THE INFLUENCE OF VIRTUAL PLATFORMS ON TEAMWORK PERFORMANCE AT THE UNITED NATIONS: A CASE OF THE UNITED NATIONS OFFICE FOR PROJECT SERVICES, EAST AFRICA HUB (UNOPS-EAH)

BY

AZIZ ALIBHAI

THE UNITED STATES INTERNATIONAL UNIVERSITY (USIU)

SPRING, 2017
THE INFLUENCE OF VIRTUAL PLATFORMS ON TEAMWORK PERFORMANCE AT THE UNITED NATIONS: A CASE OF THE UNITED NATIONS OFFICE FOR PROJECT SERVICES, EAST AFRICA HUB (UNOPS-EAH)

BY
AZIZ ALIBHAI

A Research Report Submitted to the Chandaria School of Business in Partial Fulfillment of the Requirement for the Award of a Master’s of Science in Organizational Development (MOD)

THE UNITED STATES INTERNATIONAL UNIVERSITY (USIU)

SPRING, 2017
DECLARATION

I, the undersigned declare that this research study is my original work and has not been presented to any other college, institution or university other than the United States International University-Africa for academic credit.

Signature: ..............................................               Date: ..............................................

Aziz S. Alibhai (614785)

This research study has been submitted for examination with my approval as the appointed United States International University-Africa supervisor.

Signature: ..............................................               Date: ..............................................

Dr. Zachary Mosoti
USIU-Africa

Signature: ..............................................               Date: ..............................................

Dean, Chandaria School of Business
USIU-Africa
DEDICATION
I dedicate this research project to the Alibhai family for the support they have accorded me in life and studies which continues to mould who I am today.
ACKNOWLEDGEMENT

I would like to express my deepest appreciation to all those who provided me with knowledge and guidance to complete this research study. I acknowledge my supervisor Dr. Mosoti for the intellectual guidance that has made this work successful; God bless you. I remain indebted to UNOPS-EAH for allowing me to use it as the case company. This study also recognizes the support of United States International University-Africa for a well equipped library and provision of educational and research materials that have been instrumental in the development and conceptualization of this research study. I cannot neglect to appreciate Jazz Dhanjal who was exceptionally supportive through the course of this master’s degree. Ultimately, I thank the Almighty Allah for strength, health and protection that has seen me successfully complete this study.
ABSTRACT

The purpose of this study was to investigate the influence of virtual platforms on teamwork performance at the United Nations in Kenya. The following are the research questions that this study sought to answer; to what extent does communication influence virtual teamwork performance at the United Nations Office for Project Services in Kenya? To what extent does collaboration influence virtual teamwork performance at the United Nations Office for Project Services in Kenya? How do interpersonal relationships influence virtual teamwork performance at the United Nations Office for Project Services in Kenya? To what extent does trust influence virtual teamwork performance at the United Nations Office for Project Services in Kenya?

This study adopted descriptive research design in order to provide a framework to examine current conditions, trends and status of events regarding virtual platforms and teamwork performance. The target population was the United Nations Office for Project Services, East Africa Hub (UNOPS-EAH). The study adopted the use of purposive sampling technique to select the participants. The sample size was 100 employees of UNOPS-EAH. Structured questionnaires were used as method of data collection. Data was analyzed using qualitative and quantitative approaches in statistical analysis software. The presentation was made using tables.

Findings established that communication, collaboration, interpersonal relationship and trust improved teamwork performance. The study findings indicated that virtual platforms support staff exchanges of ideas; staff sharing of work experiences; staff networking; staff dissemination of data and information; closer partnership among employees; closer partnership between employees and managers; linking employees through networking; working on joint projects and sharing of opinions. These were found to improve teamwork performance in the organization. However, findings also indicated that virtual platforms did not support staff expression of feelings; physically interaction; workplace openness, staff integrity and transparency and therefore could not improve teamwork performance.

In conclusion, communication, collaboration, interpersonal relationship and trust improved teamwork performance. Virtual platforms also support staff exchanges of
ideas; staff sharing of work experiences; staff networking; staff dissemination of data and information; closer partnership among employees; closer partnership between employees and managers; linking employees through networking; working on joint projects and sharing of opinions – which had positive impact on teamwork performance. However, virtual platforms did not support staff expression of feelings; physically interaction; workplace openness, staff integrity and transparency.

This study recommends that UNOPS-EAH works towards improving communication elements in the organization such as, staff exchanges of ideas through virtual platforms; staff sharing of work experiences through virtual platforms; staff networking; and staff dissemination of data and information through virtual platforms to enhance teamwork performance. With regard to collaboration, this study recommends that UNOPS-EAH continue to entrench collaborative elements in the organization such as closer partnership between employees to employee; closer partnership between employee and managers; linking employees through networking; and staff joint projects in virtual platforms to improve teamwork performance. With regard to interpersonal relationship, this study recommends that UNOPS-EAH adopt different interpersonal relationship strategies of improving teamwork performance since virtual platform did not support sharing of feelings and physically interaction of employees thus thereby adversely affecting teamwork performance. Lastly, concerning trust, this study recommends that UNOPS-EAH adopt different strategies of developing employees trust since virtual platform did not improve workplace openness, staff integrity and transparency thus thereby adversely affecting teamwork performance.
TABLE OF CONTENTS

DECLARATION..................................................................................................................iii
DEDICATION....................................................................................................................iv
ACKNOWLEDGEMENT......................................................................................................v
ABSTRACT........................................................................................................................vi
TABLE OF CONTENTS ......................................................................................................viii
LIST OF TABLES ..............................................................................................................x
ABBREVIATIONS / ACRONYMS ....................................................................................xi
CHAPTER ONE .................................................................................................................. 1
1.0 INTRODUCTION.......................................................................................................... 1
1.1 Background of the Problem ....................................................................................... 1
1.2 Statement of the Problem ........................................................................................ 4
1.3 Purpose of the Study ................................................................................................ 6
1.4 Research Questions .................................................................................................. 7
1.5 Significance of the Study .......................................................................................... 7
1.6 Scope of the Study .................................................................................................... 8
1.7 Operational Definition of Key Terms ...................................................................... 8
1.8 Chapter Summary ..................................................................................................... 9

CHAPTER TWO ................................................................................................................ 10
2.0 LITERATURE REVIEW ............................................................................................. 10
2.1 Introduction ................................................................................................................ 10
2.2 Communication on Virtual Teamwork Performance ............................................. 10
2.3 Collaboration on Virtual Teamwork Performance ............................................... 15
2.4 Interpersonal Relationships and Virtual Teamwork Performance ....................... 20
2.5 Trust on Virtual Teamwork Performance ............................................................... 24
2.6 Chapter Summary .................................................................................................... 30

CHAPTER THREE .......................................................................................................... 31
3.0 METHODOLOGY ...................................................................................................... 31
3.1 Introduction ............................................................................................................... 31
3.2 Research Design ...................................................................................................... 31
3.3 Population and Sampling Design .......................................................................... 31
3.4 Data Collection Methods ....................................................................................... 34
3.5 Data Collection Procedures ................................................................................... 34
LIST OF TABLES

Table 3.1  Target Population ................................................................. 32
Table 3.2  Sample Size ........................................................................ 33
Table 4.1  Response Rates ................................................................... 35
Table 4.2  Gender Analysis ................................................................... 36
Table 4.3  Age Analysis ........................................................................ 36
Table 4.4  Highest Level of Education .................................................... 37
Table 4.5  Duration of Employment ......................................................... 38
Table 4.6  Dissemination of data and information on teamwork performance .... 39
Table 4.7  Exchange of ideas on teamwork performance .......................... 40
Table 4.8  Sharing of work experiences on teamwork performance .............. 41
Table 4.9  Networking through virtual platforms on teamwork performance .... 42
Table 4.10 Closer partnerships among employees on teamwork performance .... 43
Table 4.11 Partnerships between staffs and managers on teamwork performance .... 44
Table 4.12 Networking of teams on teamwork performance ........................ 45
Table 4.13 Virtual joint projects on teamwork performance ........................ 46
Table 4.14 Staff virtual connectedness of employees on teamwork performance .... 47
Table 4.15 Sharing of opinions on teamwork performance ........................... 48
Table 4.16 Sharing of feelings on teamwork performance ............................. 49
Table 4.17 Staff and managers interaction on teamwork performance ............... 50
Table 4.18 Openness on teamwork performance ....................................... 51
Table 4.19 Virtual staff support on teamwork performance .......................... 52
Table 4.20 Integrity on teamwork performance ......................................... 52
Table 4.21 Transparency on teamwork performance .................................... 53
<table>
<thead>
<tr>
<th>ABBREVIATIONS / ACRONYMS</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICT</td>
<td>Information Communication Technology</td>
</tr>
<tr>
<td>IT</td>
<td>Information Technology</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical Package for Social Sciences</td>
</tr>
<tr>
<td>TAM</td>
<td>Technology Acceptance Model</td>
</tr>
<tr>
<td>UNOPS</td>
<td>United Nations Office for Project Services</td>
</tr>
<tr>
<td>UNOPS-EAH</td>
<td>United Nations Office for Project Services, East Africa Hub</td>
</tr>
</tbody>
</table>
CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Problem

Globally, teams are a core function of today’s modern organizations. Teams are groups of individuals who work together to accomplish a task or series (Havey, 2014). Teamwork is therefore a combination of teams into specific chunks of duty (Aaker, 2014). In the phase of an emerging advance in technology, teams especially those that transcend into long geographical distances are adopting the use of virtual platforms as their means and modes of operations. Influenced by globalization, markets liberalizations and driven by the need for organizations internalization, (Borgatti and Foster, 2013) opines that virtual platforms as teams’ working foundation are an in-thing and remain a pivot point to organizations’ success and performance.

Aver (2012) defines virtual teams as small temporary groups of geographically, organizationally and/or time dispersed knowledge workers who coordinate their work, mainly with electronic information and communication technologies to carry out one or more organization tasks. Carley (2015) describes virtual teams as the modern set of organizations workgroups that employ the digital communications, video and audio links, electronic whiteboards, e-mail, instant messaging, websites, chat rooms, as substitutes for physical collocation of the team members.

In Bertalanffy (2012) view, virtual teams have progressed and continue to grow as modern organizations teams’ platforms of operations due to two reasons; first, the emergence of virtual teams was a response to various challenges organizations of the 21st century faced and still face. Cummings and Cross (2013) cements that the rapid changes in the business environment, globalization of the marketplace, a glowing popularity of inter-organizational alliances combined with tendency to design more flexible and versatile organization structure, accelerated the need for organizations to coordinate work across geographical, functional, intra – and inter-organizational as well as temporal boundaries. In Cohen and Mankin (2015) second thoughts, the rapid development of communication technology during the last decades, made the distribution and the coordination of work much easier and much faster across time and across different geographical locations.
In Owiti (2015) context, a virtual team is seen as a group of workers spread organizational and/or geographically that gather to work together on a common project, via communicational and informational technology. A virtual team makes almost all their interactions by electronic means (Borgatti and Foster, 2013) having only few face-to-face meetings or none if its members are not in the same physical space. The members can be from different organizations, being together because they have common interests and are trying to find a common solution to a certain problem (Cottrill, 2013).

Virtual teams are also an important research area for organizational scholars who approach their studies ethnographically and through survey research primarily. Conditions, structures and processes of collaboration in global virtual teams are basic building blocks of knowledge creation, knowledge sharing and innovation in global networked organizations (Bhagat, 2014). The technologies that enable or constrain global teams also impact team functioning (Aaker, 2014). Understanding the relationship between global team structures, processes, and technologies and team performance is paramount to managing them effectively in the context of global networked organizations (Havey, 2014). Correlating the performance of global virtual teams with their network structure is possible with today’s information technology infrastructure as well as through ethnographic and survey research (Crosse, 2012).

In terms of benefits, virtual teams are known to be able to coordinate work related activities over longer geographical distance on a shared network platform (Crosse, 2012). Virtual teams are also flexible in terms of choice of where one works whether in the office or at home (Bellarby and Orange, 2013). “It (virtual platform) creates efficiency, virtual planning, organization and management of company affairs in a networked system that improves the overall organization performance and success” (Cummings and Cross, 2013:16).

Bibow (2015) further explains that virtual teams are used by different organizations for increasing efficiency in vast activities domains, such as research and development, knowledge management, learning and training, manufacturing, marketing and others. There are some obvious virtual teams’ advantages: people no longer have to work in the same place, participants can be involved in task attendance from any location.
around the globe, in any moment of day or night. Because virtual teams break time and space barriers, they can also utilize to a maximum extent the members experience from the organization. Taking into consideration such characteristics, virtual teams have a huge potential for improving the organizational efficiency (Trivedi and Desai, 2012).

