Workplace Factors That Shape IT Project Success

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Abstract

Information technology (IT) project success depends on having a project manager with effective decision-making, leadership, and project management skills. Project success also depends on completing the project in a given budget, time, and scope. However, there is a limited understanding of the lived experiences of IT managers and the following workplace factors: cultural, functional, and organizational differences. The purpose of this phenomenological study was to understand these lived experiences of 20 IT project managers or leaders at global workplaces based in the United States. The research questions were focused on the effect of these workplace factors on information technology project success. In accordance with nonrandom purposeful sampling strategies, a snowball technique was used to find more participants. An open-ended, e-mail questionnaire was created and sent to participants to collect data. The data were coded to discern themes or patterns. According to study results, team members should acquire a broader array of knowledge and experience; appreciate other cultures to create a more trusted working environment, leverage technical expertise and skills to foster team effectiveness, reduce project risks, gain and diversify skill sets; achieve more tasks in shorter time frame, and allow members to use creativity and talent. This study has implications for positive social change because organizations that understand the workplace factors may be able to improve project management strategies and cost benefits leading to higher efficiency, profitability, and productivity thus benefiting management, employees, and customers.

Keywords: Leadership Effectiveness; Virtual Team, Workplace Factors.

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1. Introduction

Many public and private sector organizations compete in the global marketplace. Some organizations are using global virtual project teams (GVPTs) as a way of developing software solutions for customers more efficiently and effectively [167]. Such GVPTs are employing state-of-the-art software development methodologies (SDMs), technologies, and processes [167]. However, information technology (IT) projects fail and cancellation rates continue to remain high. For instance, within the last decade, researchers have indicated that many IT / Information Systems (IT / IS) projects fail [40,169,181,206]. Weiling and Ping [220] noted that for an IT project to reach a desired goal or objective, the project manager must possess effective decision-making and leadership, and project management (PM) skills.

1.1 Background of the Study

Software development projects fail and cancellation rates remain high. Shenhar and Dvir [188] stated that more than 60% of IT projects are delivered late or over budget. Additionally, the Standish Group [206] found that 32% of the IT projects examined were successful and 68% of the IT projects were not successful. Emam and Koru [65] studied global IT projects in 2005 and 2007 and found that the overall failure and cancellation rates were high. Ke and Wei [110] noted that the success rate of enterprise resource planning (ERP) designs was approximately 20%. The 20% success rate consisted of ERP projects for all types of IT projects. There were several reasons for these software development projects failures and cancellations rates. For instance, IT managers may not identify and control software risks, which can contribute to project failures [181]. Researchers have demonstrated that many software development project failures also result from unidentified and uncontrolled risks [40,169,181,206]. Additionally, Kerzner [111] argued that some IT software development projects fail because project managers are not adequately monitoring schedule, cost, and scope variables. An IT manager's lack of proper leadership style and inadequate leadership skills may also contribute to project failure. For example, inefficient leadership leads to an increased risk of project failure. The IT manager's leadership style plays a role in the outcome of the project [116]. GVPTs exhibit greater risks due to cultural, functional, organizational and language differences, and insufficient technical resources. Cultural, functional, and organizational differences and internal factors also effect IT projects [67, 157, 169]. Reed and Knight [169] posited that GVPTs face greater challenges and risks than a collocated team. Reed and Knight concluded that of the 55 projects they studied, seven were comprised of inadequate knowledge transfer, deficiency of the project team coherence, cultural and language differences, inadequate technical resources, inexperience with the firm and its processes, loss of core resource(s), and concealed agendas. These projects exhibited a significantly heightened risk for the GVPT versus for traditional team projects. However, researchers have recommended that more studies be conducted to understand why these software development projects fail and why cancellation rates remain high. Oza and Hall [157], Espinosa et al. [67], Sharma et al. [187], and Reed and Knight [169] argued that workplace factors such as cultural, functional, and organizational differences effect IT project success; however, limited studies are available to confirm the statement. As noted by Espinosa et al., Nair [146], and Reed and Knight, most researchers have studied specified variables of cost, scope, and schedule.

Organizational leaders can take proactive measures to help prevent the failure and cancellation of these software

development projects. For instance, project managers must be cognizant of organizational issues and additional efforts must be created in order to coordinate IT with organizational business strategies. Team cultural cognizance, motivation, cohesiveness and synergy, and job satisfaction of the team members are needed in order to accomplish project success. The management team must also ensure that any dilemmas in communication, expectation, and interaction process are addressed and rectified before venturing on the project. Carte, Chidambaram, and Becker [34] posited that when firms become more complex, global, and dynamic, IT-linked projects are needed to streamline the business process to accomplish competitive advantage, and require innovative business solutions to design IT projects. Additionally, IT projects should be managed to produce economic value and competitive advantage. For a project to be successful, process and tools should be understood beforehand. To evaluate IT project success, project managers have to manage project efficiency, the effect on customer, business success, and long-term sustainable development [67].

Managers with good project management skills are needed to fulfill set goals or objectives. To lead efficiently in GVPT, the leaders of GVPTs necessitate relationship building, technical and leadership skills, and the ability to defuse the defeats of GVPT members [174]. Leaders with effective decision-making and project management skills can improve a project's success rate [116]. Leadership skills necessitated by leaders in GVPT climates include emotional intelligence, the ability to create an open and supportive climate, and to influence and guide by example [174].

1.2 Research Questions

The research questions were (a) what are the lived experiences of managers regarding the effects of the workplace factors of cultural, functional, and organizational differences on IT project success?, (b) What are the lived experiences of managers regarding arbitrating task process variables (e.g., coordination, task programming and team communication, and knowledge) on the enhancement of the likelihood of success, given the presence of these workplace factors?, and (c) What are the lived experiences of managers regarding a style that is best suited for managing a virtual team? These three research questions were developed into the following subquestions:

1. What is your lived experience on a virtual team?
2. What is your lived experience on how virtual team cultural differences could effect IT project success?
3. What is your lived experience on how virtual team functional differences (e.g., when more than one area of functional expertise is represented within a team) could effect IT project success or related to team-rated performance?
4. What is your lived experience on how virtual team organizational differences (e.g., multiple vendors increase project complexity as an outcome of different and sometimes conflicting sets of goals and success measures) could effect IT project success?
5. What is your lived experience on how effective virtual team coordination (e.g., task programming and team communication) could enhance the chance of success of IT projects success?
6. What is your lived experience on how effective virtual team trust could heighten the likelihood of IT project success?

7. What is your lived experience on how effective virtual team knowledge sharing could heighten the chance of IT projects success?

8. What is your lived experience on how effective virtual team knowledge management could heighten the likelihood of IT projects success?

