THE IMPACT OF VIRTUAL TEAM CHARACTERISTICS ON PROJECT EFFECTIVENESS

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ABSTRACT

The effectiveness of a project team is important because it affects work quality and productivity. In these days due to increasing in globalization of organizations, most tasks and projects require contribution of an entire team. Similarly, teamwork in project virtual teams is important and personalities of the team members greatly contribute to this environment. This study was about the relationship between organizational climate, management, leadership and personality trait relationships with virtual team set the use of ICT and development of company. The study attempted to explore the type of team personality composition that mostly impacted the effectiveness of the virtual team success including the personality traits of the team members. Qualitative method of research design was employed with the findings analysed by descriptive approach. A questionnaire survey distributed to 30 respondents that were randomly selected from a renowned organization within the industry. The findings showed that the majority of the respondents agreed that the relationship between organizational climate and job satisfaction among the group members was very closely related to leadership, management and existing personality trait. In addition, the smooth use of ICT was directly specifically for virtual team itself. It could be concluded that leadership styles in organizational management based on personality selected trait.

Keywords: Personalities, Virtual Project Team, Effectiveness

INTRODUCTION

A globalization change has pave way for organization management to strategize and to shape working relationship that uses information systems as platform to increase social capital. The proliferations of globalization have major corporations making use virtual teams that has with as much as 137 million worker reported worldwide involve with remote electronic work in some capacity or other (Mathers, 2001). Organizations utilize the use of virtual team to draw on work processes not confined to one geographical locale and expertise (Harowitz et al, 2006). Not only that, they have become primary modalities of communication to work process design, time and cost reduction (Preiss, 1999). Subsequently, the rationale of having virtual work is a sound business decision, as it will consequently reduce workspace costs, increased productivity, improving customer service, better access to global markets and environmental benefits (Cascio, 2000).

Virtual teams are established of members who work in an organization or across an inter-organizational system. They are employees who are expected to work together and collaborate to achieve an organizational goal within specific time and limited resources. A multi-cultural team is a team whose members have different cultural backgrounds, for instance because they are from different countries. In a global marketplace, more and

more companies need international presence; therefore, the need for creating virtual teams exists. By dynamically allocating people to projects based on expertise rather than location, organizations can more easily assign the most qualified people to appropriate projects without concern for the expense and wasted productivity caused by extensive travel or frequent relocation (Goldman, 2000).

The excellence of the organization is due to many factors. However, many managers and researchers in the field of leadership and management tend to view leadership and its relationship to personality traits and ICT as well as the existence of a virtual team that built a reputation as a major contributor to the achievement or the direct cause of the organization and an efficient organizational climate. The leadership is generally much based on the assumption that leadership is the cause of the effectiveness of the organization.

The leader of an organization that can handle changes and creating an efficient organizational climate can lead an organization to excellence and bring satisfaction to existing customers. Effective leadership and personality traits leaders also often associated with the nature, value and ethical conduct. Attitudes and behaviour of leaders impact the treatment of members of the organization and this will in turn affect the organization's performance (Trevino et al, 2003). Often the issues found in the organisation which relate to the virtual team are:

   a) Leadership quality
      Poor leadership will cause any team to fail, whether it is physical or digital, the issue becomes much more sensitive when you're dealing with virtual teams. Many virtual managers are poor leaders and poor communicators. They do not know how to get their message across, or they're indecisive when it comes to choosing the ways in which they want the project to function (Tuffley, 2009).
   b) Trust
      When work in virtual teams, it's all too easy to forget that we are in fact working with real people who just happen to be far miles away, and trust in the relationship takes a beating. Yet trust is paramount to collaboration, to getting things done, and to relying on those who we don't see every day and cannot look in the eye. (Holton J. A., 2001)
   c) Bond
      If there is no trust it will be hard to create the bond between the team members. Without bond there will be no unity in the team. This is bad culture as it can bring down the team as a whole. (Furumo & Pillis, 2008)
   d) Communication Efficiency
      Disadvantage that comes with virtual teams is a reduction in communication efficiency. A number of studies have consistently shown that much of what humans communicate to one another is not based on their verbal language, but on non-verbal language. Some studies show that as much as 30% of communication is non-verbal. (Jarvenpa & Leidner, 1999)

VIRTUAL TEAM

In these days and age with the rampant rise of communication technology within organization pave the way for the evolution on how people interact interdependently thus the rise of virtual team. It is better defined as a group of individuals with a common purpose and goal who works across different time zone, distance but within the boundaries of organizations with communication technologies act as link. Virtual team also factored in cultural differences as well as diverse working environment. Its main

purpose was to facilitate steps to be achieve that become the basis for the people to work together but still be interdependent. This current trend has enable organization to maintain and or decrease operation cost overtime. Organizations nevertheless, it does not come without challenges. In today's corporate culture, most of operational task were simplified with the use of computer-aided process and technology, which in turn make virtual team possible that can transcend the boundaries of how organization operates. This allows work to be carried out over intricate web of technological links therefore reduces the need for collocated teams. People communicate and collaborate electronically with colleagues in geographically disperse group within or/and outside of organization, whilst depending upon the information and communication technologies (ICTs) as oppose to face-to-face discussions (Roojie et al, 2007). Correlation working relationship with multiple teams that transcend geographical boundaries, time and organization culture.