However, being equipped with even the most advanced technologies is not enough to make a virtual team effective, since the internal group dynamics and external support mechanisms must also be present for a team to succeed in the virtual world (Cottrill, 2013). Virtual teams are technology-mediated groups of people from different disciplines that work on common tasks (Borgatti and Foster, 2013) so the way the technology is implemented seems to make the virtual teams outcome more or less likely (Anderson et al., 2007). As Carley (2015) explains, team instructor should choose the suitable technology based on the purpose of the team otherwise ineffectiveness and dismal performance remain in teams.

De Grauwe (2014) further adds that virtual teams face unique challenges. Team members may find it more difficult to establish rapport and trust with team members in remote locations. This is especially true when team communication is limited to virtual meetings. Building consensus for decision-making is frequently cited as another challenge for virtual teams since team members may have different perceptions about how decisions should be made. In addition to these interpersonal barriers, virtual teams must overcome challenges related to differences in time zones, native languages and cultural expectations when conducting business (Derbali, 2013).

As Havey (2014) also opines, technology may present its own set of challenges for virtual teams, especially when team members use different hardware platforms and a variety of communication tools. E-mail and phone calls may be sufficient for relaying fact-based information, but face-to-face communication is still the best way to build trust and foster team collaboration. Cohen and Mankin (2015) elucidate that virtual teams have a much higher chance of meeting their goals when they are provided with a virtual environment that supports face-to-face communication and real-time collaboration.
Above all, communication on virtual teams is often less frequent, and always is less rich than face-to-face interaction, which provides more contextual cues and information about emotional states — such as engagement or lack thereof. The only way to avoid the pitfalls is to be extremely clear and disciplined about how the team will communicate. It is important to create a charter that establishes norms of behaviour when participating in virtual meetings, such as limiting background noise and side conversations, talking clearly and at a reasonable pace, listening attentively and not dominating the conversation, and so on. The charter also should include guidelines on which communication modes to use in which circumstances, for example when to reply via email versus picking up the phone versus taking the time to create and share a document (Trivedi and Desai, 2012).

Bell and Kozlowski (2012) explains that team leaders also need to align their team on goals, roles and responsibilities in the first 90 days. Bell and Kozlowski further elaborate that with virtual teams, however, coordination is inherently more of a challenge because people are not co-located. So it’s important to focus more attention on the details of task design and the processes that will be used to complete them. Team leaders need to simplify the work to the greatest extent possible, ideally so tasks are assigned to sub-groups of two or three team members. And make sure that there is clarity about work process, with specifics about who does what and when. Then periodically do “after-action reviews” to evaluate how things are going and identify process adjustments and training needs (Foskett, 2012)

This study sought to investigate the influence of virtual platforms on teamwork performance at the United Nations. The study focused on United Nations Office for Project Services (UNOPS) based in Copenhagen in Denmark with a subsidiary body in Kenya named United Nations Office for Project Services, East Africa Hub (UNOPS-EAH) as the case study.

1.2 Statement of the Problem

Virtual Teams are becoming more and more important and continuing to grow in popularity. A virtual team is a group of people that uses networked system e.g. e-mail, conferencing, intranet, extranet and so on to undertake organizations activities (Honohan, 2013). In Fugmann (2013) preposition, the enabler for a virtual team to
exist is the information technology. If we remove information technology from this
equation, we will eliminate the existence of a virtual team. Members of a virtual team
coordinate their work, predominantly with electronic information and communication
technologies (e-mail, video-conferencing, telephone, etc.).

Performance is the measurement of organization success in its achievement of
objectives (Havey, 2014). The organization performance is a core concept within
work and organizational psychology. During the past ten to fifteen years, researchers
have made progress in clarifying and extending the performance concept. Moreover,
advances have been made in specifying major predictors and processes associated
with performance in modern organizations. With the ongoing changes that we are
witnessing within organizations today, the performance concepts and performance
requirements are undergoing changes in every sector. The same applies to the equal
level of attention given to its measurement in the modern organizations (Bellarby and
Orange, 2013).

Research indicates that there is a relationship between virtual teamwork and
organization performance (Carley, 2015; Aaker, 2014; Havey, 2014). These studies
established that virtual teamwork improves organization performance through virtual
shared information, knowledge and experience across the teams. Borgatti and Foster
(2013) study also found that organizations with well anchored virtual networks for
teams performed better than organizations that do not.

Trivedi and Desai (2012), Carley (2015), Cohen and Mankin (2015) and Bell and
Kozlowski (2012) further elucidate that the reason and the genesis as to why virtual
has been quickly enabled and adopted by many modern organizations is to improve
performance. The scholars opine that when team work under a networked platform as
source of coordinating organizational activities then performance is improved through
reduced operational costs, elimination of distance barrier, improved communications
and efficient exchange of knowledge and sharing of information between or among
the virtual team members. This results in overall improvement in the performance of
the organization and achievement of objectives as well as the core functions of the
organization.
In view of the above paragraph, understanding the relationship between global team structures, processes, and technologies and team performance is paramount to managing them effectively in the context of global networked organizations (Crosse, 2012). Further, correlating the performance of global virtual teams with their network structure is possible with today’s information technology infrastructure as well as through ethnographic and survey research (Zaccaro and Bader, 2014).

Despite the aforementioned, Havey (2014) explains that little research has been done globally to understand how virtual platform influences teams’ operations and performances. Trivedi and Desai (2012) opine that in Africa, there are a lot of grey areas in how virtual teams should operate to maximize organizations optimal growth. This position is further shared by Owiti (2015) study that established that subjects relating to the link between virtual platforms and teamwork performance have not been fully exploited in Kenyan perspective.

In the local context, United Nations Office for Project Services, East Africa Hub (UNOPS-EAH) is charged and mandated with the objective to advance sustainable implementation practices in development, humanitarian and peace building efforts in East Africa. For UNOPS-EAH based in Kenya and specifically in Nairobi to operate, it must liaise and coordinate its core functions with its project offices based in Somalia, Burundi, Uganda, Rwanda, Tanzania, and South Sudan, as well as its headquarters in Copenhagen, Denmark. Further, UNOPS-EAH must work with its sister UN Agencies and its core business partners. This has prompted the organization to operate on a virtual platform to fulfill these endeavors. However, with the adoption of virtual teamwork operations, there has been a gap and the need for a research to link how it influences the UNOPS-EAH performance. This study was therefore established to fill this research gap by seeking to answer the research question: How do virtual platforms influence teamwork performance at UNOPS-EAH in Kenya?

1.3 Purpose of the Study

The purpose of this study was to investigate the influence of virtual platforms on teamwork performance at the United Nations in Kenya.
1.4 Research Questions
The following research questions guided the study;
1.4.1 To what extent does communication influence virtual teamwork performance at the United Nations Office for Project Services in Kenya?
1.4.2 To what extent does collaboration influence virtual teamwork performance at the United Nations Office for Project Services in Kenya?
1.4.3 How do interpersonal relationships influence virtual teamwork performance at the United Nations Office for Project Services in Kenya?
1.4.4 To what extent does trust influence virtual teamwork performance at the United Nations Office for Project Services in Kenya?

1.5 Significance of the Study
1.5.1 The Management and Employees
This study would be significant to United Nations Office for Project Services (UNOPS) as investigation on the influence of virtual platforms on teamwork performance could be used to add value on how work teams are managed by the organization. This could go along way in improving the performance of the organizations operations in the country. The significance attached to UNOPS could also be extended to other United Nations bodies working under the umbrella of United Nations.

1.5.2 HR Practitioners
This study would also be significant to the Human Resource practitioners, Government of Kenya, policy developers and opinion shapers in terms of developing human resource frameworks that could be used to manage and improve operations of the work teams in the organizations in Kenya.

1.5.3 Contribution to the General Body of Knowledge
It was hoped that the study would be beneficial to the general body of knowledge as it would provide the requisite information that could be used as study material for teaching.

1.5.4 Other Researchers
In future, other researchers could seek to extend further investigation on the influence of virtual platform on teamwork performance in Kenya and beyond. This study
therefore would be important to future researchers as it could be used as source for future references and citation to improve the body of knowledge in the area of virtual platform and teamwork performance.

1.6 Scope of the Study
This study was limited to the influence of virtual platform on teamwork performance at the United Nations in Kenya. This study sought to assess how communication, collaboration, interpersonal relationships and trust influence virtual teamwork performance at the United Nations in Kenya. The study focused on UNOPS EAH, a subsidiary of United Nations based in Nairobi County in Kenya. The target population comprised of UNOPS EAH management and the staff.

1.7 Operational Definition of Key Terms
1.7.1 Collaboration
In this study, this was defined as an intensive form of partnership or close working relationships that is formed by virtual teams in networked systems as defined by (Borgatti and Foster, 2013).

1.7.2 Communication
This is a method and means that teams use to convey and pass information from one party to the other (Bell et al., 2012). In this study, communication meant how members of a team convey and pass information amongst each other through a virtual platform.

1.7.4 Knowledge Sharing
In this study, this was defined as form of sharing data, information and skills using network technologies platforms as defined by (Cohen and Mankin, 2015).

1.7.5 Performance
In this study, this was defined as method and parameters used to measures the achievement and activities of virtual teams as defined by (Bell et al., 2012).

1.7.6 Trust
In this study, this was defined as the confidence that the virtual team members have on one another or on each other as they work in networked systems as defined by (Bell et al., 2012).
1.7.7 Virtual Teams
In this study, this was defined as teams that work and carry out their activities on networked systems or technologies as defined by (Borgatti and Foster, 2013).

1.8 Chapter Summary
Chapter one focused on the introduction, background to the problem, statement of the problem, purpose of the study and research questions, significance of the study, scope of the study, operational definition of key terms and the chapter summary. Chapter two focused on the literature review as per the research questions. Chapter three covered the research methodology. Chapter four covered the results and the research findings of the study. Chapter five covered the summary, discussion, conclusions and recommendations for further studies.
CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction
This chapter discussed the empirical review on issues relating to communication, collaboration, interpersonal relationships, and trust and their influence on virtual teamwork performance. Empirical review was concerned with the study of past literature or research that has been undertaken in the same subject area which other studies are focusing on (Peil, 2014). The empirical review focused on communication, collaboration, interpersonal relationships, and trust on virtual teamwork performance.

2.2 Communication on Virtual Teamwork Performance

2.2.1 Communication Defined
Havey (2014) defines communication as the exchange of information between a person to a person or accompany to a company. According to Kirkman, et al., (2016), communication differs according to the level of information richness. The Media Richness Theory (MRT), proposed by Hoopes et al., (2014), is used to define the ability of different communication media to transfer information (Zaccaro and Bader, 2014). The communications medium with the highest level of richness is face-to-face communication, followed by video conferencing, phone, and chat respectively. The lowest richness level is represented by e-mail, text messaging and written documents (Cascio, 2014). The basic infrastructure that any organization conducting global projects must be equipped with consists of the computer-mediated communication systems (Majchrzak et al., 2012).

In Malhotra and Majchrzak (2015) view, computer-mediated communication systems are those that use computers to structure and process information and use telecommunications networks to facilitate its exchange. These systems include e-mail, voice messaging, computer conferencing, etc. The rapid development of technologies that support communication and facilitate the exchange of data and information, including the internet, telephony, broadcast media, and all kinds of audio and video transmission technologies, improves the team work undertaken within geographically distributed project teams.
2.2.2 Communication and Virtual Teams

Information and communication technologies (ICT) are indispensable to globally distributed projects. ICT enables communication among geographically dispersed project teams and positively impacts project team efficiency. Furthermore, information and communications media help to create and maintain trust within geographically distributed units. As Kozlenkova et al., (2014) explains, these factors are particularly significant for creating a bond between project team members and establishing a sense of team unity. Globally distributed information technology (IT) projects have become common practice within today’s organizations mainly due to outsourcing, globalization, and the ever increasing internationalization of companies. Moreover, the rapid development of information and communication technologies (ICT) has impacted the increasing use of dispersed project teams (Zaccaro and Bader, 2014).

Havey (2014) explains that communication and trust are essential to every type of business setting but they undeniably play a dominant role in virtual organizations, and for this reason also in globally distributed IT projects. Regular face-to-face communication among team members of collocated projects supports the building of trust and the sense of “teamness” (Ludwig & Pemberton, 2013). Since face-to-face communication is not always applicable to globally distributed IT projects, information and communication technologies play a major role in communicating and creating trust within global project teams. Though companies extensively use ICT to enable and support communication in distributed project teams, communication is still often recognized as one of the biggest challenges encountered in globally distributed projects (Bellarby and Orange, 2013).