9. What managerial style is best suited for managing virtual team?

The study Subquestions 1 to 4 were derived from the Research Question 1, Subquestions 5 to 8 were derived from Research Question 2, and Subquestion 9 was derived from Research Question 3. In accordance with the nonrandom, purposeful sampling strategies, I employed a snowball technique to find more participants. A pilot test of the interview or subquestions was done as well with three participants. The study contained open-ended questions to collect data. I distributed these interview questions to participants via e-mail to collect data. I then coded and analyzed the data for themes and patterns.

2. Literature Review

Researchers indicated that IT projects continue to fail at a high rate. Kerzner [111] argued that some IT projects fail because project managers are not monitoring the variables of schedule, cost, and scope. Shenhar and Dvir [188] illustrated that more than 60% of IT projects are not completed on time and within budget. The Standish Group (2010) wrote that 32% of the IT projects examined were successful and 68% of the IT projects were not successful; the failures were due failed and deserted projects. IT project success depends on various factors: having an IT project manager with effective leadership and decision-making. Traditionally, project success also depends on achieving the project in a given time, budget, and scope. However, there is a limited understanding of the lived experiences of those who experience the following workplace factors: cultural, functional, and organizational differences [67, 157, 169].

The purpose of this qualitative, phenomenological research study was to understand the lived experiences of IT managers with the workplace factors of cultural, functional, and organizational differences at global workplaces based in the United States. Up-to-date, real world communities are alike in many ways. These communities have internal factors comprised of communication, project management, accessibility of resources, project preparation, budget allotment, requirement and release management, and modification control process [36,65,67, 157,169]. However, limited information is available regarding workplace factors that have an effect on IT projects [36,65,67, 157, 169]. The scope of the study was within the United States and included virtual team professionals. The participants were drawn from members of managers from an international project management association. This study has implications for positive social change because organizations that understand workplace factors that effect the success of IT may develop strategies to improve project management and cost benefits leading to higher efficiency, profitability, and productivity.

Globalization has resulted in the demand for more efficient and competitive firms, meaning an increase in the use of GVPTs that span time zones, firm boundaries, and cultures [227]. GVPTs have the ability to transform a global enterprise by maximizing the use of all its resources to respond rapidly in a global marketplace. GVPTs can be organized independently of stakeholders' locations, gathering the best set of employee skills to be

applied to the work at hand [227]. GVPTs can also be a source of costs savings, as evidenced by Volvo, which discovered a 50% decrease in its travel disbursements by designing GVPTs [227]. Such GVPTs are employing the latest SDMs, technologies, and processes [167]. But, IT projects failure and cancellation rates continue to remain high. For instance, within the last decade, researchers have indicated that the number IT / IS projects that fail and are never brought to achievement is significant [40,36,65,67, 157, 169,205]. Weiling and Ping [220] noted that for an IT project to reach a desired goal or objective, the project manager must possess effective decision-making, leadership, and project management skills.

The literature review in this chapter includes project management, difficulties in outsourcing, project success model, offshore software development, potential difficulties and suggested provisional solutions, GVPT software project risk management, review of current findings relating to GVPTs, GVPT workplace factors that shape IT project success, coping factors that shape IT project success, and a research method review. The chapter also contains details about several theories used to ascertain IT project success and research on workplace factors effecting IT project success.

2.1. Literature Review

2.1.1. Project Manager

Researchers indicated managers with effective leadership skills help improve project success outcomes. Ginsburg [78], Chen [41], Chen et al. [40], Quisenberry [167], Kocheria and Korrapati [116], and Zivick [227] noted that managers who possess effective skills could increase the likelihood of project success. Fulfilling customer requirements are also a good core indicator of project success [41, 204]. Standing et al. [204] noted that in order to accomplish customer satisfaction, a manager must ensure that customer requirements do not change and that effective change management protocols and processes are built. The management team must also ensure job satisfaction among team members. High job satisfaction can lead to lower absenteeism and turnover and more dedication to IT project success [41,40,204]. Job satisfaction of project managers also is critical factor in successful project culmination. Standing et al. noted that if a company is successful in designing an IT project, it might gain revenues, diminish life-cycle costs, and increase competitive advantage. Successful IT projects are made to produce *economic value* and competitive advantage [41]. Hence, organizational leaders need to realize this significant prior to initiate any new project for organizations sustainable development.

IT managers must possess project management skills to fulfill set *goals* and *objectives*, extradite caliber products, and maximize revenue while downplaying costs [41,40,204,78,167,227]. Successful IT projects can lead to prompt business gains, and sometimes long-term benefits like organizing the firm for future challenges, competitive market situations, and long-term development [41,40,204, 78,167,227]. In order for a project to succeed, process, instruments, and procedures must be built. In order to evaluate IT project success, project managers have to manage project efficiency, the effect on end users, business success, and long-term sustainable development [67]. Hence, organizational leaders who are measuring project success, they constantly need to manage projects and team members effectively.

2.1.2. GVPT Workplace Factors That Shape IT Project Success

Huang [92] noted that as global IS development (ISD) practice has become more dominant and diversified; efforts are needed to address diversity issues. Distinct from traditional on-site ISD work, globally distributed ISD work is located within distinct, complex sociocultural settings, and is primarily carried out by GVPTs through virtual atmospheres accompanied by networking technologies. Hawk and Kaiser noted individual team members of GVPTs might have diverse national, professional, and firm backgrounds, which may shape their attitudes, behaviors, identities, and values (as cited in Huang, [92]). On one hand, Trauth et al. noted that cultural difference could be used as a resource to increase *creativity* and *flexibility*, which might be beneficial for team operations (as cited in Huang, [92]). On the other hand, Moitra noted that *cultural difference* might become an impediment to establishing trust, sharing, and transferring cognition, and thus effect team operations in a negative manner (as cited in Huang [92]). Therefore, management needs to determine how to create a sense of cultural difference, understand its effect on the work practices of global information systems development, and determine how to effectively handle cross-cultural or cultural, functional, and organizational differences work practices.

Researchers indicated high trust in GVPTs help improve team overall performance or project success. Casey [35] noted that a high degree of trust within a firm improves creativity, efficiency, operation, productivity, and the overall outcomes accomplished. According to Anantatmula [10], in order to be competitive, firms are must design products and services quicker and cheaper in order to sustain competitive advantage in the worldwide marketplace. The global economy is effecting how managers handle their institutional knowledge; a departure from the traditional firm constructions has become essential. For example, sharing information has become essential for firms to handle international interactions and global projects effectively. The concept of a knowledge activist was created in GVPTs to encourage knowledge sharing among all knowledgeable stakeholders within a geographically dispersed, multinational, and multicultural organization. Kauppila et al. [110] noted that various researchers have explored the challenges linked to knowledge sharing in the context of geographically dispersed organizations [128].