Three main components of virtual team consist of purpose, people and link. Virtual team need to have a common ground that endeavour the same goal that need to be accomplish which in turn construct processes in achieving those objective whilst working side by side using feasible methodology. People are the integral part of the virtual teams, everyone in the team must be independent and self-reliant but still be mutually dependent. Constant evolvement of ICT has led to organizational growth in its flexibility and structure (Fulk & DeSantics, 1995; Jarvenpaa & Ives, 1994). Virtual team symbolizes a significant example of organizational changes (Jarvenpaa & Ives, 1994). Virtual team is also known as sets of workforces with certain skills separated by time, space and cultural differences with mutual objective brought together by way of ICTs (DeSantics & Poole, 1997).

A virtual team is considered as a breakthrough in the form organizational network (Miles & Snow 1986) as it used evolutionary of ICT technology to interact. Collaboration between members of organization in a geographically challenge locale can be done in a more productive manner as people in virtual team groups work on tasks interdependently. They carry out their work through electronic platform whilst geographically scattered, at the same time have equal responsibility for team outcomes. They are wide reaching globally across and down the chain of commands. It a major hindrance for virtual teams as they face challenges in the aspect of communication, task as well as culture (Malhotra, 2003).

Cultural pays a huge part in virtual teaming environments. They are more likely to include members with different cultures than contrasting teams in the same locale (Duarte & Synder, 2001). Culture can be defined as customary beliefs, social forms, and material traits of a racial, religious, or social group often used to discern one group from another. One of the challenges from organization whom employs virtual teams may face is cultural differences such as national culture, organizational culture and functional culture (Duarte & Snyder, 2001; Beamer & Varner, 2008). Each members of the team have their own cultures, and as the team develops, this distinctive mix of team members' national, functional and organizational culture forms a unique team culture. Cultural values serve as filter for one's insight of the surrounding environment, guiding behavior such as decision-making (Chudoba et al., 2003). Culture on its own brings together the world of languages, is still relevant in virtual environment despite the fact communications is mediated through ICT (Vatsyayan, 1981).

Extensive used of communication technology has led to creation of virtual team. Interaction in virtual team is mediated by time, distance and technology (Driskell et al, 2003). Virtual team uses ICT in using 4 facets (Mittleman & Briggs, 1999). Technologies are used to gather, interpret and present information, such as collaborative document management systems and electronic white boards. It can also be used to facilitate

communication between team members globally and or within external organizations. Lastly, information technologies can assist team member process information by providing structure systems for brainstorming, problem solving, and decision making activities. Technologies may also be used to structure the group process through meeting agendas, assignment charts and project management tools.

In all likelihood the perception of virtual team has three main aspects: first is its functionality whereby team members are interdependent in task at hand, are liable to any outcomes, and collectively manages relationships across organizational boundaries; Secondly, team members are geographically dispersed; and third, they rely on technology-mediated communication to accomplish tasks (Cohen & Gibson; 2003). In essence, team members are scattered and they use computer-mediated communication.

Technological Tools Use in Virtual Teams and Its Advantages

Nevertheless, the uses technology solely does not make them a virtual team because others used technological support regardless of the locations for work on day-to-day basis. The sole importance of teams using technology as means of communication enhance the need for 'virtuality', as virtual teams does not have any other option but to use technology for 'virtuality'. Virtual teams have no chronological work environment, and hardly ever meet face-to-face; in reality, team members may not even have the occasion to do just that (Hertel et al 2005). Table 1 further illustrated the use of technological tools use in virtual teams, its advantages as well as mode of sensory uses.

Table 1: Tools for Virtual Teams

Tools	Examples	Uses and Advantages	Immediacy	Sensory Modes
Instant Messaging and Chat	• Yahoo Messenger • MSN Messenger • AOL Instant Messenger • Skype • Microsoft office Communicator	• Instant interaction • Less intrusive than a phone call • View who is available • Low cost • Low setup effort	• Synchronous or Asynchronous	• Visual • Text and limited graphics
Groupware/ Share Services	• Lotus Notes • Microsoft Exchange • Novell Group wise	• Calendars • Contact Lists • Arrange meetings • Cost and setup effort vary	• Asynchronous	• Visual
Remote Access and Control	• NetMeeting • WebEx • Remote Desktop • Pc Anywhere	• User controls a PC without being onsite • Cost Varies • Setup Varies	• Synchronous	• Visual • Audio • Tactile

Web Conferencing	• Net Meeting • WebEx • Meeting Space • Go To Meeting	• Live Audio • Dynamic video • Whiteboard • Application Sharing • Moderate cost & setup effort	• Synchronous	• Visual • Unlimited graphics • Optional audio
File Transfer	• FTP • Collaborative Websites • Intranets	• Share files of any types • Cost Varies • Moderate setup effort	• Asynchronous	• Varies with file content
Email	• Numerous vendors and free applications	• Send messages or files • Cost and setup effort vary	• Asynchronous	• Visual • Audio attached in the email
Telephone	• Plain Old Telephone Service (POTS) • Voice over Internet Protocol (VOIP)	• Direct calls • Conference calls • Cost varies • Low setup effort	• Synchronous • Asynchronous for voice mail	• Audio

Source: Adopted from Thissen et al. (2007)

Types of Virtual Team

Virtual team distinguishes by the number of persons involved with the measure of interaction between. It consists of several "telework" (telecommunicating) carry out within and outside of an organization with information communication technology (ICT) act as bridge that make it possible. Thrown into the mix several teleworkers whereby reporting will be done under the same supervision. Virtual team has common goal(s) that interaction amongst member are vital to accomplish the ends.