Another challenge, strictly related to communication, is creating a bond among geographically dispersed project team members. Project team members located at different sites are less likely to perceive themselves as part of the same team than members of a collocated project team (Lipnack and Stamps, 2014). As globally distributed projects strongly rely on communication media (Majchrzak et al., 2012), it is important to ensure that project team members are able to use the available means effectively.
Since communication in globally distributed IT projects is still recognized as particularly challenging, it requires further in-depth analysis. The goal of this research is twofold. First, the author attempts to identify new trends toward ICT use in globally distributed IT projects. Second, the author aims to fill the gap in prior literature by analyzing how ICT can be used for developing this sense of teamness within globally dispersed project teams. In light of the increasing importance of globally distributed project teams, this study contributes to the research on global project team unity (Aaker, 2014).

Furst et al., (2012) found that when a team of employees are linked together, they are likely to frequently communicate and exchange information leading to improved performance. However, as Havey (2014) posit, communication breakdown can wreak havoc in organization as virtual teams members struggle to effectively communicate and work with one another. On the other hand, communication complexity is also the result of diverse competences of the virtual team members (Borgatti and Foster, 2013) While communication can be viewed as a traditional face-to-face team issue, effective communication problems and challenges within virtual teams can be magnified by distance, time, and increased cost of interaction due to the slower pace of nonnative speakers’ communication (Malhotra & Majchrzak 2012). Furthermore, cultural diversity have a negative impact on communication (Shachaf, 2008) and cultural differences seem to affect virtual teams’ performance poorly in maintaining effective cross-functional communication (Majchrzak et al., 2012).

Carley (2015) argue that the dissemination of data improves teamwork performance in the organization. As Carley (2015) explains, both advances in information communication technology (ICT) and well-designed organizational arrangements will enable well-prepared virtual team members to communicate more effectively and more clearly across time and across different geographical locations than traditional face-to-face teams (McPherson, 2016). In Cohen and Mankin (2015) case study of virtual teams working in the European automotive industry have shown that enhanced communication and collaboration between geographically distributed engineers at automotive manufacturer and supplier sites make them obtain benefits such as better quality, reduced costs and a reduction in the time-to-market (between 20% to 50%) for a new product vehicle. Cummings and Cross (2013) highlighted the need for a
shared project knowledge base in a virtual team context to promote value creation through improved communication. This is where virtual teams need frequent and effective communication (Cummings and Cross, 2013) and where virtual teams need to avoid miscommunications (Bellarby and Orange, 2013). Finally, Carley (2015) observed that organizations which adopt virtual teams must not only ensure good communication among all members of the dispersed team but also provided regular and timely communication feedback. Similarly, the importance of implementing governance guidelines, rules and policies must be clearly understood (Cottrill, 2013). Importantly, having a well-defined strategy relating to virtual teams is imperative to overcome these communication challenges.

In the 21st century, the most valuable organizational resource is how it communicates, knowledge sharing among workers and their productivity, replacing the most valued asset of capital and equipment in the 20th century (Cottrill, 2013). According to Havey (2014), for virtual teams to operate effectively, it must be supported by extensive dissemination of data and circulation of information. Similarly, Trivedi and Desai (2012) hold that the most valuable asset firms have is the communication of their employees. Aaker established special virtual teams, which are known as Virtual Cross-value-chain or collaborative creative teams for creatively and rapidly designing a new innovative low-cost engine (Aaker, 2014). Virtual teams face many challenges in creative work, non-routine problem-solving and unpredictable solutions without the merit of having face-to-face communications.

Cohen and Mankin (2015) opine that when staffs are linked through online platforms, they are likely to share more information and ideas that improves teamwork performance. Havey (2014) on the other hand established that exchange of ideas and information was essential element for successful teamwork performance. Another study found that maintaining mutual communication was a central problem of geographically dispersed virtual collaboration. Based on 13 case studies of geographically dispersed teams, Zaccaro and Bader (2014) identified five types of problems related to failures of maintaining mutual communication: failure to communicate and retain contextual information, unevenly distributed information, difficulty communicating and understanding the salience of information, differences in speed of access to information, and difficulty interpreting the meaning of silence.
With the aid of effective use of communication, in terms of value creation, knowledge, which is distributed throughout virtual teams environment, could create value when it is identified and transferred from a source location and applied where it is needed (Carley, 2015). According to Shachaf (2008), sharing work experience empowers employees and improves performance of the organization in general. From a resource-based view of the firm, communication can sustain long-term competitive advantage as it is not easy to imitate and is socially complex (Havey, 2014). The groupware and ICT such as electronic discussion forums and repositories can support communication, knowledge sharing and knowledge transfer, whereas workflow systems support knowledge application (Crosse, 2012). As Mansfield (2014) concludes, sharing of work experiences through virtual platform enable teams to perform as they exchange how they can solve problems and improve decision making among themselves.

2.2.3 Communication Problems Related to Virtual Teams
According to Malhotra and Majchrzak (2015), the communication problems that global projects often face tend to be a result of missing informal communication, which is a constant struggle for internationally distributed teams. Past evidence indicates that communication in global software development is less frequent (Cotrill, 2013) and less effective (Cummings and Cross, 2013) than in classical, collocated project teams. Thus, the ICT must strive to strengthen the effectiveness and efficiency of communication practices between geographically distributed team members. Furthermore, communication media should enable rapid information exchange and promote regular communication. Previous research results indicate that ICT reduce the negative effects of intercultural communication and support the positive aspects of decision making in global virtual teams (Needham, 2014).

Malhotra and Majchrzak (2012) established that virtual communication enhances team partnership and framework of engagement therefore contributes to the organization performance. However, Zaccaro and Bader (2014) explain that another reason for communication problems in globally dispersed projects is a strong dependence of project team members on technology. An unforeseen technical problem, such as a sudden power outage at one location, can lead to temporary communication breakdown. This, in turn, can result in increased anxiety felt by team
members at the other site. Furthermore, a high information load due to excessive use of e-mails can lead to delays as well as increasing the risk of overseeing important information (Havey, 2014). In addition, slow or delayed feedback due to communication media has negative impact on global project team performance. When using asynchronous communication tools, such as e-mail, discussion boards, shared documents, web logs, etc. for solving urgent issues, the lack of immediate response can delay the decision making process. Delayed response is perceived as an obstacle to the development of ‘familiarity’ and a sense of unity among dispersed project team members. Thus, choosing the right communication media in particular situations is crucial.

Creating a sense of unity in globally distributed projects poses a challenge, in particular due to the distances existing between project team members and lack of regular face-to-face communication that would strengthen trust among team members. Distant project team members often feel less teamness and perceive their other colleagues as being less cooperative and helpful in the event of increased workloads (Rumelt, 2013; Furst et al., 2012). Prior literature recognizes the need to reduce distance separating parts of globally distributed projects (Peteraf, 2013; Cascio, 2014; Furst et al., 2012). However, the author found that previous research on the significance of teamness in global projects as well as the literature on the impact of ICT on creating a sense of unity in geographically dispersed project teams is scarce.

In Maznevski and Chudoba (2014) study, the finding was that virtual platform bring members of a working group as a family thus enabling them to work as a team.

### 2.3 Collaboration on Virtual Teamwork Performance

Within the context of collaboration technology enabled project work, we consider as collaborative tasks those which are characterized by high ambiguity and non-repetitiveness, and those which require intensive collaboration activities among the members of the project team. The first are described with the task non-routineness theoretical construct (Majchrzak et al., 2015), while the latter with task interdependence (Zaccaro and Bader, 2014).
2.3.1 Collaboration Defined
Townsend et al (2016), define collaboration as the partnership that brings together members of a team of different team to work together. Collaboration is an intensive form of work (Maznevski and Chudoba, 2014) and project teams constitute particularly intense collaborative work contexts. According to Davis (2012), organizations that invest and engage well through virtual platform performed better than organizations that did not appreciate technology. As Shapiro (2015) further argue, virtual platform unites a team and foster close relationships that enhance performance. Strong (2012) point out that it is increasingly clear that the effectiveness of teams cannot be understood apart from the organizational context in which they are embedded. Collaborative technologies tend to become the backbone for the support and enactment of collaboration activities in project teams, since they facilitate the access, creation, processing, storage, retrieval, distribution and analysis of information across roles and positions in a project, physical and temporal boundaries, and thus allow cooperation across geographical dispersed project members (Teece et al., 2012). Malhotra and Majchrzak (2015) elucidate that when task ambiguity is high, multiple interpretations and solutions are possible, and thus a rich medium of communication, such as a collaboration technology, is necessary for the task to be handled effectively.

2.3.2 The Link between Collaboration and Virtual Teams
The issue of collaboration has been predominant in the management literature over decades now. Globalization and the availability of communication and collaborative technologies has led to increased attention on work models such as virtual teams and networked organizations (Majchrzak et al., 2012). The literature on collaboration has underscored the positive relationship between collaborative systems and teamwork (Davis, 2012). Not surprisingly, several researchers and practitioners are concerned with the issue of understanding and managing individuals’ attitudes and behaviour towards new IT in work and organization contexts.

In Malhotra and Majchrzak (2015) view, collaboration technology utilization in project work evaluations have mostly relied on exploring team based contextual issues such as trust (Tou, 2013; Furst et al., 2012), cohesiveness (Majchrzak et al., 2012), identity (Cascio, 2014) and effectiveness (Davis, 2012); Cascio, 2014; Furst et
However, little is known about the adoption and diffusion (Uber, 2012) of Collaboration Technology at the individual level. The necessity to explore individuals’ perceptions and attitudes regarding technology usage and adoption to support collaboration activities has become an imperative in many project based work contexts. Townsend et al., (2016) study concluded that when a virtual network link one group to the other especially groups of far distance, communication and engagement is enhanced therefore performance improves.

In a study, there is need to expect project teams to exhibit elements of both cross-functional and virtual teams. As Furst et al., (2012) explains, when a team of employees are linked together, they are likely to frequently communicate and exchange information leading to improved performance. When communication and collaboration in a project are only effectuated on-line, usually through the support of a collaboration platform, then we refer to virtual project teams. In line with other authors (Bellarby and Orange, 2013) project teams are structures of independently managed individuals, often distributed, that possess complementary capabilities and who cooperate temporarily to meet predefined objectives within predetermined deadlines through a non-repetitious string of complex activities. According to Wernerfelt (2014), virtual platform improves projects performance since people in different localities can work as a team through networking.

According to Townsend et al., (2016), when communication and collaboration in a project are only effectuated on-line, usually through the support of a collaboration platform, then we refer to virtual project teams. In line with other authors (Davis, 2012; Cascio, 2014; Furst et al., 2012) this study define project teams as structures of independently managed individuals, often distributed, that possess complementary capabilities and who cooperate temporarily to meet predefined objectives within predetermined deadlines through a non-repetitious string of complex activities. In a project, Furst et al., (2012) explains that when a team of employees are linked together, they are likely to frequently communicate and exchange information leading to improved performance.

Within the context of collaboration technology enabled project work, collaborative tasks are those which are characterized by high ambiguity and non-repetitiveness, and
those which require intensive collaboration activities among the members of the project team. The first are described with the task non-routiness theoretical construct (Majchrzak et al., 2012), while the latter with task interdependence (Malhotra and Majchrzak, 2015).

Carley (2015) provided empirical evidence that when the task of a subunit is considered as non-routine, there is a need for substantial information-processing, which subsequently implies intensive collaboration activities among team members. In routine tasks the nature of the decision making required is known and disagreements over preferences are less prominent (Borgatti and Foster, 2013). Bell and Kozlowski (2012) argues that in situations where individuals perceive their task as non-routine, there is a higher potential for misunderstanding arising from confusion over conflicting and multiple interpretations of causation that may affect the whole context of collaboration in a project team. Individuals in project-teams may consider their tasks as non-routine for several reasons: they may have a new role to perform; they may be new to project team work; or the task the group deals with may be entirely new.

Cohen and Mankin (2015) claim that when individuals are engaged in non-routine tasks, even partial IT support may facilitate the whole context of collaboration. The creation of a functional collaboration context through a virtual workspace, populated by individuals with different expertise, is necessary when collaboration intensity is high, since such cases are prone to a high degree of misunderstandings. The intensity of collaboration in a project team work context is highly related to the nature of the work tasks carried out by team members and especially the degree of “routineness” of these tasks.

Cooperation between project team members is crucial for successful project team performance (Cascio, 2014; Furst et al., 2012). However, establishing a sense of unity, also referred to as “oneness” or “collaboration”, is recognized as one of the challenges facing global teams. Collaboration is defined as an intangible feature of a team’s performance (Majchrzak et al., 2012). It is the ability of individuals to collaborate and work effectively as a team (Furst et al., 2012). Collaboration is characterized by close relationships among team members, their strong commitment
to the team’s success, and a perceptible unity of team members. Collaboration is a synonym of oneness with an emphasized aspect of striving for a common team achievement.