2.1.2.1. Cultural differences

Bass studied culture and leadership within countries, firms, and groups [67]. Bass stressed the importance of understanding *cultural differences* between countries. Hofstede stated that the success of the tasks of one individual in one culture is dependent upon understanding *cultural differences*, encompassing a variety of types of leadership styles [67]. The globalization of numerous firms and the gaining interdependency of nations make the understanding of culture and its effect on leadership significant. On a more virtual degree, these efforts offer a place to start understanding the cultural variances of leadership and the cultural settings that may shape individual leaders from distinct countries. Additionally, cultural and language differences are amplified in GVPTs [24]. Unintended, noninclusive behaviors rooted in cultural standards can be interpreted as intimidation or rudeness. Nurturing cultural understanding can enhance the success of GVPTs.

Furthermore, Espinosa, DeLone, and Lee [67] concluded that cultural differences were attributed to project

results by 13 participants, most of whom discussed *negative effects* on project operations in terms of budget and time overruns, higher cost / effort, and lower system caliber. Project team members from various countries had different views on issues and different way of conveying and resolving problems. Team members experienced troubles in empathizing with other members' behavior and operating as one team. A deficiency of understanding due to cultural gaps requires greater *effort* and *time* to resolve [67]. According to Espinosa et al., one participant indicated, "It takes a lot longer time to figure out certain things that would probably get resolved by a five minute phone call they dwell on the issue or problem for probably a week or two weeks" [67, p. 355].

Time separation remains a problem for ICTs [67]. To deal with time separation, teams need to design daily or weekly meetings, steady conference calls, and routine reporting of the project. Some teams should also rotate sending stakeholders to various locations and promote on-site meetings. This way, project team members may be able to prevent some of the problems that come from geographic distance and time separation. The negative effects of cultural differences on project operation appear in the original phase of projects, making it important to address cultural differences within teams early on in the project. Espinosa et al. (2006) suggested that early recognition of cultural differences may help project team members prevent potential risks. As team members complete tasks with team members from other cultures, they become better able to deal with cultural diversity.

2.1.2.2. Functional differences

Buyl et al. [31] suggested that the effect of top management team (TMT) functional differences on firm operation is unknown. Buyl et al. examined the personalities of CEOs, postulating that the CEO's expertise and background characteristics effect the TMT functional difference and firm operation. Using a dataset of 33 Dutch and Belgian IT firms, Buyl et al. examined the personality characteristics of three sets of CEOs (status as founder, functional background, and shared experience) with the other TMT members to determine the connection between TMT functional difference and firm operation. Buyl et al. found that CEO and TMT characteristics do impact the functional expertise of distributed TMTs. Hence, these findings on CEO and TMT characteristics might also apply to GVPTs leaderships.

According to Espinosa et al., some problems in a global workplace may be attributed to functional differences that may subsist between sites when multiple areas of functional expertise are represented within a team. Espinosa et al. noted that functional differences can shape team processes, which can effect the group's operation. In addition, Peters and Karren [162] noted that functional differences plays a role when team members are functionally distinct and geographically dispersed (virtual); and this diversity in terms of job function effects the degree of trust within the team. Peters and Karren found that both trust and functional differences had a direct effect on team member ratings. To effectively handle diversity, firms must understand the difference between functional and social diversities, and treat diversity differently in functional and innovative teams [196]. Hence, GVPTs leaders need to realize the diversity distinctly when managing these teams.

One of the advantages of GVPTs is that they are able to connect diverse experts from around the world in an effective way [174]. Therefore, in order for the GVPT to work at maximum effectiveness, the leader must

promote the diversity of the team by establishing a culture of information sharing, cooperation, and functioning rooted in mutual respect and trust [174]. Leaders can also espouse diversity by promoting input from all team members, establishing a shared GVPT setting, and establishing a common language in order to ascertain that each team member defines terms in the same way.

2.1.2.3. Organizational differences

Researchers indicated organizational differences are significant when organizational leaderships use to establish alliances and connect with customers for promoting new market strategies. Smith and Barclay noted that building alliances to connect customers are among the new marketing strategies that mangers use for competitive advantage [146]. To be successful, these alliances require sales representative to form organizations to function effectively as selling partners. Smith and Barclay created a trust-rooted model to showcase effective selling partner strategies in the context of the computer industry. Smith and Barclay discovered that organizational differences were forecasters of three dimensions of commonly perceived attributes of trustworthiness. Organizational differences in goals and / or control systems and strategic horizons have an indirect impact on partnership satisfaction.

According to Espinosa et al., the gaining popularity of global outsourcing is effecting the use of teams that traverse organizational boundaries (OBs). Espinosa et al., [67] noted that distributed work groups frequently use teams comprised of multiple firms. According to Espinosa et al. [67], differences in organizational affiliations can have the following outcomes: (a) diminish a shared sense of identity, and effect communication and operation effectiveness, and (b) a gain hidden costs because client organizations need to communicate work requirements to IT service providers and monitor contractual responsibilities.

2.1.3. Coping Factors That Shape IT Project Success

2.1.3.1. Coordination: task programming and team communication

Researchers noted that projects coordination activities within GVPTs environment can be a challenge due to across multiple workplace factors. Coordination involves dispersing task activities, which may be difficult across multiple workplace factors [67]. Team members use two kinds of coordination mechanisms: team communication (TC) and task programming (TP). Coordination of repetitious and routine facets of the project can be programmed using mechanisms comprised of division of labor, plans, project controls and specifications, schedules, and tools. But less routine facets of the task can be most effectively aligned through communication, which can be asynchronous (e.g., electronic mail, shared databases) or synchronous (e.g., F2F, instant messaging, telephone). When GVPT members are in close proximity, they frequently gather spontaneously and coordinate their tasks informally [67]. As workplace factors impair communication among members, TP mechanisms can assist GVPT members in ensuring effective communication.

2.1.3.2. Team communication

Casey [35] noted that effective communication (EC) is a crucial process in every organization and is a required

component for successful, globally distributed software development. Trust, fear, and motivation directly effect the degree, content, and effectiveness of communication. Stakeholders have to be motivated to use the communication software, which is furnished. The communication, which takes place, must be effective to fulfill the demands of the teams and projects [35]. Hence, effective members' communication skills are also important to GVPTs overall project outcome.

