testing

The CFA model was transformed into a structural model to test the hypothesis of this research. Table 3 demonstrated the test results. All hypotheses were validated with a significant level of $p < 0.001$. Moreover, the regression coefficient of the path for $H1 = 0.683$; $H2 = 0.595$; $H3 = 0.881$; and $H4 = 0.337$, with critical ratio or t-values > 2.0. It indicated that all proposed hypotheses were accepted.

4.3 Mediating effect

The mediating effect of TIC on the relationship between QWL and TP was tested using the Sobel test (Hayes, 2009). The statistical test of the Z-value was 6.81221965, where the result was higher than the cut-off value of 1.96. It shows the existence of the mediating effect of the variables tested. In other words, TIC mediated the impact of QWL on TP.

5. Discussion

This study focuses on the ways QWL can improve TP. By using a theory of time, interaction and performance approach and theory of groups pioneered by McGrath (1991), this section would review some of the relationship variables that were presented in this study.

First, in QWL, a good conversation should include an open conversation on various organizational problems. The concept of transformative interaction stated by Ferdig and Ludema (2005) explained that the quality of conversation formed an interactive container

Source	Variable and indicator	Standardized estimate	Construct reliability	Average variance extracted	Discriminant validity
Dutta and Singh (2015), Nayak and Sahoo (2015)	Quality of work-life		0.856	0.551	0.742
	QWL1	0.778			
	QWL2	0.818			
	QWL3	0.850			
Mezirow (2006), Weick et al. (2005); Santos et al. (2015)	Transformative interaction capability		0.913	0.556	0.746
	TIC1	0.749			
	TIC2	0.798			
	TIC3	0.794			
	TIC4	0.777			
	TIC5	0.854			
	TIC6	0.806			
Amaral et al. (2015)	Team resilience		0.871	0.544	0.738
	TR1	0.817			
	TR2	0.942			
	TR3	0.728			
Liu et al. (2014)	Teamwork performance		0.835	0.557	0.747
	TP1	0.780			
	TP2	0.853			
	TP3	0.742			

Source: Author's data processing

Table 2.
Measurement validity and reliability
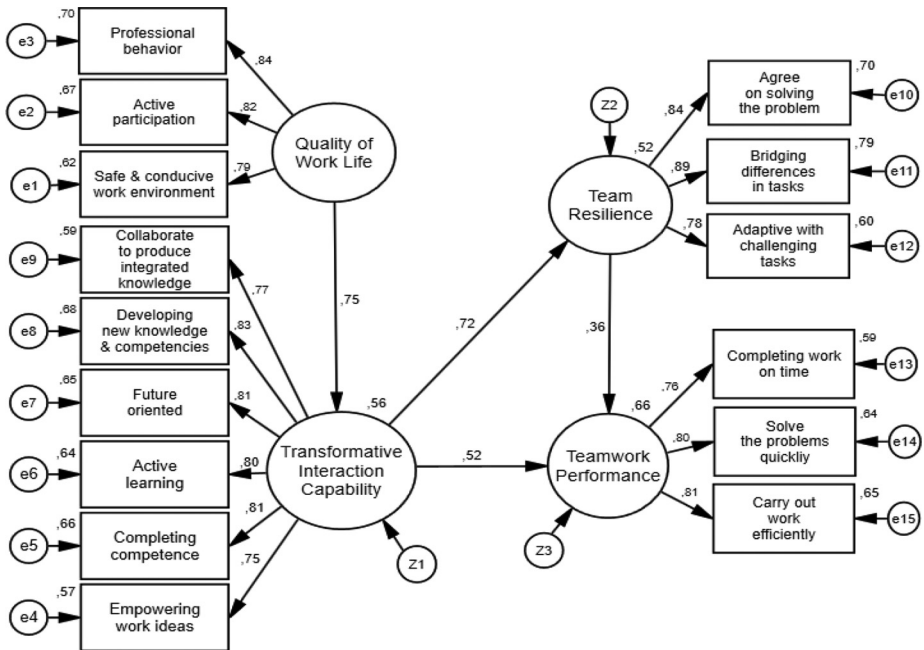
Figure 1.
Full structural
equation model

Hypothesis	Standardized estimate	Critical ratio	*p*-value	Result
H1: TIC ← QWL	0,683	9.519	0.000	Supported
H2: TP ← TIC	0,595	5.699	0.000	Supported
H3: TR ← TIC	0,881	9.765	0.000	Supported
H4: TP ← TR	0.337	4.136	0.000	Supported
H5: TIC mediates the influence of QWL to TP	*Z*-value = 6.81221965		0.000	Supported

Table 3.
The result of the
regression test

where transformative self-organizing takes place. Strategic communication in QWL is a tool
to enforce, enhance or change organizational identity among employees and organizational
culture (Falkheimer, 2014). It can also be used to encourage the quality and quantity of
participants' micro-interactions that may contribute to the strength of the three domains of
self-organizing activities; identity, connectivity and capacity. Identity is characterized by the
way the system refers to itself as a whole. Meanwhile, connectivity describes the quantity
and quality of relationships between diverse system components.

On the other hand, capacity refers to the ability of the system to access and produce
knowledge relevant to a sustainable system. This system is referred to as TIC, which
consists of three dimensions, namely, sensemaking building, transformative learning and
knowledge-creating. The accepted hypothesis on the effect of QWL on TIC shows the
strength of the concept of organizational learning (Argote and Miron-Spektor, 2011; Qamari
et al., 2019) and group theory (McGrath, 1991).