A network of communication thus is form as a result of collaborative work that create "virtual communities" which are entities of distributed work done via online on the basis of common purpose, roles and norms. Telework is considered as cost savings method to reduce the time-consuming commute to and from workplace and offer the flexibility of having more personal time (Johnson, 2001). The differences of virtual team classified with respect to two variables (the number of locations) and managers (one or more) Cascio and Shurygailo (2003). Consequently, there are four categories of teams:

1.   Teleworkers: A single manager of a team at one location.

2.   Remote team: A single manager of a team distributed across multiple location.

3.   Matrixed teleworkers: Multiple manager of a team at one location.

4.   Matrixed remote teams: Multiple managers across multiple locations.

Comparison of the Physical and Virtual Team

Below table sums up the differences of virtual versus collated team success and classified physical teams versus virtual team in six categories (Pawar & Sharifi, 1997).

Table 2: Classifying Physical Teams Versus Virtual Teams

Activity	Physical Teams Nature	Virtual Teams Nature
Nature of interaction	Opportunity to share work an non-work related information.	The extent information minimal of is informal related exchange of information
Utilization of resources	Increases the opportunity for allocation and sharing of resources.	Each collaborating body will have to have access to similar technical and non-technical infrastructure
Control and accountability (over and within the project)	The project manager provides the context for ongoing monitoring of activities and events and thus enhances their ability to respond to requirements.	The collaborating bodies were accountable to the task leaders and the project coordinator who had limited authority to enforce any penalties for failure to achieve their tasks
Working environment	They constraints information interacting encountered accessing and with others.	Sometimes not able to share ideas or dilemmas with other partners.

Although it is norm for organization to make use of virtual team, it will not likely to replace traditional team as virtual team not be suitable for all circumstances (Nemiro, 2002). Lurey and Raisinghani (2001) survey conducted in 12 separate virtual teams from eight different sponsor companies in IT found that organizations choose to employ this method have to focus their effort in the same direction as they were employing traditional team. It is concluded the effectiveness of ICT-enabled virtual collaboration with the face-to-face communication support, lead to high level of satisfaction in collaboration.

Virtual Team Leadership

As organization worldwide strive to improve their deliverable quality of work to remain competitive and ensure growth, researchers and practitioners are challenged to tamper with the nature of leadership requirements pertaining to organizations in general (Robinson & Harvey, 2008) and virtual teams in particular (Leonard, 2011; Pearce, 2004). Virtual teams approach poses significant leadership and management challenges for organization that want to using it in their system. No doubt that this challenges are existing in traditional teams but the leadership challenges may become more considerable in virtual settings (Malhotra et al., 2007; Morgeson et al., 2010) due to the presence of physical cultural, and temporal dispersions (Leonard, 2011).

Leadership ability to successfully influence a team member to maintain commitment in achieving team goals is an important requirement of leader effectiveness (Yukl & Tracey,

1992). However, it is depending on the situation to prove that specific leadership pulled from the leader's repertoire is appropriate to the circumstances at hand (Stott and Walker, 1995). Effective leaders are also able to adapt their behaviors and employ the needed skills in ways that influence subordinates and improve productivity and morale (Kipnis et al., 1980). Leaders that able to demonstrate both people-oriented and task-oriented leadership roles are more effective than those who tend to focus solely on one relationship function (Quinn, 1988; Hart & Quinn, 1993). Leadership effectiveness is depending on the direct interaction of the leader with team members in the processes of team development and performances management (Fleishman et al., 1991; Kozlowski et al., 1996).

When the leadership effectiveness taking places it will produce positive outcomes, for instance, the research conducted indicates that leadership effectiveness is linked to greater team member satisfaction and performance (Kayworth & Leidner 2001). The technical knowledge skills and communication skills that able to explain to team with clear, engaging way are expected from the effective leaders (Hackman & Waltron, 1986). The set of skills for a leader to provide clear guidance and goals facilitates the members to observe and evaluate their own performance in the team (Kozlowski, 1998); also with effective leadership, team members able to fully utilized team processes in order to control team performance (Zaccaro & Burke, 1998). In addition, with leadership effectiveness presence it will able to cultivate team innovation (Somech, 2006). The team outcomes are depending on the nature of leadership (Fjermestead & Hiltz, 1999), as shown that teams with the effective leaders are able to maximize the team performance. While, Shachaf & Hara (2005) suggest four dimensions of effective virtual team leadership:

1. Communication (the leader provides continuous feedback, engages in regular and prompt communication, and clarifies tasks);

2. Understanding (the leader is sensitive to schedules of members, appreciates their opinions and suggestions, cares about member's problems, gets to know them, and expresses a personal interest in them);

3. Role clarity (the leader clearly defines responsibilities of all members, exercises authority, and mentors virtual team members); and

4. Leadership attitude (the leader is assertive yet not too "bossy," caring, relates to members at their own levels, and maintains a consistent attitude over the life of the project).