Communication issues for GVPTs include both the tools or technologies for communication and the rules of participant. Both are vital for GVPT success and what functions well for F2F teams is usually not effective for GVPTs. Researchers have discovered different outcomes as to whether communication tools like videoconferencing and e-mail are beneficial or ineffective for GVPTs. Shared electronic workplaces such as websites on an intranet are preferred communication tools for GVPTs [130]. Rules of participation for GVPTs includes building upfront the guidelines that team members will and will not use when communication with each other. Rules that are taken for granted in a F2F situation, like not recognizing each member at the beginning of a meeting, might need to be created explicitly for GVPTs.

With regards to the avenue to communicate to remote team members, researchers discovered that onsite engineers whose jobs sent offshore can be a challenge. Casey [35] studied onsite engineers whose job was sent offsite. Casey found that these engineers communicated with their offsite stakeholders in a limited way. As a consequence, communication was kept to a minimum, phone calls were not answered, e-mails furnished a limited amount of data, and on occasions were not replied to and queries stayed unanswered [35]. When direct communication occurred, the discourse was crisp and, on occasions, aggressive. This resulted in inexperienced team members in an offsite location who lacked the communication required to execute their job successfully [35]. It became apparent that online communication was being employed as a means to narrow and control the amount and quality of data, which were shared. Communication was a barrier in the development of personal associations and trust by limiting any direct interaction [35]. It can be easy to resent and dislike someone who is not known personally, especially when they are perceived as a threat to an individuals' future [35]. Casey further noted that in the offshore / nearshore software development study, communication was employed as a weapon with which was used to attack remote team members. This was mainly accomplished through the misuse of e-mail. Copying others on e-mail is not a problem [35]. Rather in this instance, it was the malicious use of e-mail by virtual team members at both locations, which made it become a problem.

2.1.3.3. Team knowledge or cognition

Team knowledge can be a great accompaniment to traditional *coordination mechanisms* [67]. Espinosa et al. [67] examined three types of team cognition: building trust, shared cognition, and cognition and cognition management. Espinosa et al. found that sharing knowledge has a positive effect on IT project results. Shared knowledge offers a mutual ground for efficient communication with less complex messages and a mutual cognition base that assists team members tap into expert cognition sources within the team [67]. Hence, shared knowledge also help team overall performance.

2.1.3.4. Building trust

In a GVPTs project environment, establishing strong trust at the beginning with all team members could have positive effect on future team project performances and organizations operating efficiency. According to Casey [35], trust in the organizational setting is characterized as the reciprocal faith in other stakeholders' conduct. Casey stated, "In short we give what we get: trust begets trust, distrust begets distrust" (p. 52). The importance of trust has become increasingly acknowledged as a vital component in the successful operation of organizations and in business, professional, and employment relationships. Trust is obtained through the successful cooperation amongst stakeholders within and between organizations. Trust is necessary for the operation of an organization and the units functioning within it. Casey noted that high level of trust within a business firm improves creativity, efficiency, operation, productivity, and the overall outcomes accomplished.

In GVPTs, trust must be built through other avenues rather than through traditional F2F communication. Brandt, England, and Ward [24] stated that there are three elements of trust (ability, integrity, and benevolence) that must be present GVPT. Without trust, effective connections between team members cannot be established in the GVPT; therefore, it is vital to the success of a GVPT that the leader establishes the climate that is conducive to trust [174]. A leader can establish trust in a GVPT by having an initial in-person meeting with the team [174]. However, if this is not possible, then the leader should encourage members in the GVPT to post a picture of themselves and their biographical data, in order for each individual to see the human face behind the user name [174]. Other ways that leaders can create trust in GVPTs include designating tasks and promoting open and honest communication by establishing a safe, noncritical climate [174]. GVPT managers can also nurture trust by meeting the goals created by the GVPT constituents, appearing on credible and legitimate with followers, and ensuring that each member of the GVPT is performing via a private chat.

In software development teams, trust takes time to establish between team members. Distance makes it more difficult to develop trust between remote colleagues [35]. Despite this, the development of trust is important for the success of a GVPT-based software development [35]. Casey [35] stated, (a) Webs of technology and trust link GVPTs, and (b) *Trust* is *pivotal* in a GVPT to alleviate the high level of mistrust indigenous to the *global* and technologically rooted climate.

Cooperation between team members is necessary for the successful operation of GVPTs. The term *teameness* has been characterized as the ability of stakeholders to collectively collaborate and work effectively as a team [35]. Carmel stated that the loss of teamness was one of the five negative centrifugal forces, which effect outcomes for GVPT operation (as cited in Casey, [35]). Distance has a negative effect on the degree of teamness between remote colleagues [35]; it is not easy to successfully incorporate geographically remote and culturally various individuals or groups into a single team.

Trust is an important element of numerous interactions, encompassing virtual and F2F teams. Members of high-operation teams have high degrees of trust in one another [179]. Developing trust in GVPTs, who consist of members with little history of working and sometimes few opportunities of working together again, is a challenge [179]. Jarvenpaa and Leidner [110] examined the growth of trust in temporary GVPTs. Jarvenpaa and Leidner discovered that with short deadlines and no F2F time to build trust, the team members relied on trust being developed through from other avenues. Trust-building actions like fulfilling deadlines and

communication effectively assisted in strengthening initial feelings of trust.

A GVPT is a network where team members from different cultures are temporarily assembled together for a mission. Chang, Chuang, and Chao [37] proposed a general model of GVPTs to investigate how communication caliber, cultural adaptation, and trust impact the performance of GVPTs and their interaction with each other. Four GVPT members were interviewed in order to determine how GVPTs work. Chang et al. found that communication caliber, cultural adaptation, and trust have positive effects on the performance of GVPTs. For GVPTs, team leadership should be cognizant of cultural differences and project issues within teams.

Mockaitis, Rose, and Zettinig [141] studied the perceptions of members of 43 culturally diverse GVPTs, with regard to team results and processes. Employing a student-rooted sample, Mockaitis et al. examined the connection between global GVPT members' collectivistic and individualistic orientations and their measurements of trust, communication and information sharing, interdependence, and dispute during team tasks. Mockaitis et al. advised that a collectivist orientation is linked with global GVPT processes and cultural differences are not hidden by virtual communication.

2.1.3.5. Knowledge and knowledge management

Researchers indicated that to effectively deal with rivalry, organizations must find avenues to quickly develop products and services with a lower cost to remain competitive advantage. According to Anantatmula [10], in order to successfully deal with rivalry, firms are must design *products* and *services* quicker and cheaper in order to sustain competitive advantage. The global economy is effecting the ability of firms to handle their institutional knowledge. For example, sharing information has become essential for firms to handle international projects efficiently [10]. In the process, firms share knowledge with their strategic partners globally. In addition, worldwide projects provide opportunities to acquire cognition from each other and increase their cognition base [10]. Further, operating conditions and *communication systems* of GVPTs are connected to a person's lack of willingness to share information. Compounded with these challenges, firms encounter other challenges of cultural diversity as obstacles to effective knowledge management in global projects. Knowledge sharing and management are vital for firms to become and stay competitive [10]. However, due to international interactions and global projects, numerous firms are obligated to share their institutional knowledge with partnering firms, thereby threatening their competitive advantage.