Creating a sense of unity in globally distributed projects poses a challenge, in particular due to the distances existing between project team members and lack of regular face-to-face communication that would strengthen trust among team members. Distant project team members often feel less collaboration and perceive their other colleagues as being less cooperative and helpful in the event of increased workloads (Cascio, 2014). Prior literature recognizes the need to reduce distance separating parts of globally distributed projects authors (Davis, 2012; Cascio, 2014; Furst et al., 2012). However, the author found that previous research on the significance of collaboration in global projects as well as the literature on the impact of ICT on creating a sense of unity in geographically dispersed project teams is scarce.

In the globalized world with crucial technological changes, leaders are facing unforeseen opportunities as well as challenges while striving to reach their objectives. Such changes have led to organizational restructurings and implied rethinking of leadership functions and practices. Changing organizational structures, from traditional hierarchical towards lower and more flexible ones, have made leaders organize work through collaboration. Teams account for one new way of organizing work and reaching organizational goals. Likewise, globalized markets have made leaders search for new solutions to meet the needs of customers (Davis, 2012; Cascio, 2014).

In consequence, organizations strive for competitive advantages through downsizing, subcontracting, joint ventures, strategic alliances, and other collaborative and network-based alternatives which are typically facilitated by virtual teams. Virtual teams are geographically and organizationally dispersed teams that function over time zones. Due to such dispersion, physical contact in virtual teams is reduced or lacking altogether which means that collaboration is enabled by IT-solutions such as computer based communication. This kind of electronically facilitated team work is known to imply opportunities as well as challenges for today’s global e-leaders. Research on virtual teams suggests that organizational success greatly depends on
leadership. However, it remains unclear what kind of leaders, and more specifically, which leadership skills, behaviors or practices contribute to effective virtual teams. To add knowledge on the field and fill such research gap, this article aims at exploring e-collaboration and answering these questions authors (Davis, 2012; Furst et al., 2012).

2.4 Interpersonal Relationships and Virtual Teamwork Performance

2.4.1 Interpersonal Relationships Defined

Relationship is the closeness a person shares with the other (Furst et al., 2012). McPherson (2016) describes relationship as the connection that determines how one person communicates, engage and do business with the other. Interpersonal relationship is therefore simply the connection among different people or groups. The interpersonal relationship is defined by Davis (2012) as a mutual and emotional link that help members of an organization to work together. According to Carley (2015), interpersonal relationship is a direct attachment between one person to another person.

2.4.2 The Link between Interpersonal Relationships and Virtual Teams

For effective virtual teams, it is critical to understand the importance of the relationship between people, processes and technology (Kirkman, et al., 2016). McPherson (2016) posits that when employees are networked, they interact in often and exchange data that improves their knowledge and performance. Furst et al., (2012) further proposition states that when a team of employees are linked together, they are likely to frequently communicate and exchange information leading to improved performance.

According to Furst et al., (2012) model, and from a management and skills, the model represents an important way to enhance virtual teams effectiveness, which discovered that teams managed effectiveness while the teams were given more constant feedback (Cascio, 2014; Furst et al., 2012). Therefore, the mechanisms of the collaboration and coordination of the teams are more preferred than a controlled style, which are more effective in reaching their goals (Davis, 2012). An important finding is that leaders are there to merely create the environment for their teams to gain the best out of their collaborative skills (Cascio, 2014; Furst et al., 2012). As Davis (2012) study concluded, employees who are networked performed better than their colleagues that
are not networked since they exchange and share lot information that lead to improved performance.

Therefore, the impact of leadership style and virtual teams’ effectiveness is one of the significant organizational challenges in virtual teams (Davis, 2012; Cascio, 2014; Furst et al., 2012). In addition, the relational links among group members is a critical and a fundamental component of virtual teams’ processes and their ability to exchange information that positively affects the group’s performance (Furst et al., 2012).

Furthermore, McPherson (2016) also mentions in his study that some researchers who have investigated the impact of members’ technical expertise have found evidence of its effect on team performance. Therefore, by using emerging technology, the virtual teams’ environment allows working effectively and also creates competitive advantages by enabling several parties to work together under a more consultative leadership rather than a single layered team (Majchrzak et al., 2012). Overall, it is essential to promise a greater understanding of alignment in a virtual and traditional fashion from interpersonal skills perspective.

Another claim is that the intensity of interpersonal relationships in a project team work context is highly related to the interdependence of the tasks carried out by team members. Carley (2015) define interdependence as the extent to which team members cooperate and work interactively to accomplish tasks. Other authors (Carley, 2015; Aaker, 2014; Havey, 2014) elucidate that high task interdependence occurs when team members interact cooperatively and depend on each other for information, materials, and reciprocal units. Therefore, high independence reflects an intensive interpersonal relational environment. Tasks are highly interdependent when team members need to interact with each other to perform, and the individual contributions cannot be separated out in the final outcome of work (Aaker, 2014). Trivedi and Desai (2012) elucidates that usually team performance in projects does require mutual interactions and coordination among team members, and the final output cannot be obtained unless all team members interactively relate on task completion.

The interpersonal relationships is a powerful tool that can directly influence the social dimensions of virtual teams and performance of virtual teams, which in turn has a
positive impact on satisfaction with virtual teams (McPherson, 2016). The interpersonal relationship within the virtual team across time and space is enabled by a heavy reliance on computer mediated communications (Lipnack & Stamps, 2014). On the one hand, the interpersonal relationships among virtual teams is very complex, requiring a detailed analysis of both the team members and the social dimensions of the shared common technology being used (Majchrzak et al., 2012).

2.4.3 Interpersonal Relationship Problems Related to Virtual Teams

Kirkman et al., (2016) opine that virtual teams provide the capability for more flexible organizational response. According to Aaker (2016), exchange of information and virtual interactions of employees through virtual network improves performance. Kirkman, et al., (2016) further posit that employees that exchange and share their opinions over the internet were better placed to perform that those that do not since they find new ideas from their colleagues to work better. However, Kirkman et al., (2016) also opine that virtual teams could also create conflicts of the roles attributed to virtual teams’ members. However, understanding goals, objectives, task requirements, roles and responsibilities among teams members lead to effective virtual teams (McPherson, 2016).

Aaker (2016) explains that one of the limitations of the virtual connections is that it cannot promote expression of personal feelings with one another thereby negatively influencing the personal touch of the individuals coordinating their activities through the internet. Another underlying problem with interpersonal skills mentioned by Cascio (2014) which is organizational and cultural barriers are perhaps serious barriers as the technological barriers are among virtual teams members to the effectiveness of virtual teams. However, Davis (2012) model also show that value is being created autonomously within each team and then processed as value through the technology resources as the human recourses are. Moreover, it is critical to the leaders of virtual teams to understand the unavoidable need to rely on technological rather than personal resources of communication (Lipnack & Stamps, 2014).

Carley 2015 survey revealed the following about the virtual teams’ shortcomings; the top challenge for virtual team members was the inability to read nonverbal cues (94%); most virtual team members (90%) said they do not have enough time during
virtual meetings to build relationships; there is an absence of collegiality among virtual team members (85%); it is difficult to establish rapport and trust in virtual teams (81%); managing conflict is more challenging on virtual teams than on conventional teams (73%); decision making is more difficult on virtual teams than on conventional teams (69%); and it is more challenging to express opinions on virtual teams than on conventional teams (64%). In addition to these interpersonal challenges, survey respondents noted that different time zones are a stumbling block for virtual teams (81%). Other hurdles included language (64%), holidays, local laws and customs (59%) and technology (43%) (Carley, 2015).

Aaker (2014) further adds that it is difficult to build trust and to manage conflict when team members lack the ability to interact face-to-face. Communication is often more challenging, particularly among global virtual teams, which can also make it more difficult to overcome cultural barriers (Ebrahim et al, 2009). Kirkman et al., (2016) states that it may seem paradoxical, but face-to-face communication is still better than virtual when it comes to building relationships and fostering trust which an essential foundation for effective team work. Kirkman opine that the only way team leader can get the team together is to use the time to help team members get to know each other better, personally and professionally, as well to create a shared vision and a set of guiding principles for how the team will work. The team leader should also schedule the in-person meeting early on, and reconnect regularly (semi-annually or annually) if possible (Carley, 2015).

Trivedi and Desai (2012) elucidates that virtual teams often also are cross-cultural teams, and this magnifies the communication challenges — especially when members think they are speaking the same language, but actually are not. Trivedi and Desai further posit that when teams work on tasks involving more ambiguity, for example generating ideas or solving problems, the potential for divergent interpretations is a real danger. The scholars explains that taking the time to explicitly negotiate agreement on shared interpretations of important words and phrases, for example, when we say “yes,” we mean… and when we say “no” we mean…and post this in the shared workspace is the only way out to the distant interactions and interrelations of the virtual team members.
David and Cynthia (2015) further adds that team leaders’ one-to-one performance management and coaching interactions with their team members are a fundamental part of making any team work. Making these interactions a regular part of the virtual team rhythm, using them not only to check status and provide feedback, but to keep members connected to the vision and to highlight their part of “the story” of what they are doing together helps build team members’ interrelationships (Furst et al., 2012). Defining deliverables and tracking commitments provides “push” to keep team members focused and productive; shared leadership provides crucial “pull” also helps to build team members’ interrelationships. Trivedi and Desai (2012) elucidates that team members must find ways to involve others in leading the team for instance; assigning responsibility for special projects, such as identifying and sharing best practices; or getting members to coach others in their areas of expertise; or assigning them as mentors to help on-board new team members; or asking them to run a virtual team-building exercise. Trivedi and Desai opine that by sharing leadership, this will not only increase engagement, but will also take some of the burden off shoulders of other team members (Trivedi and Desai, 2012). Havey (2014) posits that virtual workplace inhibits employees’ interactions and expressions thus negatively affecting personal or individual connectedness of staff.

2.5 Trust on Virtual Teamwork Performance

Within any organizational context, trust is a pervasive global challenge. Therefore, not surprisingly, trust has received much attention in various research fields, confirming the importance of trust in sustaining the effectiveness of organizations during the past decade (Carley, 2015; Aaker, 2014; Havey, 2014). In contrast, there has been little theoretical work that explains the effect of trust on virtual teams’ task performance in IT-enabled interpersonal relationships in the virtual environment (Crosse, 2012).

2.5.1 Trust Defined

The definition of trust that has been offered by Havey (2014: page15) is: “the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trust or, irrespective of the ability to monitor or control that other party”. Another study suggested that trust can be defined as a belief that increases the vulnerability and
reliance between members and between team and their leader (Zaccaro and Bader, 2014). Trust in a firm focuses on the role of direct ties between actors and the relational, as opposed to structural, outcomes of interactions (Majchrzak et al., 2012). Trust is a key element in the willingness of team members to share knowledge (Cottrill, 2013).

2.5.2 The Link between Trust and Virtual Teams

Literature on virtual teams shows that trust has been found as more critical in global virtual teams, whose members are separated by location, culture, and time, than the traditional teams because of the absence of face-to-face interactions (Aaker, 2014; Havey, 2014). In a study on virtual teams’ performance it is found that trust is necessary for adding value to virtual teams’ performance as an important determinant of the team member’s decision for cooperation with or competition against other team members in the virtual workplace environment, where team members work independently (Cottrill, 2013). According to McPherson (2016), factors such as openness cannot be easily achieved through virtual workplace operations as it requires face to face interactions to achieve it.

A case study of Orange Group illustrates the difficulty of establishing trust in virtual teams, even though the organization has been actively using virtual teams. Orange is a fast moving business in the highly competitive mobile communication market and a branch of France Telecom and one of the UK’s leading mobile phone service providers, with services to 57 million customers across 17 countries. As a consequence, most of their traditional face-to-face team members also are involved as members of virtual teams (Cascio, 2014). The case study finds that a lack of trust among virtual teams is a major hindrance to new product development, because collaboration among virtual teams is often absent. The key challenge facing Orange is to improve their business performance by developing and maintaining trust within their virtual teams. The knowledge management team found that their virtual teams were performing in several different forms of organizational structures, requiring Orange to develop a framework for best practice in virtual teams (Kirkman, et al., 2016).
In face-to-face environments, team members, attending the same meetings, working in the same physical environment, tend to share commonly held information, and experiencing similar organizational culture. They all contribute to a common understanding of team goals. However, in virtual team settings contextual knowledge may be held uniquely and tends to be unevenly distributed among team members. For example, failure to share the contextual knowledge in virtual team environments may cause misunderstandings or misinterpretation of a remote team member’s behavior, and negatively affect the performance of the team as well as trust among them (Davis, 2012; Cascio, 2014; Furst et al., 2012).