Second, this study has proven that better TIC will further improve TP. The interactions
between team members will empower each other and team members will learn and adapt to

the latest and future-oriented developments. Illeris (2017) suggests that transformative interaction as learning involves qualitative changes in "perspective meaning," "terms of reference" or "habits of mind," a cognitive mental structure, that governs our understanding of ourselves and our lives, the world and emphasizes the central role of critical reflection, as well as opens discourse in a relationship and the importance of applying new insights into practice. In the world of academics and professionals, transformative interaction aims to create new understandings and practices in mutual understanding, which are increasingly needed by individuals, teams and by companies and communities, covering the three basic mental dimensions of learning, namely, cognitive, emotional and social. In addition, the results of this study supported some of the findings of previous studies. Hong et al. (2016) explained that knowledge creation on the team level had a positive effect on TP, while Kleinsmann et al. (2010) observed the factors that influenced the process of creating shared understanding. These factors existed on three different levels of the organization, namely, actors, projects and company level. It means that the quality of knowledge integration does not depend only on face-to-face communication but also project management and project organization. This study also supported the enrichment of the study by Mesmer-Magnus and DeChurch (2009), which explores the idea that the uniqueness and openness of information sharing, parallel tasks and socio-emotional functions of the team will build up existing stock of knowledge, improving the team's task results. The study also discussed information broadly, which allows in-depth information processing and improving the quality of team decisions.

Furthermore, when a team is more open during the discussion, the sharing of unique information may increase, which will encourage quality performance. TIC that has been implemented is an activity that becomes an empirical finding in this research, which is to empower the team by exploring ideas from various media that can be used in work; build a solid team by improving the structure and evaluation with workshops and training; interact by sharing and adapting; strengthen self-capacity, being dedicated and adjusting to market changes and future orientation; interact with constantly learning and keep abreast of design and technology; and collaborate with the team to always update information and evaluations. TIC is the interaction between team members who empower each other, learn and adapt to the changing times and future-oriented.

Thirdly, a sense of openness in dealing with each problem is a critical asset for the team members. Team sensemaking capability in the form of internal and external communication, information gathering, active participation, classification of information, building a mental model of togetherness and taking experimental action has a positive impact on TR (Akgün et al., 2012). The ability to survive is not only unique to the organization but also can be developed and managed well to ensure that the primary factors and dimensions are embedded. It is to ensure adoption and to record benefits obtained over time.

Fourthly, the team plays a vital role in organizational development. TR is the ability of the team to handle problems, overcome obstacles or withstand pressure from adverse situations, without entering into destruction. A strong team creates conditions that make it possible to overcome difficulties, to promote improvement in the overall performance of the organization and capable of identifying actions that can affect the development of the project and the final results (Amaral et al., 2015; Meneghel et al., 2016).

6. Research and managerial implications
The results of this study contribute to the development of the concept of transformative interaction, especially in the fields of management and organizations that support the

development of service businesses. Based on the results of the discussion, this study leads to work teams, group processes, group dynamics, group learning, behavioral and attitude change and decision-making. This research successfully explained the research gap between QWL and TP through TIC.

The influence of QWL on TIC is supported by Hosseinabadi *et al.* (2013) and Liu and Feng (2007). Ontologically, the empirical research model proposed in this study shows that QWL is an antecedent variable that has a direct influence on the TIC variable. Furthermore, the effect of TIC on TP is supported by Ceschi *et al.* (2014), Fry *et al.* (2017), Zarraga-Rodriguez *et al.* (2015). The results of testing the role of TIC mediation between QWL in achieving TP are presented with a Sobel test calculation. The results of the Sobel test show that TIC has a significant role as a mediator to bridge the gap between QWL and TP. These results signal the importance of the TIC variable as a mediator to bridge the research gap between QWL and TP.

TIC is the interaction between team members who empower each other, learn and adapt to changes faced by the organization and future-oriented. The stronger the TIC will further encourage the TP. Team performance can be developed by implementing empirical findings in this research in the form of, namely, optimization of work teams with maximum service, open communication, planning that is brief and responsible, follow up on any problems encountered in accordance with the division of work and expertise, work results that are appropriate and even exceed targets with a positive appreciation from external and internal parties and team activities with efficient resources and utilization of communication technology.

7. Limitations and future research

The TIC was introduced in this study as a process that influences QWL in improving TP, and it is one of the company's core competencies. This research has proven that TIC has a significant effect on TP. It is in accordance with Dionne *et al.* (2004), Suhana *et al.* (2019) and Sulistiyani *et al.* (2018), who used the transformational leadership theory approach as one of the ways to improve TP.

There are three limitations to this study. The first limitation is that the survey was conducted only in the service business industry in the Special Region of Yogyakarta, Indonesia. Further research should be applied in various manufacturing industries to generalize the findings regarding TIC in improving TP. Secondly, while this study focuses on the main mediator (TIC), it does not consider variables from other theories such as the dominant logic service theory, social exchange theory and others. Thirdly, this research survey only captures the perception of the team. Future researchers are advised to integrate various theories and variables (e.g. leadership style, top manager characteristics, group dynamics, group process and decision-making) to extend the models based on the present research findings. They might also explore various moderators outside of this study, broaden the scope of research and compare explanatory abilities with the variables studied in this research.

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Corresponding author

Ika Nurul Qamari can be contacted at: ika_nr@umy.ac.id