According to Anantatmula [10], knowledge management is a systematic method to using information systems, business processes, best praxis, and culture to design and share knowledge within a firm. Innovation and transfer of knowledge are two facets of knowledge management. Knowledge innovation and transfer can occur only when more than one individual is involved. With regard to innovation, knowledge management includes two activities: (a) preserving and employing existing knowledge and (b) producing new knowledge for effective use. Existing knowledge is comprised of both tacit and explicit knowledge. Producing new knowledge involves the interaction of stakeholders within the organization.

2.1.3.6. Knowledge sharing

Kauppila, Rajala, and Jyrämä [107] analyzed the key concerns in knowledge management, including the challenges of nurturing *knowledge sharing* by encouraging the interaction of stakeholders within an organization. Kauppila et al. noted that knowledge management scholars have underscored the need for communities that enable knowledge sharing. A knowledge activist in a GVPT is charged with encouraging knowledge sharing among all knowledgeable stakeholders within a geographically dispersed, multinational, and multicultural organization. Various researchers have explored the challenges linked to knowledge sharing in the context of geographically dispersed organizations [67,128]. Kauppila et al. concluded that knowledge sharing includes a reliance on cohesive social ties, dialogic practices, F2F encounters, and shared *norms*, and *trust*. However, the physical distance between stakeholders diminishes the number of chances for F2F interaction. According to Kauppila et al., the absence of F2F interaction leads to diminished trust and cohesion among stakeholders and thus compromises knowledge sharing. This issue is complicated by the fact, in addition to that geographical impediments; multinational firms must also reduce cultural and functional impediments to their internal knowledge sharing.

GVPTs are one solution to the challenges facing *knowledge sharing* in multinational companies. Kauppila et al. [107] argued that processes that support knowledge synergy and shared understanding make GVPTs a potentially powerful new organizational form. According to Kauppila et al., challenges in handling GVPTs and the practices of GVPT leaders have been addressed. Kauppila et al. [107] emphasized that work can now be conducted anytime, anywhere, and either in real space or through technology, thus overcoming key challenges faced by global organizations. Martins et al. stated that as technology has improved and collaborative software has been developed, GVPTs, whose stakeholders are spread across diverse physical geographic locations, have become increasingly prominent (as cited in [107]).

3. Research Method

The purpose of this qualitative, phenomenological research study was to understand workplace factors of cultural, functional, and organizational differences that effect the success of IT projects. I explored which arbitrating task process variables heighten the likelihood of success, given the presence of these workplace factors. A qualitative research approach is appropriate for the study because qualitative inquirers depict and explicate research and interpret or establish theories [45]. The workplace factors included in the study are those factors leading to GVPT project success, such as cultural, functional, and organizational differences. The study included 20 IT managers based in the United States who had successful GVPT experiences. The 20 IT managers were sent a set of interview questions containing open-ended questions. Researchers employ a qualitative phenomenological research design to reveal the characteristics of a phenomenon [45]. A qualitative phenomenological research design is also used when inquirers want to establish theories, best practices, and offer insights on assembled data [26].

3.1. Research Design and Rationale

3.1.1. Research Method

Researcher noted that mixed method research demand more time during data collection and data analysis process. Plano Clark [164] noted that the mixed methods form of research requires an inquirer to do extensive data collection, and the process of analyzing numerical data and text is time intensive. Mixed method designs also include a deficiency of balance in terms of how the quantitative and qualitative strategies and research are designed [30]. The deficiency of balance can lead to a study intemperately aimed on one of the research designs and can lead to the supporting facet of the research being deserted, which causes limited illumination [30]. In addition, mixed methods research is not appropriate for this study because it combines quantitative and qualitative research approaches and uses them in tandem to improve the study [71].

Quantitative research is generalized and includes numbers to test hypotheses. Quantitative research is deductive as inquirers employ the method to test theories [195]. Quantitative research includes postpositivist worldviews that focus on empirical observation and evidence [161] and comes to definitive conclusions using statistical evidence [195]. Quantitative researchers do not engage subjective facets of phenomena because they test theoretical conclusions. In addition, Borrego et al. noted that a quantitative research approach requires a bigger population independent of circumstance, which means that the study should have random sampling [172]. A quantitative research approach was not appropriate for the study because researchers who employ quantitative research approaches use particular and narrow questions, collect numerical information from participants, and analyze the numbers employing statistics [161].

A qualitative research approach was a more appropriate choice than a quantitative research approach because of the subjective nature of the research study. The study consisted of interviews employing a questionnaire consisting of open-ended questions to collect information from the participants. The study included Moustakas' [143] modified van Kaam method and the Nvivo Qualitative Research Software Package (NQRSP) to analyze the data. A quantitative method was not applicable for this study because quantitative researchers do not collect information to distinguish emerging themes and patterns [172].

A qualitative method was appropriate for this study. Borrego et al. noted that a qualitative researcher looks to explain the phenomenon of a particular event, permitting a reader to create links between the study and his or her own circumstance [172]. Schilling [185] noted that qualitative approaches are optimal for assembling a more in-depth understanding of individuals' purviews, lived experiences, and perceptions. Qualitative approaches are inductive because inquirers assemble data from participants to depict and explicate research and interpret or establish theories [45]. Adams et al. [1] and Creswell noted that qualitative inquiry is effective in explaining ideas about a particular phenomenon [172]. Additionally, Sherrod (2006) noted that qualitative inquiry approaches are effective for demonstrating study participants' perceptions to understand a phenomenon. A qualitative research method is also proper when researchers need to know more about the particular construction of occurrences versus the general persona and overall distribution of the occurrences [201].

A qualitative research approach was appropriate for this study because I wished to analyze the life experiences and perceptions of a sample of IT managers in global workplaces based in the United States who experienced a

GVPT project success. The chosen sample size, which was 20 participants, was also conducive to a qualitative research approach. Sherrod [190] noted that qualitative inquiry methods normally have smaller sample sizes (e.g., 100 participants or less) than other research approaches. A qualitative research approach helped me achieve the goal of the study, which was to understand and depict the GVPT workplace factors that lead to IT project success.