Malhotra, and Majchrzak (2012) point out that relational dimension is centered on the role of the direct ties between team members which build trust. This dimension factors focuses on shared responsibility for outcome, trust and collaboration among distributed project teams. In particular, collective trust can be a crucial element of virtual team well functioning. Collective trust is defined as a shared psychological state in a team that is characterized by an acceptance of vulnerability based on expectations of intentions and behaviors of others within the team (Malhotra and Majchrzak, 2015). Collaboration is defined as the degree to which team members actively help one another in their work (Furst et al., 2012). Trust plays an important role in successful collaboration.

Strong ties promote trust and collaboration. As trust develops over time, opportunities for knowledge transfer between members should increase (Furst et al., 2012). Configuration of a team should encourage collaboration as configuration influences the flexibility and ease of communication and knowledge exchange between team members. A decentralization of authority to members such as the development of lateral ties improves communication and collaboration (Davis, 2012). According to Havey (2014), strong ties encourage trust. Moreover, the concentration of decision-making authority inevitably reduces creative solutions, whereas the dispersion of power facilitates spontaneity and experimentation, and the freedom of expression which are the lifeblood of knowledge creation. In addition, leadership should promote trust and collaboration (Choi et al., 2003).
The stability of a virtual team increases trust and collaboration. In particular, collective trust is an essential element of any virtual team in order to function effectively. There is more difficulty in collaboration if there is a high personnel turnover. Highly unstable network may limit opportunities for the creation of social capital, because when an actor leaves the network, ties disappear (Davis, 2012; Cascio, 2014). According to Malhotra and Majchrzak (2012), virtual platforms enable employees to support each other through networking and therefore improve performance. In Cascio (2014) view, employees often form discussion groups in the virtual platforms that enable them to share their problems and discuss matters affecting their career hence improving every individual performance in the groups. However, virtual platform is not appropriate to be used when matters such as improvement of openness, integrity and transparency are the objectives to be achieved in the workplace (Borgatti & Foster, 2013). This was also established in Bell and Kozlowski (2012) study that opined that virtual platform was not a good source for promoting openness, integrity and transparency in the organization.

In Owiti (2015) context, trust is critical in effective Communication and successful team-working among employees as well as between employees and managers. Transparent and honest Communication puts organizational employees in a constant contact, which supports exchanging information about interests, desires and approaches to possible problems. Thus, an organization learns the reality of its employees and the employees learn its preferences and the objectives. That helps to create a culture of comprehensiveness and critical feedbacks when necessary and provides a platform for trust to occur (Cottrill, 2013).

Carley (2015) found that human resource managers are more likely to offer training and shape the internal promotion systems when trust is high. In addition, firms exhibited higher organizational performance when trust is high. Owiti (2015) have agreed that risk, or having something invested, is an essential step towards making trust decision in an organization. It is in a risky situation that the need for trust arises. Regardless of considering the role of Risk as an antecedent to trust, trust itself or an outcome of trust.
The world of the virtual team is far from static; continuing changes in technology and competitive environments will present new opportunities and imperatives for virtual teamwork. As Cascio (2014) explains, one can expect to have on their wrist tomorrow what they have on their desk today, what filled a room yesterday. As telecommunication technologies continue to evolve, the virtual interface will continue to face more challenges. This requires continues examinations of factors that may influence virtual teams’ performance.

2.5.3 The Actions of Virtual Teams on Trust

Furst et al (2012) consider that actions of a team leader and team members that impact trust fall into three categories to include performance and competence, integrity, and concern for the well-being of others. They state that all three factors should exist in order for a virtual team to have a high level of trust. In Kirkman, et al., (2016) view, in order to select the right technology for a global virtual team, it is necessary to consider the trust, the nature of the task and the context where it occurs. Trust has an impact on the reliability of the communication technology on which members depend (McPherson, 2016). In addition, local habits are developed in a determined context and can have big variations across team members. Cascio (2014) identify aspects to consider choosing the right technology that include infrastructure, differences in local power, telephone or cable infrastructure, culture and language, accessibility of information, time zone gap, team size, technology maturity, and task complexity.

Technology can send subtle messages about which members of the team are considered high performer or not. The communication between high performers tends to be through one-on-one electronic messages. Thus, being left out of one-on-one communication patterns could indicate that a team member is perceived as less competent than others (Lipnack and Stamps, 2014). Regarding the second factor, the integrity of team processes and decision making can be facilitated through technology. For example, groupware with anonymity features allows sharing opinions and ideas, especially when there is a disagreement or when only a few members of the team do not share an idea. Using technology, members can express their opinion without fear of recrimination and improve trust (Majchrzak et al., 2012).
In addition, electronic distribution lists make it easy to get the same information to everyone in a timely manner (Davis, 2012; Cascio, 2014). In relation to the third factor, the fact that virtual teams operate in an isolated environment can generate less need for social posturing than in traditional teams. This situation can produce a tendency to display less concern. One study showed that computer-mediated groups communicate more negative messages than face-to-face groups do (Cascio, 2014). To avoid this situation, members of virtual teams should avoid waiting for face-to-face meetings or at least teleconference to express criticism in order to avoid misunderstanding.

There is a distinction between efficiency and effectiveness to explain the lack of the relationship between trust and virtual team performance. Trust does not necessarily augment the quality of the task performance. McPherson (2016) found no relationship between trust and task performance. Moreover, trust can have unpleasant consequences including that high levels of trust may not always be justified because of the risk that others will take advantage of the situation.

Bell and Kozlowski (2012) states that past empirical studies, theories and frameworks suggest that ability, integrity, work engagement, communication, training and risk are contributor factors in an organizational climate which have magnifying effects toward organization trust. Moreover, these contributors are in indirect relationship with virtual team through the moderating role of organization trust and are considered as independent variables for the current research.

Ability is an essential element of trust. It is that group of skills, competencies, and characteristics that enable a party to have influence within some specific domain. The domain of the ability is specific because the trustee may be highly competent in some technical area, affording that person trust on tasks related to that area (Borgatti and Foster, 2013). Borgatti and Foster (2013) further explains that virtual platform is not appropriate to be used when matters such as improvement of openness, integrity and transparency are the objectives to be achieved in the workplace.

Integrity is discussed as antecedent to trust by a number of theorists. The relationship between integrity and trust involves a person’s perception that the other person has respect to a set of principles that the one who trusts finds acceptable. In fact Integrity
is a characteristic quality which is commonly considered as trustworthiness in a trusting relationship. In addition, in a team collaboration context the employee’s (managers) Integrity and zero tolerance to violation of commonly set ethical principles are particularly important to motivate other employees to assume responsibility for their decisions and actions and act in a trustworthy way (Crosse, 2012).

2.6 Chapter Summary
This chapter covered the empirical review on issues relating to communication, trust and collaboration and their influence on virtual teamwork performance. The research questions that guided the chapter were to what extent does communication influence virtual teamwork performance at the UNOPS EAH, to what extent does collaboration influence virtual teamwork performance at the UNOPS EAH, how interpersonal relationships influence virtual teamwork performance at the UNOPS EAH and to what extent does trust influence virtual teamwork performance at the UNOPS EAH. This chapter further covered the research gaps and the chapter summary. Chapter three covered the methodology which was used to carry out the study.
CHAPTER THREE

3.0 METHODOLOGY

3.1 Introduction
This section covered the research instruments which the researcher incorporated in the study. In addition to that, the sampling design and the data collection procedures indicated. In brief this chapter focused on introduction, research design, target population, sample size and sampling procedures, data collection instruments, data collection procedures and methods of data collection.

3.2 Research Design
Cooper and Schindler (2014) define research design as an outline, plan or scheme that is used to generate answers to research study. This study adopted descriptive research design in order to provide a platform to analyze data vividly in numeric and narrative form. As Cooper and Schindler (2014), opined, descriptive research design helps to analyze data in both qualitative and quantitative forms.

3.3 Population and Sampling Design
Peil (2014) define target population as the entire group of people, events, or objects a study focuses on as the subject of analysis. Sampling design is the process in which a sample size is selected (Cooper and Schindler, 2014). This section discusses the target population and the sampling design that will be used in this study.

3.3.1 Population
Peil (2014) defines target population as the entire group of people, events, or objects a study focuses on as the subject of analysis. This study target population was 300 UNOPS-EAH employees. The target population was composed of UNOPS-EAH management and the staff. See table 3.1.
Table 3.1 Target Population

<table>
<thead>
<tr>
<th>Category of Participants</th>
<th>Target Population</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Management Level</td>
<td>21</td>
<td>7</td>
</tr>
<tr>
<td>Middle Management Level</td>
<td>97</td>
<td>32</td>
</tr>
<tr>
<td>Support Staff</td>
<td>182</td>
<td>61</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>300</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: UNOPS-EAH (2017)

3.3.2 Sampling Design

Cooper and Schindler (2014) describe sample or sample size as a subset of a population that is studied through a research study and generalized on the entire population. Sampling procedure therefore is the process in which a sample size is selected (Cooper and Schindler, 2014). This study focused on UNOPS-EAH which has branches in Eastern and Southern African countries such as Kenya, Somalia, Uganda, Rwanda, Burundi, Tanzania, as well as South Sudan. Due to the geographical distance and logistical costs involved in reaching out to the UNOPS-EAH branches located in the countries mentioned above, this study adopted purposive sampling to pick the management and staff of UNOPS-EAH Nairobi Branch as the sample size. This was because the UNOPS-EAH Nairobi Branch was located in Nairobi Kenya and was therefore convenient in terms of distance and logistical cost for the researcher to collect data. The UNOPS-EAH Nairobi Branch has 100 employees.

3.3.2.1 Sampling Frame

A sampling frame is a list of population units or elements from which to select units/elements to be sampled (Peil, 2013). The sampling frame from which the population was selected in this study comprised of the management and staff of UNOPS-EAH.
3.3.2.2 Sampling Technique

Cooper and Schindler (2014) define sampling technique as selecting a given number of subjects from a defined population as representative of that population. Sampling technique therefore is the process in which a sample size is selected (Cooper & Schindler, 2014). The purposive sampling technique was used to select the sample size. This was because of geographical distance and logistical costs involved since UNOPS-EAH has branches in Eastern and Southern African countries such as Kenya, Somalia, Uganda, Rwanda, Burundi, Tanzania, as well as South Sudan.

3.3.2.3 Sampling Size

Cooper and Schindler (2014) describe sample or sample size as a subset of a population that is studied through a research study and generalized on the entire population. This study focused on UNOPS-EAH which has branches in Eastern and Southern African countries such as Kenya, Somalia, Uganda, Rwanda, Burundi, Tanzania, as well as South Sudan. Due the geographical distance and logistical costs involved in reaching out to the UNOPS-EAH branches located in the other Eastern and Southern African countries mentioned above, this study used purposive sampling to pick the management and staff of UNOPS-EAH in Nairobi as the sample size. The UNOPS-EAH, Nairobi Branch is a subsidiary of UNOPS-EAH and had 100 employees. See table 3.2 for further details.

Table 3.2 Sample Size

<table>
<thead>
<tr>
<th>Category of Participants</th>
<th>Target Population</th>
<th>Sample Size</th>
<th>Percentage of Target Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Management Level</td>
<td>21</td>
<td>6</td>
<td>28.57</td>
</tr>
<tr>
<td>Middle Management Level</td>
<td>97</td>
<td>21</td>
<td>21.65</td>
</tr>
<tr>
<td>Support Staff</td>
<td>182</td>
<td>73</td>
<td>40.1</td>
</tr>
<tr>
<td>Total</td>
<td>300</td>
<td>100</td>
<td>33.33</td>
</tr>
</tbody>
</table>

Source: UNOPS-EAH (2017)
3.4 Data Collection Methods
This study adopted the use of structured questionnaires to collect data. According to Peil (2014), questionnaires are set of standard questions normally targeting participants of a particular group of which the debated research topic is to be answered. This study sought to use semi structured questionnaires to collect data from the population.

3.5 Data Collection Procedures
Pilot testing was undertaken with sample of ten participants. This aimed at capturing specific information from the participants. Thereafter, data from the questionnaires was analyzed and adjustments were made accordingly. The questionnaires were then rolled out again for final data collection. The questionnaires were dispatched to all participants through hand delivery on agreed dates. Participants were awarded time to read through the questionnaires and understand every detail. Participants were then allowed to fill the questionnaires based on the best of their knowledge. Questionnaires were collected later on specific agreed dates with the participants for analysis.

3.6 Data Analysis Methods
Data that was collected was first cleaned and grouped according to the objectives of the study, it was then coded and entered into the Statistical Package for Social Sciences (SPSS) software. Analysis was then carried out through descriptive statistics such as frequencies and percentages. The outcome of the analysis was presented using frequency tables that illustrate the distribution of the responses.