The Big Five Personality Traits

The relevant characteristics of virtual team using a widely-employed model of individual personality behavior which often referred to as the big five are extraversion, openness, conscientiousness, agreeableness and neuroticism. Extraversion represents the tendency to be sociable, assertive, and active, and to experience positive effects, such as energy and passion (Watson & Clark, 1997). Agreeableness refers to the tendency to be gullible, compliant, caring, and gentle (Digman, 1990). Conscientiousness is comprised of two related facets: a behavioral organizing or task-orientation element and an element of prudence. (John, 1992). Neuroticism or emotional stability refers to the tendency to demonstrate poor emotional adjustment and experience negative effects, such as nervousness, lack of self-confidence, and aggression. As a final point, openness to experience represents a character to be imaginative, out of the ordinary, open to ideas, and unconventional (McCrae & Costa, 1997).

<div align="center">Effectiveness of Virtual Teams</div>

There are very little resources of information are available on the effectiveness of virtual teams (Piccoli & Ives, 2007). Lurey and Raisinghani (2001), studied the factors contribute to the effectiveness of virtual teams and the results specify that the processes used by the team and their relationships were most convincing related to team effectiveness. This remark has caused little surprise since effectiveness was defined as team performance and member satisfaction.

Edward and Sridhar (2003) verified from their study that the technologies' facilitate trust among the team members, and well-defined task structure and processes were positively associated with the effectiveness, and trust level of global virtual teams. Costigan and Berman (1998) stated that trust is related to the perceived effectiveness of the reward practices of the organization. The researchers indicate that in positively influencing the effectiveness of traditional teams, trust is one of the main factors even though there is a limited studies of the trust on the team performance (Bromiley & Cummings, 1995). The general effect of trust has been proper documented. With high level of trust, it able to reduce interpersonal transaction costs (Handy, 1995), improvement security in relationships, facilitate open information sharing (Larzelere & Huston, 1980), promote risk taking (McAllister, 1995) and contribute to the well-being of individuals and enable well balance stability of organizations (Cook & Wall, 1980). Morgan and Hunt (1994) stated that trusting work relationships influenced cooperation, reduced conflicts, increased commitment to the organization and reduced the tendency to leave.

Adapting to new environment from co-locations to virtual is long processes that pose many challenges of misfit and trials scenarios. This is seen as encouraging factor for teams moving from co-location to virtual environments, an ability to adapt and change can be a long process riddled with trial and error scenarios. This process is seen as crucial in the effectiveness of the team (Kirkman et a l., 2002). Hertel et al. (2005) collected a list of criteria from the team managers both at the individual and at the team level. The results of the field study showed good reliability of the task work-related attributes, teamwork-related attributes, and attributes related to tele-cooperative work.

In the application of organizational effectiveness, checking thoroughly trust as a bellwether has no substitute. Cook and Wall (1980) study proves that "trust between individuals and groups within organizations are a highly important ingredient in the long-term stability of the organization and the well-being of its members" (p. 39). In this study, it will attempt to determine how important personality and leadership give an impact of effectiveness of the virtual team success within Malaysia ICT companies.

<div align="center">METHODOLOGY</div>

The section describes the case study, the study design, data collection methods, and data analysis methods used in this study. The discussion extends to the criteria of respondents' selection, identification of study population as well as data transformation techniques. Generally, the study adopted qualitative data collection. The case study of a construction company in Klang Valley is selected for it is well-known as one of the most active main construction company for projects in urban areas. The targeted population for the study will be those who involved in construction projects for more than 5 years and play the role as key personnel in construction projects. This included those in project, procurement, information technology, planning and design departments within the company.

Thirty (30) respondents involved participating in the semi-structured interview exercise. Respondents were selected randomly from 49 staffs as research population, based on criteria set as mentioned above. According to Kelley et al. (2003), random sampling allows the results to be generalized to the larger population. By using this sampling method, every member of a large population has an equal chance to be selected for sampling, which therefore eliminates bias in sampling. This sampling technique is popular for conducting surveys and one of the advantages is that this technique provides a better population representation, reducing bias in sampling and is considered easy to handle (Kelley et al., 2003). The responses from the survey were analyzed using analysis packages namely Statistical Package for Social Sciences (SPSS) for descriptive statistics results. Descriptive statistics provide information regarding the measurement of central tendency (mean, mode and median) and standard deviation. The data are shown in tables and graphic forms, which provide a complete view of the profile of the findings with the percentage of responses given to each point on the Likert scale. Sekaran and Bougie (2013) noted that descriptive analysis could provide general overview on what is happening in research finding. Respondents are required to make an appropriate option for each statement submitted by Likert Scale 4 points. As usual, before conducting the data collection, researchers obtained consent from relevant parties such as management of the company and the respondents themselves. After a week researcher managed to collect all 30 responses to form a database for analysis.