3.1.2. Research Questions

The purpose of this study was to understand the workplace factors that effect the success of IT projects. The three research questions were as follows. What are the lived experiences of managers regarding the effects of the workplace factors of cultural, functional, and organizational differences on IT project success? What are the lived experiences of managers regarding arbitrating task process variables (e.g., coordination, task programming and team communication, and knowledge) on the enhancement of the likelihood of success, given the presence of these workplace factors? What are the lived experiences of managers regarding a style that is best suited for managing virtual team? These three research questions were then functionally composed into the nine subquestions (see Appendix D & E).

3.2. Methodology

3.2.1. Population

The population for the study included IT managers based in the United States with direct involvement in GVPT. The inclusion criteria for selecting participants included the volunteers' willingness to participate in the study, participants' prior and current cognition of GVPT processes, and the participants' willingness to share lived experiences and perceptions about workplace factors. Knapik (2006) noted that participants included in qualitative inquiry studies generally have comprehensive experience and cognition about their work environment. In addition, participants normally want to offer high-quality and accurate data based on experience [118]. The eligible study participants received an e-mail letter of invitation or invitation letter requesting to participation (see Appendix A & B) briefly explaining the research study and providing criteria for inclusion.

3.2.2. Data Collection

Researcher indicated that qualitative researchers use more than one steps when assembling research data. Patton [161] claimed that there are five steps involved in the process of gathering qualitative data. Qualitative studies require obtaining participants, attaining access, deciding on the types of information to collect, using data collection forms, and administrating the study in an ethical fashion [161]. In other words, the data collection process is comprised of collecting data using forms with questions to evoke responses from participants, gathering text, and collecting data from a small number of participants.

An e-mail questionnaire was used to collect the research questionnaire data. The participants were required to answer the same questions. The questionnaire was used to gather demographic information (e.g., age, gender,

number of year experience with collocated and virtual team project, and current industry), details about project success, cultural, functional, and organizational differences.

3.2.2.1. Interviews

Interviews with open-ended questions were used to evoke responses from participants, exploring the workplace factors leading to GVPT project success. The workplace factors the participants believe are most highly valued at ensuring GVPT project success are documented. Therefore, the participants' responses helped me in answering the research questions of the study.

3.2.3. Instrumentation and Material

An e-mail questionnaire interview format was the vehicle employed to collect information from the study participants. An e-mail questionnaire interview enables an inquirer to implement the content and analyze the outcomes objectively. The study questions (see Appendix D & E) were based on what researchers advised as workplace factors that could effect IT project success.

3.2.4. Pilot Study

Singleton and Straits [197] noted that during research, there is a possibility of participants misinterpreting interview questions. Pilot testing both the interview questions and the instructions minimizes this problem. Three individuals were be asked to participate in the pilot test that meet the same criteria as the primary study participants and these participants would not be included in the primary study. I followed up with the pilot participants after the pilot study to obtain feedback on the questions and instructions to obtain any recommendations for further development and enhancement. I also asked if the questions are clear and easy to understand. Feedback and recommendations from the pilot study participants were not essential and were not implemented in the primary study.

4. Results

The purpose of this qualitative, phenomenological research study was to understand the lived experiences of IT managers with the workplace factors of cultural, functional, and organizational differences at global workplaces based in the United States. The lived experiences and perceptions of 20 IT managers who experienced a GVPT processes were explored to analyze the workplace factors leading to project success (e.g., resulting in improved PM, higher productivity, improved cost benefits, greater efficiency, and profitability) to assist in the improvement of future GVPT projects. I used the data assembled from the interviews to answer the following three research questions: What are the lived experiences of managers regarding the effects of the workplace factors of cultural, functional, and organizational differences on IT project success? What are the lived experiences of managers regarding arbitrating task process variables (e.g., coordination, task programming and team communication, and knowledge) on the enhancement of the likelihood of success, given the presence of these workplace factors? What are the lived experiences of managers regarding a style that is best suited for managing virtual team?

4.1. Pilot Study

Three managers were included in the pilot test (see Appendix F), which consisted of open-ended questions supporting the research questions on July 2013. The managers chosen for the pilot test were knowledgeable of GVPT processes and were current or had prior experience in managing or leading a GVPT. The results of the pilot test required no modifications to either the instructions or the interview questions. The participants responded to all nine questions appropriately with no indications of ambiguity.

4.2. Demographics

The intent of the study was to obtain a better understanding of the following organizational workplace factors: cultural, functional, and organizational differences. The participants came from diverse backgrounds and were all either members of an International PM association or group. Twelve (see Table 1) out of 20 (60%) study participants work in the IT industry. Four out of 20 (20%) participants worked in manufacturing. Two out of 20 (10%) participants worked in the department of defense. By looking at these participant pools, I was able to seize the views of tenured GVPT managers from a variety of backgrounds. Table 1 presents the demographic information offered by each participant.

4.3. Data Collection

4.3.1. Participants

Participant selection using purposeful sampling began on July 24, 2013 and ended on August 7, 2013. Letter of invitations (see Appendix A & B), a participant informed consent form (see Appendix C). The interview questions (see Appendix E) were e-mailed to 40+ participants employed at global workplaces based in the United States. After the 14-day period, a total of 20 project managers and / or leaders at global workplaces based in the United States took part in an interview using e-mail as part of my interviewing protocol. They answered a series of nine interview questions, as noted in my data collection instrument (see Appendix D & E). Table 1 shows a demographical overview of the study participants.

The data collection process used in the study to gather in-depth responses from participants had no variations from what I discussed in Chapter 3 to the actual implementation. I obtained the participants' e-mail addresses during the initial contact via Linked In discussion postings and Linked In International PM association and group discussion postings. I did not face any unusual circumstances during the data collection process, such as any technical difficulties with using e-mail. All participants were knowledgeable of e-mail functionalities. The interview protocol and methodology used to assemble the data from participants was effective and I did not face any issues that changed or hindered the data collection process in any manner.

4.4. Study Results

4.4.1. Responses

The completed interview questionnaires (see Appendix E) were the collected data. The synopses of responses were the result of Moustakas' [143] modified version of van Kaam's method of phenomenological data analysis. Additionally, the NQRSP was used to distinguish common themes and patterns among the study participants' responses.

The open-ended questions containing the questionnaire (see Appendix E) were the result of the cognition gained from the literature review. Research articles on workplace factors leading to GVPT project success [67,146,169], PMI [199], and GVPT [167] were important in developing the nine open-ended questions in the questionnaire.