3.7 Chapter Summary
This chapter covered introduction, research design, target population, sample size and sampling procedures, sampling frame, data collection instruments, data collection methods and procedures as well as methods of analysis. Chapter four discussed the results and findings of the study.
CHAPTER FOUR

4.0 RESULTS AND FINDINGS

4.1 Introduction
This chapter presents the results and findings of collected data from the respondents. The purpose of this study was to investigate the influence of virtual platforms on teamwork performance at the United Nations in Kenya. The results and findings are presented on the basis of the research objectives.

4.2 General Information

4.2.1 Response Rates
A total of 100 questionnaires were issued to UNOPS-EAH, Nairobi Branch staff, 60 questionnaires were filled and returned back, this represents 60% response rate as shown in table 4.1.

Table 4.1 Response Rates

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duly filled and returned</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Not returned</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>60</td>
</tr>
</tbody>
</table>

4.2.2 Respondents’ Gender
The respondents were requested to indicate their gender, as shown in table 4.2, the study got 58% female respondents and 42% male respondents. This indicates that the study received a better response rate from females than from males. However, despite the difference in gender response, contributions of both gender implied that the information gathered and analyzed covered views, recommendations and suggestions of both genders which was vital for the study to understand different perspectives on influence of virtual platforms on teamwork performance at the United Nations in Kenya.
4.2.3 Respondents’ Age

The respondents were asked to indicate their age group; the result revealed that 27% of the respondents were between 26-33 years of age, 25% were between the ages of 42-49 years. 23% were between the age of 18-25 years while 15% were aged between 34 – 41 years and 10% were aged over 50 years old. These findings are displayed in table 4.3. The age bracket of the participants was incorporated as a variable to help in the detailed analysis of the responses gathered from the field. This helped to ascertain whether all age brackets listed in the questionnaire responded to the study which of course the finding indicates happened. It therefore follows that data gathered and analyzed reflected views and suggestions from respondents of all different age limits.

Table 4.3 Age Analysis

<table>
<thead>
<tr>
<th>Age Ranges</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-25 years</td>
<td>14</td>
<td>23</td>
</tr>
<tr>
<td>26-33 years</td>
<td>16</td>
<td>27</td>
</tr>
<tr>
<td>34-41 years</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>42-49 years</td>
<td>15</td>
<td>25</td>
</tr>
<tr>
<td>50 years and above</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
4.2.4 Level of Education
The respondents’ education level was asked in the questionnaire, and the findings revealed that half of the respondents, 50% were graduates, 25% had diplomas and 17% had a post graduate education while only 8% had certificate qualifications, this is displayed in table 4.4. This indicates that participants were literate and could read and fill the questionnaires to the best of their ability and knowledge.

Table 4.4 Level of Education

<table>
<thead>
<tr>
<th>Levels of Education</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certificate</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Diploma</td>
<td>15</td>
<td>25</td>
</tr>
<tr>
<td>Graduates</td>
<td>30</td>
<td>50</td>
</tr>
<tr>
<td>Post graduate</td>
<td>10</td>
<td>17</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

4.2.5 Duration of Employment
On work history, it was found out that 30% of the respondents had worked in UNOPS-EAH, Nairobi Branch for a period of 3-6 years, 23% had worked in UNOPS-EAH, Nairobi Branch for a period of 9-12 years, 20% had worked for between 6-9 years while 17% had worked there for a period of less than three years. Additionally, 10% had worked there for over twelve years. These findings are illustrated in table 4.5.
Table 4.5 Duration of Employment

<table>
<thead>
<tr>
<th>Durations of employment</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 3 years</td>
<td>10</td>
<td>17</td>
</tr>
<tr>
<td>3-6 years</td>
<td>18</td>
<td>30</td>
</tr>
<tr>
<td>6-9 years</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>9-12 years</td>
<td>14</td>
<td>23</td>
</tr>
<tr>
<td>Over 12 years</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

4.3 Communication on Virtual Teamwork Performance

4.3.1 Dissemination of Data and Information and Teamwork Performance

Respondents were asked whether they disseminate data and information through virtual platforms and if this had improved teamwork performance in their organization, it was revealed that 48% strongly agreed to this and an additional 28% also agreed, 13% were undecided while 10% disagreed that UNOPS-EAH staff disseminate data and information through virtual platforms and that this had improved teamwork performance in the organization, however no respondent strongly agreed to this. These findings are as shown in table 4.6.
Table 4.6 Dissemination of data and information and teamwork performance

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>29</td>
<td>48</td>
</tr>
<tr>
<td>Agree</td>
<td>17</td>
<td>28</td>
</tr>
<tr>
<td>Undecided</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>Disagree</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

4.3.2 Exchange of Ideas and Teamwork Performance

The study sought to find out if UNOPS-EAH staff exchanged ideas through virtual platforms and whether this had improved teamwork performance in the organization. As shown in table 4.7, 63% strongly agreed as well as 21% also agreed that UNOPS-EAH staff exchanged ideas through virtual platforms and that this had improved teamwork performance in the organization. 8% percent of the respondents were undecided while similar numbers were observed to disagree and strongly disagree representing 4% each of the total respondents.
Table 4.7 Exchange of ideas and teamwork performance

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Valid Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>30</td>
<td>63</td>
</tr>
<tr>
<td>Agree</td>
<td>10</td>
<td>21</td>
</tr>
<tr>
<td>Undecided</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Disagree</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

4.3.3 Sharing of Work Experiences and Teamwork Performance

The respondents were asked whether UNOPS-EAH staff shared work experiences through virtual platforms and if this had improved teamwork performance in the organization, 40% agreed to this and also 29% strongly agreed to this. However, 10% of the respondents were undecided whether UNOPS-EAH staff shared work experiences through virtual platforms and if it had improved teamwork performance in the organization. Additionally, 8% of the respondent disagreed and 7% strongly disagreed that UNOPS-EAH staff shared work experiences through virtual platforms and that it had improved teamwork performance in the organization. These findings are demonstrated in table 4.8.
Table 4.8 Sharing of work experiences and teamwork performance

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>17</td>
<td>29</td>
</tr>
<tr>
<td>Agree</td>
<td>24</td>
<td>40</td>
</tr>
<tr>
<td>Undecided</td>
<td>10</td>
<td>16</td>
</tr>
<tr>
<td>Disagree</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

4.3.4 Networking through Virtual Platforms and Teamwork Performance

The study further sought to establish if UNOPS-EAH staff were networked and linked through virtual platforms and if this had improved teamwork performance in the organization. The findings show that 72% strongly agreed and also 21% agreed that UNOPS-EAH staff were networked and linked through virtual platforms and this had improved teamwork performance in the organization. It was however observed that 3% of the respondents were undecided while similar numbers of respondents, representing 2% each, disagreed and strongly disagreed that UNOPS-EAH staff were networked and linked through virtual platforms and that this had improved teamwork performance in the organization. The results are shown in table 4.9.


Table 4.9 Networking through virtual platforms and teamwork performance

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>43</td>
<td>72</td>
</tr>
<tr>
<td>Agree</td>
<td>13</td>
<td>21</td>
</tr>
<tr>
<td>Undecided</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Disagree</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

4.4 Collaboration on Virtual Teamwork Performance

4.4.1 Closer Partnerships among Employees and Teamwork Performance

The respondents were asked whether virtual platforms had brought closer partnership among employees and whether this had improved teamwork performance in the organization, 47% strongly agreed to this and also 23% agreed. Fifteen percent of the respondents were undecided on whether virtual platforms had brought closer partnership between employee to employee and if this had improved teamwork performance in the organization. Ten percent of the respondent strongly disagreed while 5% disagreed that virtual platform had brought closer partnership among employees and that this had improved teamwork performance in the organization. Table 4.10 illustrates these results.
Table 4.10 Closer partnerships among employees and teamwork performance

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>28</td>
<td>47</td>
</tr>
<tr>
<td>Agree</td>
<td>14</td>
<td>23</td>
</tr>
<tr>
<td>Undecided</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>Disagree</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

4.4.2 Partnerships between Staff and Managers and Teamwork Performance

Respondents were asked to indicate whether virtual platforms had brought closer partnership between employees and managers and if it had improved teamwork performance in the organization. As shown in table 4.11, it was agreed that virtual platforms had brought closer partnership between employees and managers and that this had improved teamwork performance in the organization, this is illustrated with 47% and 25% of the respondent who strongly agreed and agreed respectively. On the other hand 15% of the respondent were undecided while 8% disagreed and 5% strongly disagreed that virtual platform had brought closer partnership between employees and managers and that this had improved teamwork performance in the organization.
Table 4.11 Partnerships between staff and managers and teamwork performance

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Valid Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>28</td>
<td>47</td>
</tr>
<tr>
<td>Agree</td>
<td>15</td>
<td>25</td>
</tr>
<tr>
<td>Undecided</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>Disagree</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

**4.4.3 Networking of teams and teamwork performance**

Respondents were further asked to indicate whether virtual platforms network linked one team of UNOPS-EAH staff to the other and if this had improved teamwork performance in the organization. The findings as shown in table 4.12, reveal that virtual platform networks linked one team of UNOPS-EAH staff to the other and this had improved teamwork performance in the organization. This is illustrated with 52% of the respondents who strongly agreed and 20% of the respondents who also agreed. However, 23% of the respondents were undecided while 3% of the respondents disagreed and also 2% strongly disagreed.
Table 4.12 Networking of teams and teamwork performance

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Valid Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>31</td>
<td>52</td>
</tr>
<tr>
<td>Agree</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>Undecided</td>
<td>14</td>
<td>23</td>
</tr>
<tr>
<td>Disagree</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

### 4.4.4 Virtual Joint Projects and Teamwork Performance

The study further sought to find out if UNOPS-EAH staff worked in joint projects through virtual platforms and whether this had improved teamwork performance in the organization. It was agreed that UNOPS-EAH staff worked in joint projects through virtual platforms and this had improved teamwork performance in the organization. This is shown with 50% and 43% of the respondents who agreed and strongly agreed respectively. However, 2% of the respondents remained undecided while 3% and 2% disagreed and strongly disagreed respectively. These findings are illustrated in table 4.13.
Table 4.13 Virtual joint projects and teamwork performance

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Valid Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>26</td>
<td>43</td>
</tr>
<tr>
<td>Agree</td>
<td>30</td>
<td>50</td>
</tr>
<tr>
<td>Undecided</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Disagree</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

4.5 Interpersonal Relationships and Virtual Teamwork Performance

4.5.1 Staff Virtual Connectedness of Employees and Teamwork Performance

The study further sought to establish whether virtual platform linked UNOPS-EAH staff together and if this had improved teamwork performance in the organization. The respondents agreed to this as shown with 50% of the respondents and also 38% who strongly agreed virtual platform linked UNOPS-EAH staff together and that it had improved teamwork performance in the organization. However, 7% of the respondents were undecided while 3% disagreed and 2% strongly disagreed. The findings are illustrated in table 4.14.
Table 4.14 Staff virtual connectedness of employees and teamwork performance

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Valid Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>23</td>
<td>38</td>
</tr>
<tr>
<td>Agree</td>
<td>30</td>
<td>50</td>
</tr>
<tr>
<td>Undecided</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Disagree</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

4.5.2 Sharing of Opinions and Teamwork Performance

The respondents were asked if they shared their opinions with their work colleagues through virtual platforms and whether this had improved teamwork performance in the organization. According to the results as shown in table 4.15, 63% of the respondent strongly agreed and further 12% respondent also agreed. Fifteen percent were however undecided while 8% disagreed and a further 2% strongly agreed that they shared their opinions with their work colleagues through virtual platforms and this improved teamwork performance in the organization.
Table 4.15 Sharing of opinions and teamwork performance

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Valid Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>38</td>
<td>63</td>
</tr>
<tr>
<td>Agree</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>Undecided</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>Disagree</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

4.5.3 Sharing of Feelings and Teamwork Performance

The study also sought to find out whether UNOPS-EAH staff shared their feelings with their work colleagues over virtual platforms and if it had affected teamwork performance, according to the findings it was established that UNOPS-EAH staff did not share their feelings with their work colleagues over virtual platforms and this had affected teamwork performance. This is shown with 47% of the respondent strongly disagreeing with as well 33% of the respondent disagreeing. However, a small percentage of 10% and 3% agreed and strongly agreed respectively, that UNOPS-EAH staff shared their feelings with their work colleagues over virtual platforms and this had affected teamwork performance. Additionally, 7% of the respondent remained undecided. These findings are depicted in table 4.16.
4.5.4 Staff and Managers Interaction and Teamwork Performance

In addition, the respondents were queried if they could physically interact with their managers over the virtual platforms and whether this had affected teamwork performance in UNOPS-EAH. According to the results as displayed in table 4.17, 45% of the respondent strongly disagreed, and 40% respondents disagreed. Ten percent of the respondents remained undecided while only 5% of the respondents agreeing that they could physically interact with their managers over the virtual platforms and that this had affected teamwork performance in UNOPS-EAH, there were none strongly agreeing to this.