Summary from the literature search, Figure 1 below conceptualizes a relationship between "team leader", "team member" and "virtual team effectiveness" in managing a project under virtual team.
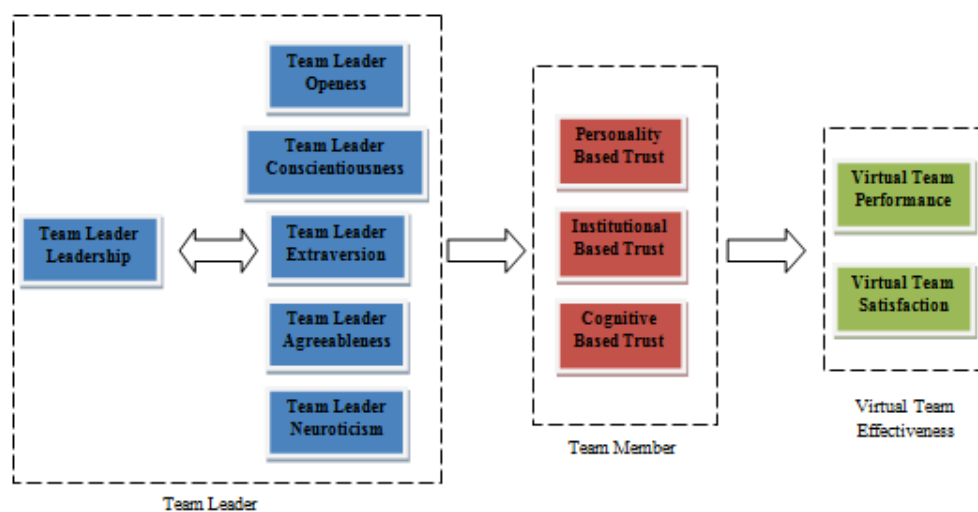

Figure 1: Conceptual Framework

DATA COLLECTION AND DISCUSSION

A brief description of the participants are listed in Table 3. All participants are officers in a company that runs the internet-based services and a virtual team. The identity of each individual is given a number to protect the confidentiality and rights of participants.

Table 3: Demograpic Profile of the Respondents

		Description	Frequency/Percentage
1	Gender	Male	18 (60%)
		Female	12 (40%)
2	Academic vitae :	Graduated	22 (73.33 %)
		Non-graduated	8 (26.67%)
3	Age range :	Over 50 year	0 (0 %)
		40 to 49 tahun	1 (3.33 %)
		30 to 39 tahun	6 (20%)
		20 to 29 tahun	23 (76.67 %)
4 .	Position	Head of unit	4 (13.33 %)
		Unit members	26 (86.66%)

Questionnaires for demographic analysis shows that a total of 18 respondents or 60% are male respondents, while 12 more people or 40% of female respondents. Through the total, as many as 22 people or 73.33% of graduate respondents, while only 8 people or 26.67% of respondents are not a graduate. Age range of respondents, as many as 23 people or 76.67% of the respondents were aged between 20 and 29 years and is categorized as a new member of the new unit, while 6 people or 20% of those in the age range 30 to 39 years.

While as many as 1 person or 3.33% is for those who are in the age range 40 to 49 years. None of the respondents aged over 50 years. 4 respondents or 13.33% was the head of a virtual team while another 26 people or 86.66% of the ordinary members of the unit.

Table 4 : The concept of leadership in general

	Knowledge about the concept of leadership in implementation of tasks	Strongly Disagree	Disagree	Agree	Strongly agree
1	I know the so-called leadership in general	0	0	12 (40%)	18 (60%)
2	I realize the important leadership in the management directly.	0	0	16 (53.33%)	14 (46.67%)
3	Quality of work is related to leadership practices	0	0	10 (33.33)	20 (66.67%)
4	Management is able to improve the quality of leadership of an organization's performance	0	0	8 (26.67%)	22 (73.33%)
5	Leadership among member unit is in the form of matter that involves adding knowledge and existing knowledge	0	0	11 (36.67%)	19 (63.33%)
6	Leadership has a relationship with the quality of the participants units	0	0	7 (23.33%)	23 (76.67%)
7	My profession requires leadership best to produce high quality work quality	0	0	12 (40%)	18 (60%)

Table 4 shows feedback on questions regarding leadership concept. For the first question that *I know what the leadership in general* as there were 18 respondents or 60% who strongly agree with this statement in full and 12 respondents or 40% more on agree. Then the second question that *I am aware of the important leadership in the management* shows finding 14 respondents or 46.67% which is strongly agree and 16 respondents or 53.33% was agreed. This indicates that respondents understand what is

being said as they realize that leadership and leadership is essential for the management of a group.

This is followed by questions three, namely as quality of work is related to leadership practices shows 20 respondents or 66.67% strongly agreed, while 10 respondents or 33.33% agreed. This is followed by questions four on quality management leadership to improve the performance of an organization is able to show the results of 22 respondents or 73.33% strongly agree and 8 respondents or 26.67% agreed. This shows that respondents understand that the quality of the work required by the company depending on the shape and type of existing leadership and management leadership quality would improve organizational performance.

For questions number five, which is about leadership among members of the unit is in the form of a case involving the addition of knowledge available show the results of 19 respondents or 63.33% strongly agreed, while 11 respondents or 36.67% was agreed. It was followed by questions number six of leadership related to the quality of the joint unit also explain the finding of 23 respondents or 76.67% strongly agreed, while 7 of respondents agreed or 23.33%. Questions number seven on where my profession requires leadership best to produce high-grade quality of work shows the results of 18 respondents or 60% strongly agreed, while 12 respondents or 40% agree. The three groups of question show that respondents understand that the concept of good leadership and quality then it will make the unit stronger and more effective. The quality of leadership will bring good quality to the existing unit.