Table 2: Participant Demographic Information

Participant	Gender	Age group	Virtual team experience (years)	Collocated team experience (years)	Current industry
SP1	M	40-49	6-10	11-15	IT
SP2	F	19-29	1-5	1-5	IT
SP3	M	30-39	1-5	1-5	IT
SP4	M	40-49	6-10	11-15	IT
SP5	M	40-49	6-10	16-20	IT
SP6	M	40-49	6-10	11-15	Manufacturing
SP7	F	40-49	6-10	11-15	Manufacturing
SP8	F	40-49	6-10	11-15	IT
SP9	F	50-59	11-15	26+	IT
SP10	M	50-59	16-20	26+	Manufacturing
SP11	M	30-39	11-15	6-10	Manufacturing
SP12	F	50-59	11-15	26+	IT
SP13	F	50-59	1-5	1-5	Higher Ed
SP14	F	60+	11-15	21-25	DOD
SP15	F	40-49	11-15	16-20	Healthcare Ins
SP16	F	50-59	21-25	21-25	IT
SP17	M	40-49	1-5	1-5	IT
SP18	F	40-49	11-15	16-20	IT
SP19	M	60+	6-10	6-10	DOD
SP20	M	40-49	1-5	1-5	IT

4.4.2. Virtual Teams

More and more organizations are turning into virtual team to leverage ICTs, development methodologies, and team members' diverse expertise skills around the world. Thus, project leaders and team members with effective decision-making and project management skills have an effect on project outcomes. Additionally, project leaders and team members need to be culturally sensitive as well as be trained on different cultures in order to work effectively with their team members locally and remotely. This in turn helps minimize miscommunication among team members as well as optimized team overall performance, especially during team meetings and teleconferences meetings. Furthermore, leadership with effective decision-making and project management skills as well as appropriate leadership styles usage also effect project outcomes [117]. The following nine interview questions and findings are as follows.

Question 1

Question 1 was "What is your lived experience on a virtual team?"

Table 3: Responses to Question 1 (N = 20)

Prevalent theme	Frequency	%
Broader array of knowledge and experience	15	75
Leverage technologies, diverse and skills	9	45
Creative and have high degree of initiative and adaptability	6	30
Save organization annually traveling cost and employee time and money	6	30
Diverse and offer views not realized	5	25
Reduce time to market and self (motivation, reliance, or management)	5	25
Lack of team achievement celebration morale	4	20
ICTs use (teleconferencing and videoconferencing)	3	15

As shown in Table 3, 15 out of the 20 (75%) study participants believe virtual team members bring a broader array of knowledge and experience to leverage technology. Participants 1, 2, 3, 6, 7, 8, 9, 10, 13, 15, 18 and 20 showed similar thoughts based on the responses. For example, Participant 11 stated, "Virtual teams are created to utilize broader array of knowledge and experience from team members across the globe to leverage technology." Nine out of 20 (45%) study participants think virtual team helps organizations leverage technologies and leverage diverse and skills. Participants 1, 2, 3, 4, 6, 7, 8 and 20 showed similar thoughts based on the responses. For example, Participant 5 stated, "Virtual teams built to utilize a broader array of knowledge and experience and to my organization leverage diverse knowledge and skills from members around the world." Six out of 20 (30%) study participants believe virtual team members are creative and they have high degree of initiative and adaptability. Participants 1, 2, 3, 4, and 5 showed similar thoughts based on the responses. For example, Participant 18 stated, "My team members are created to use their creativity and they have high degree of initiative and adaptability since annually we supported 12000 customers internally and externally." Six out of 20 (30%) study participants believe virtual teams save organizations travel costs and time. Participants 1, 2, 3, 4 and 5 showed similar thoughts based on the responses. For example, Participant 7 stated, "My virtual team affords the chance to save my organization annually traveling cost and employees' time and money." Five out of 20 (25%) study participants believe virtual team members are diverse and provide perspectives not realized and eliminate downtime due to travel is minimum. Participants 2, 3, 4, and 5 showed similar thoughts based on the responses. For example, Participant 1 stated, "My team members are diverse and provide perspectives not realized and daily we able eliminate downtime due to our travel to remote or client site is minimum." Five out of 20 (25%) study participants believe virtual team helps reduce time to market and team members are self (motivation, reliance, or management). Participants 1, 2, 3, and 4 showed similar thoughts based on the responses. For example, Participant 5 stated, "My virtual team members are conceived to be self-managed, that is they don't really need to be micromanaged by their leaders. They also help us reduce time to the market in delivering solutions to our customers." Four out of 20 (20%) study participants believe virtual teams lack team achievement celebration morale. Participants 1, 2, and 5 showed similar thoughts based on the responses. For example, Participant 8 stated, "the drawback is lack of team success celebration as I can see." Three out of 20 (15%) study participants believe virtual team communication technologies or ICTs use

consist of teleconferencing and videoconferencing. Participants 10 and 13 showed similar thoughts based on the responses. For example, Participant 18 stated, "My virtual team use communication technologies or ICTs consist of teleconferencing and / or videoconferencing when we communicate with our remote team members."

4.4.3. Workplace Factors Shape Project Outcomes

Internal factors consisted of communication, project management, accessibility of resources, project preparation, budget allotment, requirement and release management, and modification control process [41,40,204, 78, 167,227] have significant effect on project outcomes. Additionally, project managers with effective decision-making and project management skills as well as appropriate leadership styles, depends on the circumstance also effects project outcomes [117]. Furthermore, workplace factors such as cultural, functional and organization differences effect project outcomes [67].

Question 2. Question 2 was "What is your lived experience on how virtual team cultural differences could effect IT project success?"

Table 4: Responses to Question 2 (N = 20)

Prevalent theme	Frequency	%
Positive		
Appreciate other cultures create a more trusted working environment and allows time for each member to speak	9	45
Concurrent engineering reduce time to market	8	40
Leverage diverse knowledge and skills	8	40
Level of proficiency can effect project success	3	15
ICTs use (teleconferencing and videoconferencing) extensively	3	15
Negative		
Divergences in verbal and non-verbal styles create miscommunication	4	20
Discovery of deficient skills may set-back the project and inqualified member might accept certain task	2	10

As shown in Table 4, nine out of the 20 (45%) study participants believe virtual team members need to appreciate other cultures create a more trusted working environment and allows time for each member to speak. Participants 1, 2, 3, 4, 5, 14, 15, and 20 showed similar thoughts based on the responses. For example, Participant 18 stated, "My team consists of members from various cultures. Each of my team members bring different perspectives with respect to culture, they appreciate and respect other members culture this in turn help them to build stronger trust and working relationships. "