<table>
<thead>
<tr>
<th>Responses</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Agree</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Undecided</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Disagree</td>
<td>20</td>
<td>33</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>28</td>
<td>47</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
### Table 4.17 Staff and managers interaction and teamwork performance

<table>
<thead>
<tr>
<th>Responses</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Agree</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Undecided</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Disagree</td>
<td>24</td>
<td>40</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>27</td>
<td>45</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

### 4.6 Trust on Virtual Teamwork Performance

#### 4.6.1 Openness and Teamwork Performance

The study sought to establish whether UNOPS-EAH virtual platforms had improved openness in the workplace and if this had improved teamwork performance in the organization. It was revealed that UNOPS-EAH virtual platforms had not improved openness in the workplace and which in turn had also not improved teamwork performance in the organization. This is shown with 80% of the respondents’ strongly disagreeing while 19% of the respondents disagreeing. One percent of the respondents agreed but none of the respondents could strongly agree, there was also no respondents who remained undecided. These findings are shown in table 4.18
4.6.2 Virtual Staff Support and Teamwork Performance

The study inquired whether UNOPS-EAH staff supported each other through virtual platforms and if this had improved teamwork performance in the organization. The findings revealed that UNOPS-EAH staff supported each other through virtual platforms and that this had improved teamwork performance in the organization. This is shown with 58% of the respondents who strongly agreed and 38% of the respondents who just agreed. Nevertheless, 4% of the respondents indicated that they disagreed that UNOPS-EAH staff supported each other through virtual platforms and that this had improved teamwork performance in the organization. There were no respondents who strongly disagreed or remained undecided; these findings are depicted in table 4.19.

Table 4.18 Openness and virtual teamwork performance

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Valid Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Agree</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Undecided</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Disagree</td>
<td>11</td>
<td>19</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>48</td>
<td>80</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
Table 4.19 Virtual staff support and teamwork performance

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>35</td>
<td>58</td>
</tr>
<tr>
<td>Agree</td>
<td>23</td>
<td>38</td>
</tr>
<tr>
<td>Undecided</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Disagree</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>60</td>
<td>100</td>
</tr>
</tbody>
</table>

4.6.3 Integrity and Teamwork Performance

The respondents were again asked to indicate whether they agree or disagree, that UNOPS-EAH virtual platforms had brought integrity in their workplace and if it had improved teamwork performance in the organization. As depicted in table 4.20, 40% strongly disagreed as well as 35% disagreed, 15% remained undecided while 7% and 3% agreed and strongly agreed respectively, that UNOPS-EAH virtual platforms had brought integrity in their workplace and that it had improved teamwork performance in the organization.

Table 4.20 Integrity and teamwork performance

<table>
<thead>
<tr>
<th>Responses</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Agree</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Undecided</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>Disagree</td>
<td>21</td>
<td>35</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>24</td>
<td>40</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>60</td>
<td>100</td>
</tr>
</tbody>
</table>
4.6.4 Transparency and Teamwork Performance

The respondents were further asked to indicate whether they agreed or disagreed, that virtual platforms had improved transparency in UNOPS-EAH and enhanced team performance in the organization. The results as shown in table 4.21, indicate that 65% respondents strongly disagreed and 27% respondent disagreed, 5% respondents agreed while 3% who responded were undecided, there was no one who strongly agreed, that virtual platforms had improved transparency in UNOPS-EAH and enhanced team performance in the organization.

Table 4.21 Transparency and teamwork performance

<table>
<thead>
<tr>
<th>Responses</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Agree</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Undecided</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Disagree</td>
<td>16</td>
<td>27</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>39</td>
<td>65</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

4.7 Chapter Summary

This chapter presented the results of the findings of the data collected from the field. The presentation was made using tables. The chapter was organized in the following sub topics; results on general information; results on communication and virtual teamwork performance; results on collaboration and virtual teamwork performance; results on interpersonal relationship and virtual teamwork performance; results on trust and virtual teamwork performance; and lastly the chapter summary. Chapter five provided the discussion, conclusions and the recommendations of the study.
CHAPTER FIVE

5.0 DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This section provided the summary of the findings as analysed and presented in chapter four. It also covered the discussion that compared the study findings established vis-à-vis the evidence from literature review. Thereafter, the conclusion, recommendations for improvement and recommendations for further studies were made based on the discussions. In summary, this chapter was organized in the following manner; introduction, summary, discussion, conclusion, recommendations for improvement and recommendations for further studies.

5.2 Summary of Findings

The purpose of this study was to investigate the influence of virtual platforms on teamwork performance at the United Nations in Kenya. The study was guided by the following research questions:

- To what extent does communication influence virtual teamwork performance at the United Nations Office for Project Services in Kenya?
- To what extent does collaboration influence virtual teamwork performance at the United Nations Office for Project Services in Kenya?
- How do interpersonal relationships influence virtual teamwork performance at the United Nations Office for Project Services in Kenya?
- To what extent does trust influence virtual teamwork performance at the United Nations Office for Project Services in Kenya?

This study adopted descriptive research design in order to provide a framework to examine current conditions, trends and status of events regarding virtual platforms and teamwork performance. The target population was the United Nations Office for Project Services, East Africa Hub (UNOPS-EAH). The study adopted the use of purposive sampling technique to select the participants. The sample size was 100 employees of UNOPS-EAH. Structured questionnaires were used as method of data collection. Data was analyzed using qualitative and quantitative approaches in statistical analysis software. The presentation was made using tables.

The findings on the influence of communication on virtual teamwork performance showed that, UNOPS-EAH staff disseminated data and information through virtual platforms and this improved their teamwork performance in the organization. The
findings further revealed that the UNOPS-EAH staff exchanged ideas through virtual platforms and this had improved teamwork performance in the organization. The findings also established that UNOPS-EAH staff shared work experiences through virtual platforms and this had improved teamwork performance in the organization. Lastly, the findings showed that UNOPS-EAH staff were networked and linked through virtual platforms and this had improved teamwork performance in the organization.

The findings on the influence of collaboration on virtual teamwork performance reveal that virtual platforms had brought closer partnership among employees and this had improved teamwork performance in the organization. Findings further revealed that virtual platforms had brought closer partnership between employees and managers and this had also improved teamwork performance in the organization. It was also revealed that virtual platform networks linked one team of UNOPS-EAH staff to the other and this had improved teamwork performance in the organization. Lastly, the findings established that UNOPS-EAH staff worked in joint projects through virtual platform and this had improved teamwork performance in the organization.

Findings on the influence of interpersonal relationships on virtual teamwork performance, demonstrate that virtual platforms linked UNOPS-EAH staff with their work colleagues and this had improved teamwork performance in the organization. Additionally, the findings demonstrate that UNOPS-EAH staff shared their opinions with their work colleagues through virtual platforms and this had improved teamwork performance in the organization. However, the findings showed that UNOPS-EAH staff could not share their feelings with their work colleagues over virtual platforms and this had affected teamwork performance. Similarly, findings showed that UNOPS-EAH staff could not physically interact with their managers over the virtual platform and this had affected teamwork performance.

Findings on the influence of trust on virtual teamwork performance, established that UNOPS-EAH virtual platforms had not improved openness in the workplace and thus had also not improved teamwork performance in the organization. Likewise, findings showed that UNOPS-EAH virtual platforms had not brought integrity in the
workplace and therefore it also had not improved teamwork performance in the organization. It was also revealed that virtual platforms had not improved transparency in UNOPS-EAH and thus it did not enhance team performance in the organization. It was however, revealed that UNOPS-EAH staff supported each other through virtual platforms and this had improved teamwork performance in the organization.

5.3 Discussions
5.3.1 The Influence of Communication on Virtual Teamwork Performance
The finding on the influence of communication revealed that, forty eight percent of the respondents strongly agreed that they disseminate data and information through virtual platforms and that this had improved teamwork performance in their organization, this was further agreed by twenty eight percent of the respondents. The result affirms that virtual platforms help in dissemination of data and information which influence positive teamwork performance in organizations. This finding agreed with Havey (2014) who was of the opinion that for virtual teams to operate effectively, it must be supported by extensive dissemination of data and circulation of information. Organizations should thus promote virtual platforms as a means of transferring data and information across the organization so as to boast teamwork performance.

The findings also showed that sixty three percent of the respondents agreed that UNOPS-EAH staff exchanged ideas through virtual platforms and that this had improved teamwork performance in the organization, this was also agreed with twenty one percent of the respondents. These findings imply that virtual platforms are used by employees to share ideas and through that they improve the teamwork among employees in the organization. This findings correlate with Carley (2015) who observed that both advances in information communication technology (ICT) and well-designed organizational arrangements will enable well-prepared virtual team members to communicate more effectively and more clearly across time and across different geographical locations than traditional face-to-face teams. Organizations should therefore encourage sharing of ideas through virtual platforms to influence positive teamwork performance.
Further, the findings of this study showed that forty percent of the respondents agreed and as well as twenty nine percent of the respondents strongly agreed that, UNOPS-EAH staff shared work experiences through virtual platforms and this had improved teamwork performance in the organization. These findings indicate that virtual platforms are used by employees to share their various experiences at work with their colleagues and that this translated to positive teamwork performance in the organizations. Sharing of work experience can help employees understand the different approach to task and problem solving that are used by others, it creates team spirit and therefore boasts teamwork morale. This finding resonates with Shachaf (2008) findings which concluded that sharing work experiences empower employees and improve performance of the organization in general. This finding was also in line with Cummings and Cross (2013) argument that sharing of work experiences through virtual platform enable teams to perform as they exchange how they can solve problems and improve decision making among themselves.

In additional, the results of this study showed that seventy two percent of respondents strongly agreed that staff at UNOPS-EAH were networked and linked through virtual platforms and that this had improved teamwork performance in the organization, this was further agreed by twenty one percent of the respondents. These findings demonstrate that virtual platform can help organizations improve team work performance by networking and linking employees across the organization. This can be attributed to the efficient collaborative environment facilitated by virtual networks that make it easy to work as a team. These results are in line with the views of Cohen and Mankin (2015) study proposition that states that, when staff are linked through online platforms, they are likely to share more information and ideas that improves teamwork performance. The findings also reinforced Furst et al., (2012) proposition that when a team of employees are linked together, they are likely to frequently communicate and exchange information leading to improved performance.

5.3.2 The Influence of Collaboration on Virtual Teamwork Performance

The findings on the influence of collaboration on virtual teamwork performance, displayed that forty seven percent of the respondents strongly agreed that virtual platforms had brought closer partnership among employees and this had improved teamwork performance in the organization, this was further agreed by twenty three
percent of the respondents. Collaboration can be thought to create good relationship among employees which help them to perform much better. These results are concurrent with the Malhotra and Majchrzak (2012) finding that postulated that virtual communication enhances team partnerships and frameworks of engagement therefore contributing to the organizations performance. It further supported Maznevski and Chudoba (2014) finding that opined that virtual platforms bring members of a working group as a family thus enabling them to work as a team. Organization should therefore ensure an effective collaboration through virtual platform that would enable employee perform better as a team.

The results further showed that forty seven percent of the respondents strongly agreed that virtual platforms had brought closer partnership between employees and managers and that this had improved teamwork performance in the organization, this was as well agreed by twenty five percent of the respondents. This depicts that use of virtual platform in organization improve teamwork performance in the organization through fostering a closer partnership among the organization managers and their subordinates. This finding reinforced Davis (2012) literature study that established that organizations that invest and engage well through virtual platforms performed better than organizations that did not appreciate technology. The finding was further in agreement with Cascio (2014) position that virtual platforms unite a team and foster close relationships that enhance performance.

The results additionally showed that fifty two percent of the respondents strongly agreed and as well as twenty percent of the respondents agreed that virtual platforms network linked one team of UNOPS-EAH staff to the other and this had improved teamwork performance in the organization. Linking of two teams through virtual platform creates an efficient pathway for the two team to collaborate on common work, it also brings unity among the teams which motivates them to perform better. This finding matched with Townsend et al., (2016) study which concluded that when a virtual network links one group to the other especially groups of far distances, communication and engagement is enhanced therefore performance improves.

The findings further, showed that half of the respondent agreed and also forty three percent of the respondent strongly agreed that UNOPS-EAH staff worked in joint
projects through virtual platforms and this had improved teamwork performance in the organization. These findings depict that virtual platforms can be utilized in common projects in the organization to facilitate efficient execution of the project. The virtual platform can be used to coordinate the activities of the project effectively. This finding was in agreement with Borgatti and Foster (2013) study that opined that virtual platforms improve projects performance since people in different localities can work as a team through networking. The finding also supported Furst et al., (2012) proposition that when a team of employees are linked together, they are likely to frequently communicate and exchange information leading to improved performance. Organizations carrying out projects can therefore employ virtual platform to facilitate enhanced project execution through enhancing the teamwork of the project team.