Table 5 : Team personality composition that affect effectiveness of the virtual team success

	Type of team personality composition that mostly impacted the effectiveness of the virtual team success	Strongly Disagree	Disagree	Agree	Strongly agree
1	Virtual team requires a team of experts who have a personality that can help companies	0	0	6 (20%)	24 (80%)
2	I realized that I need to have a personality that is openness, conscientiousness and agreeableness	0	0	9 (30%)	21 (70%)
3	I realized that I need to have a personality that is both extraversion and neuroticism.	0	6 (20%)	14 (46.67%)	10 (33.33%)
4	I need to have personality traits that help a lot and give a chance	0	0	11 (36.67%)	19 (63.33%)
5	I have to think about whether I have the same personality traits with other group members	0	6 (20%)	13 (43.33%)	11 (36.67%)
6	I am aware that my employer personality traits affect the brilliance of my team	0	0	6 (20%)	24 (80%)
7	Excellence companies controlled by good relationships and have an employer-employee personality traits like-minded.	0	0	4 (13.33%)	26 (86.67%)

The next group of questions asked about team personality that affects team success. Table 5 shows feedbacks from the respondents. For questions about whether a virtual team requires a team of experts who have a personality that can help companies, findings showed that 24 respondent or 80% strongly agreed, while 6 respondents or 20% was agreed. This shows that the members of the group must have the appropriate personality traits and in line with the company's needs.

For the second question, is *that I realized that I need to have a personality that is openness, conscientiousness and agreeableness*, findings showed 21 respondents or 70% strongly agree and 9 respondents or 30% was agree. This is followed by questions number three, namely, *I realized that I need to have a personality that is both extraversion and neuroticism,* shows the results of only 10 respondent or 33.33% strongly agreed, while 14 respondents or 46.67% was agreed. Nevertheless, there are 6 respondents or 20% who disagree. These findings explain that the respondent chose the personality traits openness, conscientiousness and agreeableness as personality traits. In addition, questions number four that *I need to have personality traits that help a lot and give a chance*, show the results of 19 respondents or 63.33% strongly agreed, while 11 respondents or 36.67% was agreed. This was followed by questions five which I have to think about whether I have the same personality traits with other group members shows the results of 11 respondents or 36.67% strongly agreed, 13 respondents or 43.33% agree and there are 6 respondents or 20% disagreed. This suggests that the same trait personality is important in a group. At the same time it cannot be ruled out if there is a group like this virtual team.

For questions number six *that I am aware that my employer personality traits affect the brilliance of my team* showed that 24 respondents or 80% strongly agreed, while 6 respondents or 20% agreed. This suggests that employers should have the personality to develop virtual team directly and provide support not only in terms of material and moral support even have to show personality who helped and want to develop virtual team together. Question number seven about the excellence of companies controlled by good relationships and has an employer-employee personality traits like-minded shows the results of 26 respondents or 86.67% strongly agreed, while four respondents or 13.33% agreed. This means that a company must have an employer and an employee who has a personality that requires mutual need and mutual cooperation not only in energy but also in terms of giving their views and thoughts.

Table 6: The effectiveness of the technology and their relationships

	The effectiveness of the technology and their relationships	Strongly Disagree	Disagree	Agree	Strongly agree
1	The success and effectiveness of the technology team leader has something to do with personalities, team trust, and perceived team effectiveness	0	0	8 (26.67%)	22 (73.33%)
2	In addition to the success of a virtual team of personality trait, the ability of technology used is also a contributor to the success	0	0	6 (20%)	24 (80%)
3	Customer-friendly ICT program allows it to help launch the existing virtual team.	0	0	2 (6.67%)	28 (93.33%)

Table 6 shows relationship between technology effectiveness and between team leader personalities and perceived team effectiveness by surveying the ICT and related sectors employees. For the first question, namely the success and effectiveness of the technology team leader has something to do with personalities, team trust, and perceived team effectiveness showed 22 respondents or 73.33% strongly agree that while eight respondents or 26.67% agreed. This means that the success and effectiveness pf the technology is related to the formation of personality, faith groups and the responses of all members in it. For the second question, namely in addition to the success of a virtual team of personality trait, the ability of technology used is also a contributor to the success shows the results of 24 respondents or 80% strongly agree and 6 followed by the respondent or 20% agreed. Technological capabilities also contribute to the

effectiveness of virtual team because he brings the team closer to the customer concerned directly.

For questions number three of Customer-friendly ICT program allows it to help launch the existing virtual team suggests the findings of 28 responDet or 93.33% strongly agreed, while 2 respondents or 6.67% who agree. These findings indicate that the relationship between the use of ICT that enables efficient travel virtual team to be better and more effective.

These findings indicate that the relationship between the use of ICT that enables efficient travel virtual team to be better and more effective. It also shows that through the growing ICT capabilities and at the same time virtual team strength itself with the support of the best personality traits she will develop the company directly.

CONCLUSION

Virtual teams are established of members who work in an organization or across an inter-organizational system. They are employees who are expected to work together and collaborate to achieve an organizational goal within specific time and limited resources. This study was about the relationship between organizational climate, management, leadership and personality trait relationships with virtual team set the use of ICT and development of company. The study attempted to explore the type of team personality composition that mostly impacted the effectiveness of the virtual team success including the personality traits of the team members. Qualitative method of research design was employed with the findings analysed by descriptive approach. The findings showed that the majority of the respondents agreed that the relationship between organizational climate and job satisfaction among the group members was very closely related to leadership, management and existing personality trait. In addition, the smooth use of ICT was directly specifically for virtual team itself. It could be concluded that leadership styles in organizational management are based on personality selected trait.

REFERENCES

[1] Anderson, A., Mcewan, R., Bal, J., & Carletta, J. (2007). Virtual team meetings: An analys is of communication and context. *Computers in Human Behavior, 2558-2580.*

[2] Bromiley, P., & Cummings, L. (1995). Transaction costs in organizations with trust. *Research on Negotiations in Organizations, 219-247.*

[3] Cascio, W., & S.Shurygailo. (2003). E-Leadership and Virtual Teams. *Organizational Dynamics, 362-376.*

[4] Cascio, W. F. (2000). Managing a virtual workplace. *Academy of Management Executive, 81- 90.*

[5] Costigan, R.D., Ilter, S.S. & Berman, J.J. (1998). A Multi-Dimensional Study of Trust in Organizations. Pittsburg State University - Department of Economics: *Journal op Managerial Issues.*

[6] Chudoba, K. M., Lu, M., Watson-Manheim, M. B., & Wynn, E. (n.d.). How virtual are we? Measuring virtuality and understanding its impact in a global organization. *Retrieved January 11, 2009, from How virtual are we? Measuring virtuality and understanding its impact in a global organization: http://redesignresearch.com/chi05/ Virtuality%20Index.pdf*

[7] Cohen, S. G., & Gibson, C. B. (2003). Virtual teams that work: Creating conditions for virtual team effectiveness. *San Francisco: Jossey-Bass.*

[8] Cook, J., & Wall, T. (1980). New work attitude measures of trust, organizational commitment and personal need non-fulfillment. *Journal of Occupational Psychology, 39-52.*

[9] DeSantics, G. P. (1997). Transitions in teamwork in new organizational forms. *In Markovsky,*

[10] Deutsch, M. (1858). Trust and suspicion. Journal of Conflict Research, 265-279. B. (Eds.). *Advances in Group Processes, vol. 14. Greenwich: JAI Press.*

[11] Digman, J. M. (1990). Personality structure: Emergence of the five-factor model. *Annual Reviews in Psychology, 41(1) 417-440.*

[12] Driskell, J. R. (2003). Virtual teams: Effects of technological mediation on team performance. *Group Dynamics: Theory, Research and Practice, 7. 297 -323.*

[13] Duarte, D. L. (2001). Mastering virtual teams: Strategies, tools, and techniques that succeed. *San Francisco, CA: Jossey-Bass, Inc.*

[14] Edwards, K., & Sridhar, V. (2003). Proceeding of the Annual Hawaii International Conference on System Sciences. *Retrieved from http://csdl2.computer.org/comp/proceedings/hicss/2003/1874/01/187410019b.pdf*

[15] Fjermestead, J., and Hiltz, S.R. (1999). "An Assessment of Group Support Systems Experimental Research: Methology and Results*." Journal of Management Information System 15(3): 7-149.*

[16] Fulk, J. D. (1995). Electronic communication and changing organizational forms. *Information Systems Journal, 6(4). 337 - 349.*

[17] Furumo, K., & Pillis, E. d. (2008). Individual Personality Demensions That Impact Trust In Virtal Teams. *Emerald, 1-11.*

[18] Goldman, J. E. (2000). Applied Data Communications 2nd edition New York: *. John Wiley and Sons, Inc.*

[19] Hackman, J. R., & Walton., R. E. (1986). Designing Effective Work Groups. *San Francisco: P.S. Goodman, ed.*

[20] Handy, C. (1995). Trust and the virtual organization. *Harvard Business Review, 40-50.*

[21] Hart, S. L., & Quinn, R. E. (1993). Roles executives play: CEOs, behavioral complexity, and firm performance. *Human Relations, 543–575.*

[22] Hertel, G., Geister, S., & Konradt, U. (2005). Managing virtual teams: A review of current empirical research. *Human Resource Management Review, 69-95.*

[23] Holton, J. (2001). Building trust and collaboration in a virtual team. *Team Performance Management, Vol. 7 Nos 3/4, pp. 36-47.*

[24] Horowitz LM, Wilson KR, Turan B, Zolotsev P, Constantino MJ, Henderson L. How interpersonal motives clarify the meaning of interpersonal behavior: A revised circumplex model. *Personality and Social Psychology Review. 2006; 10:67–86.*

[25] Jarvenpaa, S. &. (1994). The global network organization of the future. *Journal of Management Information Systems. 25 – 58.*

[26] Jarvenpaa, S., & Leidner, D. (1999). Communication and Trust in Global Virtual Teams. *Organization Science. 791 - 815.*

[27] John, M. &. (1992). An introduction to the five-factor model and its applications. *Journal of Personality., 60(2) 175-215.*

[28] Johnson, P. V. (2001). The "wonderland" of virtual teams. *Journal of Workplace Learning, 13. 24 - 30.*

[29] Kayworth, T. R., & Leidner, D. E. (2001). Leadership effectiveness in global distributed teams. *J. Management Inform. Systems, 7–40.*

[30] Kelley, K., Belinda,C., Vivienne, B., and John, S. (2003). *International Journal for Quality in Health Care, Volume 15, Issue 3, May 2003, Pages 261–266*

[31] Kipnis, D., Schmidt, S. M., & Wilkinson., I. (1980). Intra-organizational influence tactics: Explorations in getting one's way. *J. Appl. Psych, 440–452.*