5.3.3 The Influence of Interpersonal Relationships on Virtual Teamwork Performance
The findings on the influence of interpersonal relationship on virtual teamwork performance showed that half of the respondents agreed that UNOPS-EAH staff were linked together through virtual platform and this had improved teamwork performance in the organization, this was as well strongly agreed by thirty eight percent of the respondents. This study finding affirmed McPherson’s (2016) position that when employees are networked, they interact often and exchange data that improves their knowledge and performance. These results can also be attributed to the unity created when employees are linked to another, it makes them work or pull together in the same direction and this is anticipated to register much better teamwork performance in the organization.

The findings further illustrated that sixty three percent of respondents strongly agreed that they shared their opinions with their work colleagues through virtual platforms and this had improved teamwork performance in the organization, this was also agreed by twelve percent of the respondents. Sharing of opinion over virtual platform will create a collaborative atmosphere and help to influence teamwork performance among employee that share opinion through the virtual platforms. This finding ascertained Aaker (2016) theory that exchange of information and virtual interactions of employees through virtual network improves performance. This finding further reinforced Kirkman, et al., (2016) position that opined that employees that exchange
and share their opinions over the internet were better placed to perform than those that do not since they find new ideas from their colleagues to work better.

It was observed that forty seven percent of the respondents strongly disagreed that UNOPS-EAH staff shared their feelings with work colleagues over virtual platforms and this had affected teamwork performance, this was further disagreed by thirty three percent of the respondent. This could be attributed to the lack of mutual connection between individuals interacting on a virtual platform and hence it is hard for them to exchange their deeper inner feelings. This is different if the employee could be interacting on face to face, since this would create a mutual relationship and make it easier for them to share their feelings. This finding ascertained Aaker (2016) theory that one of the limitations of the virtual connections is that it cannot promote expression of personal feelings with one another thereby negatively influencing the personal touch of the individuals coordinating their activities through the internet. This finding was also in line with Cascio (2014) study that posits that the communications medium with the highest level of richness is face-to-face communication, followed by video conferencing, phone, and chat respectively. The lowest richness level is represented by e-mail, text messaging and written documents (Cascio, 2014).

Further, the study findings illustrated that forty five percent of the respondents strongly disagreed that they could physically interact with their managers over the virtual platforms and this had affected teamwork performance in UNOPS-EAH, this was also disagreed by forty percent of the respondents. This shows that in as much as a virtual platform enhances interaction among employees; it has failed to facilitate interaction between employees and their managers. This could be attributed maybe to strict managers that are unapproachable, cutting or maintaining minimum interaction possible with the subordinate. This finding agreed with Havey (2014) that posits that virtual workplace inhibits employees’ interactions and expressions thus negatively affecting personal or individual connectedness of staff. The finding also reinforced Lipnack and Stamps (2014) argument that the challenge strictly related to communication, is creating a bond among geographically dispersed project team members. Project team members located at different sites are less likely to perceive
themselves as part of the same team than members of a collocated project team (Lipnack and Stamps, 2014).

5.3.4 The Influence of Trust on Virtual Teamwork Performance
The findings on the influence of trust on virtual teamwork performance showed that eighty percent of the respondents strongly disagreed that UNOPS-EAH virtual platforms had improved openness in the workplace and that it had improved teamwork performance in the organization. This was also disagreed by nineteen percent of the respondents. This study finding affirmed McPherson (2016) position that factors such as openness cannot be easily achieved through virtual workplace operations as it requires face to face interactions to achieve it. Literature on virtual teams also shows that openness has been found as more critical in global virtual teams, whose members are separated by location, culture, and time, than the traditional teams because of the absence of face-to-face interactions (Aaker, 2014; Havey, 2014).

The findings further showed that, fifty eight percent of the respondents strongly agreed that UNOPS-EAH staff supported each other through virtual platforms and this had improved teamwork performance in the organization, this was further agreed by thirty eight percent of the respondents. This can be attributed to the efficiency in collaboration that virtual platforms bring to the organization. This finding supports Malhotra and Majchrzak (2012) literature that virtual platforms enable employees to support each other through networking and therefore improves performance. As Cascio (2014) also further found out, employees often form discussion groups in the virtual platforms that enable them to share their problems and discuss matters affecting their career hence improving every individual performance in the groups.

These findings also demonstrated that, forty percent of the respondents strongly disagreed that UNOPS-EAH virtual platforms had brought integrity in their workplace and that it had improved teamwork performance in the organization, this was also disagreed by thirty five percent of the respondents. This shows that virtual platforms are not likely to bring integrity to the workplace. This finding was in agreement with Bell and Kozlowski (2012) study that established that a virtual
platform was not a good source for promoting openness, integrity and transparency in the organization.

This study finding also showed that sixty five percent of the respondents strongly disagreed that virtual platforms had improved transparency in UNOPS-EAH and enhanced team performance in the organization; this was also disagreed by twenty seven percent of the respondents. This depicts that virtual platforms are not likely to bring transparency in the organization. This finding reinforced Borgatti and Foster (2013) study that opined that virtual platforms are not appropriate when matters such as improvement of openness, integrity and transparency are the objectives to be achieved in the workplace.

5.4 Conclusions
5.4.1 Communication on Virtual Teamwork Performance
The results of this study leads to the conclusion that, the exchange of ideas through virtual platforms; staff sharing of work experiences through virtual platforms; staff networking; staff dissemination of data and information through virtual platforms lead to improved teamwork performance.

5.4.2 Collaboration on Virtual Teamwork Performance
Concerning collaboration, the study established that closer partnerships among employees; closer partnership between employee and managers; linking employees through networking; and staff joint projects in virtual platforms improved teamwork performance.

5.4.3 Interpersonal Relationships and Virtual Teamwork Performance
Concerning interpersonal relationships, the study established that linking employees with their work colleagues over the internet and staff sharing of opinions through virtual platforms improved teamwork performance in the organization. However, the study found that employees were not able to express their feelings and physically interact with their colleagues in different localities through virtual platforms and this had an adverse impact on teamwork performance in the organization.
5.4.4 Trust on Virtual Teamwork Performance
Concerning trust, the study established that employees and the management were able to support one another through virtual platform and this improved teamwork performance. However, the study also established that virtual platforms did not improve workplace openness, staff integrity and transparency and therefore could not improve teamwork performance.

5.5 Recommendations
5.5.1 Recommendations for Improvement
This section provides the recommendations for improvement based on the study findings and discussions. The recommendations were organized based on the following four research questions of the study: To what extent does communication influence virtual teamwork performance at the United Nations Office for Project Services in Kenya? To what extent does collaboration influence virtual teamwork performance at the United Nations Office for Project Services in Kenya? How do interpersonal relationships influence virtual teamwork performance at the United Nations Office for Project Services in Kenya? To what extent does trust influence virtual teamwork performance at the United Nations Office for Project Services in Kenya?

5.5.1.1 Communication on Virtual Teamwork Performance
Based on the findings and conclusions above, this study recommends that UNOPS-EAH (the case company in which this study was based) works towards improving communication elements in the organization such as, staff exchanges of ideas through virtual platforms; staff sharing of work experiences through virtual platforms; staff networking; and staff dissemination of data and information through virtual platforms to enhance teamwork performance.

5.5.1.2 Collaboration on Virtual Teamwork Performance
With regard to collaboration, this study recommends that UNOPS-EAH continue to entrench collaborative elements in the organization such as closer partnership among employees; closer partnership between employees and managers; linking employees through networking; and staff joint projects in virtual platforms to improve teamwork performance.
5.5.1.3 Interpersonal Relationships and Virtual Teamwork Performance
With regard to interpersonal relationship, this study recommends that UNOPS-EAH adopt different interpersonal relationship strategies of improving teamwork performance since virtual platform did not support sharing of feelings and physically interaction of employees thus thereby adversely affecting teamwork performance.

5.5.1.4 Trust on Virtual Teamwork Performance
Lastly, concerning trust, this study recommends that UNOPS-EAH adopt different strategies of developing employees trust since virtual platform did not improve workplace openness, staff integrity and transparency thus thereby adversely affecting teamwork performance.

5.5.2 Recommendations for Further Studies
This study sought to investigate the influence of virtual platforms on teamwork performance at the United Nations in Kenya. The study looked at how communication, collaboration, interpersonal relationship and trust influence teamwork performance. However, during undertaking of the study other factors such as management support and employees’ acceptance to change showed an influence teamwork performance. This study therefore suggests that future studies be done with focus on how other variables such as management support and employees acceptance to change among others influence teamwork performance.
REFERENCES


APPENDIX I
LETTER OF INTRODUCTION

17th November, 2016

United Nations Office for Project Services (UNOPS)

East Africa Hub (EAH)

P.O Box 783 - 00621

Nairobi, Kenya

Dear Sir/ Madam,

RE: DATA COLLECTION

I am a former employee of UNOPS EAH and currently student undertaking a Masters of Organizational Development (MOD) at the United States International University (USIU). I am carrying out a research on ‘The influence of virtual platforms on teamwork performance at the United Nations Office for Project Services in Kenya’.

Your organization has been selected to form part of this study as a case company. This is to kindly request you to allow me collect data using the questionnaires that will be administered to your employees. I bring to your attention that the information your employees provide will only be used for academic purposes and will be treated with utmost care and confidentiality.

A copy of the final report will be availed to you upon request. Your assistance will be highly appreciated.

Yours truly,

Aziz Alibhai

Dr. Zachary Mosoti

Student/Researcher

Supervisor
APPENDIX II
QUESTIONNAIRE

SECTION 1 : GENERAL INFORMATION

1. Gender: □ Male □ Female

2. Age group in years: □ 18-25 □ 26-33 □ 34-41 □ 42-49 □ 50+

3. Highest level of education: □ Certificate □ Diploma □ Graduate □ Post graduate

4. Duration of employment: □ <3 □ 3-6 □ 6-9 □ 9-12 □ +12

SECTION 2: INFLUENCE OF COMMUNICATION ON VIRTUAL TEAMWORK PERFORMANCE

To what extent do you agree or disagree with the following statements: (1) Strongly agree (2) Agree (3) Undecided (4) Disagree (5) Strongly disagree.

<table>
<thead>
<tr>
<th>Communication</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. We disseminate data and information through virtual platforms and this had improved teamwork performance in our organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. We exchange ideas through virtual platforms and this had improved teamwork performance in our organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. We share work experiences through virtual platforms and this had improved teamwork performance in our organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. We are networked and linked through virtual platforms and this had improved teamwork performance in our organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SECTION 3: INFLUENCE OF COLLABORATION ON VIRTUAL TEAMWORK PERFORMANCE

To what extent do you agree or disagree with the following statements: (1) Strongly agree (2) Agree (3) Undecided (4) Disagree (5) Strongly disagree.

<table>
<thead>
<tr>
<th>Collaboration</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. Our virtual platform has brought closer partnership among employee and this had improved teamwork performance in our organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Our virtual platform has brought closer partnership between employee to managers and this had improved teamwork performance in our organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Our virtual platform link and network one team to the other and this had improved teamwork performance in our organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. We work in joint projects through virtual platform and this had improved teamwork performance in our organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION 4: INFLUENCE OF INTERPERSONAL RELATIONSHIP ON VIRTUAL TEAMWORK PERFORMANCE

To what extent do you agree or disagree with the following statements: (1) Strongly agree (2) Agree (3) Undecided (4) Disagree (5) Strongly disagree.

<table>
<thead>
<tr>
<th>Interpersonal Relationship</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. Our virtual platform links me with my work colleagues and this had improved teamwork performance in our organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. I share my opinions with my work colleagues through virtual platforms and this had improved teamwork performance in our organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. I share my feelings with my work colleagues through virtual platforms and this had improved teamwork performance in our organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. I interact with my managers through virtual platforms and this had improved teamwork performance in our organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SECTION 5: INFLUENCE OF TRUST ON VIRTUAL TEAMWORK PERFORMANCE

To what extent do you agree or disagree with the following statements: (1) Strongly agree (2) Agree (3) Undecided (4) Disagree (5) Strongly disagree.

<table>
<thead>
<tr>
<th>Trust</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>17. Our virtual platform had improved openness in our work and this had improved teamwork performance in our organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. We support each other through virtual platforms and this had improved teamwork performance in our organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. Our virtual platform has brought integrity in our work and this had improved teamwork performance in our organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. We are transparent with our work over virtual platforms and this had improved teamwork performance in our organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Thank you for your contribution to this study.