[32] Kozlowski, S. W., Gully, S. M., McHugh, P. P., Salas, E., & Cannon-Bowers, J. A. (1996). A dynamic theory of leadership and team effectiveness: Developmental and task contingent leader roles. *Research in Personnel and Human Resource Management, 253–305.*

[33] Larzelere, R. E. (1980). The dyadic trust scale: Toward understanding interpersonal trust in close relationships. *Journal of Marriage and the Family, 595-604.*

[34] Leonard, B. (2011). Managing virtual teams. *HR Magazine, 39-42.*

[35] Lurey, J. S., & Raisinghani, M. S. (2001). An empirical study of best practices in virtual teams. *Information & Management, 523-544.*

[36] Malhotra, A. (2003). Far-flung virtual teams: Pitfalls and best practices, presentation notes. *(A. Malhotra, Performer) Kenan-Flagler Business School, University of North Carolina, NC, Chapel Hill,, North Carolina, United States Of America.*

[37] Malhotra, A., Majchrzak, A., & Rosen, B. (2007). Leading virtual teams. *Academy of Management Perspectives, 60-70.*

[38] Mathers CD, Vos T, Lopez AD, Salomon J, Ezzati M (ed.) 2001. National Burden of Disease Studies: A Practical Guide. Edition 2.0. *Global Program on Evidence for Health Policy. Geneva: World Health Organization.*

[39] McAllister, D. (1995). Affect- and cognition-based trust as foundations for interpersonal cooperation in organizations. *Academy of Management Journal, 38.*

[40] McCrae & Costa, 1. (1997). Conceptions and correlates of openness to experience. (J. J. R. Hogan, Ed.) Handbook of personality psychology. *Academic Press,, 825–847.*

[41] Miles, R. and Snow, C. (1986) 'Organizations: new concepts for new forms', *California Management Review 28(2): 68-73*

[42] Mittleman, D. &. (1999). Supporting work team effectiveness. In D. &. Mittleman, Communication technologies for traditional and virtual teams. *In E. Sundstom (E.) (pp. 246 - 270). San Francisco: Jossey-Bass.*

[43] Morgeson, F., Scott DeRue, D., & Karam, P. (2010). Leadership in teams: a functional approach to understanding leadership structures and processes. *Journal of Management, 5-39.*

[44] Nemiro, J. (2002). The Creative Processs in Virtual Teams. *Creativity Research Journal. 69- 83.*

[45] Pawar, K., & S. Sharifi. (1997). Physical or virtual team collocation: Does it matter? *International Journal. 283-290.*

[46] Pearce, C. (2004). The future of leadership: combining vertical and shared leadership to transform knowledge work. *Academy of Management Executive, 47-57.*

[47] Piccoli, G., & Ives, B. (2007). Virtual teams: Managerial behavior control's impact on team effectiveness. *Retrieved from Proceedings of the twenty first international conference on Information systems:http://www.users.cs.york.ac.uk/~kimble/teaching/hi-2/p575-piccoli.pdf*

[48] Preiss, K. (1999). The new economy – old business rules turned upside down. (K. Preiss, Performer) *Paper presented at the Faculty Research Seminar, Graduate School Business, University of Cape Town, Cape Town, Cape Town, Cape Town, South Africa.*

[49] Quinn, R. E. (1988). Beyond Rational Management: Mastering the Paradoxes and Competing Demands of High Performance. *San Francisco: Jossey-Bass Inc.*

[50] Robinson, A., & Harvey, M. (2008). Global leadership in a culturally diverse world. *Management Decision, 466-80.*

[51] Roojie, J. d. (2007). Barriers for shared understanding in virtual teams: A Leader Perspective. *The Electronic Journal of Virtual Organizations and Networks, 64 – 77.*

[52] Sekaran, U. and Bougie, R. (2013) Research Methods for Business: A Skill-Building Approach. *6th Edition, Wiley, New York*

[53] Shachaf, P., & Hara, N. (2005). Team Effectivenes s in Virtual Environments : An Ecological Approach. IN FERRIS, P.A.G., S., (Ed.) *Teaching and Learning with Virtual Teams. Idea Group Publishing.*

[54] Somech, A. (2006). The Effects of Leadership Style and Team Process on Performance and Innovation in Functionally Heterogeneous Teams. *Journal of Management, 32*(1), 132–157

[55] Stott, K., & Walker., A. (1995). Teams, Teamwork, and Teambuilding. *Singapore: Prentice Hall.*

[56] Tuffley, D. (2009). Leadership of Integrated teams in Virtual Environments. *IGI Global, 136- 151.*

[57] Vatsyayan, S. (1981). A sense of time: An exploration of time in theory, experience and art. *Delhi: Oxford University Press.*

[58] Watson & Clark, 1. (1997). Extraversion and its positive emotional core. R. Hogan, J. Johnson, S. Briggs. *Handbook of Personality Psychology. Academic Press, San Diego, 767-793.*

[59] Yukl, G., & Tracey, J. (1992). Consequences of influence tactics used with subordinates, peers, and the boss. *J Appl Psych, 525–536.*

[60] Zaccaro, S. J., & Burke, C. S. (1998). Team versus crew leadership: Differences and similarities. *OH: TX. SIOP, Bowling Green.*