Eighth out of the 20 (40%) study participants believe virtual team is created to use concurrent engineering reduce time to market. Participants 1, 2, 3, 4, 5, 7, and 20 showed similar thoughts based on the responses. For example, Participant 18 stated, "Concurrent team work or engineering helps us reduce time in delivering deliver solutions to our customers as well as resolved issues more rapidly." Eight out of the 20 (40%) study participants believe virtual team is created to leverage diverse knowledge and skills and improves team decision making. Participants 1, 2, 3, 4, 5, 7, and 8 showed similar thoughts based on the responses. For example, Participant 18

stated, "Cultural differences among members help my virtual team to leverage diverse knowledge and skills for sustainable and development as well as help improve our team decision making." Three out of the 20 (15%) study participants believe virtual team members from different culture and their level of proficiency can effect project success. Participants 6 and 7 showed similar thoughts based on the responses. For example, Participant 15 stated, "Generational gaps play a role as well, and local cultures such as work ethics is also a cultural difference that could effect IT project success." Three out of the 20 (15%) study participants believe virtual team members use communication technologies or ICTs such as videoconferencing and teleconferencing extensively. Participants 10 and 13 showed similar thoughts based on the responses. For example, Participant 9 stated, "My team use various communication technologies such as videoconferencing and teleconferencing very extensively in order to be very productive meeting discussions and outcomes. But I can tell you that there is no substitute to face to face meeting."

On the contrary, four out of the 20 (20%) study participants believe virtual team members' divergences in verbal and non-verbal styles create miscommunication. Participants 3, 4, and 5 showed similar thoughts based on the responses. For example, Participant 1 stated, "I believed that differences in verbal and non-verbal styles can create miscommunication and language divergences create miscommunication due lack of accuracy. My team members face this dilemma especially when we first establishing the team especially to include member from Far East. My team faces this dilemma especially when we first established the team especially to include those members from the Far East." Two out of the 20 (10%) study participants believe that discovery of deficient skills may set-back the project and an unqualified member might accept certain task. Participants 6 showed similar thoughts based on the response. For example, Participant 7 stated, "The level of proficiency can effect a project success. For instance, a person not qualified for a certain task may accept the task. The discovery of the deficient skills may set-back the project."

Question 3. Question 3 was "What is your lived experience on how virtual team functional differences (e.g., when more than one area of functional expertise is represented within a team) could effect IT project success or related to team-rated performance?"

As shown in Table 5, thirteen out of the 20 (65%) study participants believe that functional differences help virtual team to leverage technical expertise and skills and foster team effectiveness. Participants 1,2,3,4,5,8,9,10,12,14,17,19, and 20 showed similar thoughts based on the responses. For example, Participant 9 stated, "You have to have a team with different skills to satisfy and deliver a project. Team leader has to search the right person for the right project in order to succeed. Thus, functional differences help virtual team to leverage technical expertise and skills and foster team effectiveness." Twelve out of the 20 (60%) study participants believe that functional differences provide better dynamic and reduce development cycle. Participants 1, 3, 5, 7, 9, 10, 12, 14, 16, 17, and 19 showed similar thoughts based on the responses. For example, Participant 4 stated, "I believe that when more than one functional expertise is within a group this in turn aids to better team performance. Thus, functional differences within virtual team provide better dynamic and aid to reduce development cycle. " Eleven out of the 20 (55%) study participants believe that functional differences help boost team overall performance and outcome. Participants 1, 3, 4, 5, 8, 15, 17, 19, and 20 showed similar thoughts based on the responses. For example, Participant 18 stated, "I believe that functional

differences benefit or boost the performances of the IT team due to IT project's complexities." Seven out of the 20 (35%) study participants believed that functional differences or having the right expertise or people at the table are critical to project success. Participants 3, 7, 14-17, and 20 showed similar thoughts based on the responses. For example, Participant 15 stated, "Having the right expertise or people at the table, no matter if they work virtually or work in the same building, is critical to its success." Six out of the 20 (30%) study participants believe that functional differences create diverse skills so knowledge can be shared. Participants 2, 4, 9, 14, and 20 showed similar thoughts based on the responses. For example, Participant 19 stated, "My virtual team was established to use diverse skills so knowledge can be shared from team members around globe."

Table 5: Responses to Question 3 (N = 20)

Prevalent theme	Frequency	%
Positive		
Leverage technical expertise and skills and foster team effectiveness	13	65
Provide better dynamic and reduce development cycle	12	60
Boost team overall performance and outcome	11	55
Right expertise or people at the table is critical to project success	7	35
Diverse skills so knowledge can be shared	6	30
Multiple functional expertise control whole project and other members have limited input	5	25
Negative		
Gain conflict among team members and lower team commitment	5	25
Less attraction and trust of peers and less frequent communication	2	10
Difficult to establish trust and assess teammates' trustworthiness	2	10

On the contrary, five out of the 20 (25%) study participants believe that multiple functional expertise control whole project and other members have limited input. Participants 6, 11, 15, and 17 showed similar thoughts based on the responses. For example, Participant 7 stated, "There have been instances where a member that possesses multiple functional expertise would try to take control of the whole project and other members have limited input." Five out of the 20 (25%) study participants believe that functional differences gain conflict among team members and lower team commitment. Participants 1-4 showed similar thoughts based on the responses. For example, Participant 5 stated, "I believe that drawback is that functional differences gain conflict among team members and lower team commitment." Two out of the 20 (10%) study participants believe that functional differences can lead less attraction and trust of peers and less frequent communication. Participant 1 showed similar thoughts based on the responses. For example, Participant 5 stated, "Another drawback I see is that it could lead to less attraction and trust of peers and less frequent communication." Two out of the 20 (10%) study participants believe that multiple functional expertise control whole project and other members have limited input. Participant 6 showed similar thoughts based on the responses. For example, Participant 7 stated, "There have been instances where a member that possesses multiple functional expertise would try to take control of the whole project. The issue with this is creativity from other members are effected because their ideas or recommendations is limited."

Question 4. Question 4 was "What is your lived experience on how virtual team organizational differences (e.g., multiple vendors increase project complexity as an outcome of different and sometimes conflicting sets of goals and success measures) could effect IT project success?"

Table 6: Responses to Question 4 (N = 20)

Prevalent theme	Frequency	%
Positive		
Reduce project risks, gain and diversify skill sets	12	60
Create competition that leads to improve project performance	9	45
Vendors processes or tools are uniform, alignment, and thoroughly tested	8	40
Decipher hidden agenda and remind them main goals	7	35
Invite vendors to teleconference meetings	6	30
Minimum effect when leaders and team members remotely work well together	4	15
Negative		
Conflicting sets of agreements, goals, duties and success measures and increase project complexity	8	40
A full time collaboration manager that aims on alignment (>=3)	5	25

As shown in Table 6, twelve out of the 20 (60%) study participants believe that organization differences reduce project risks, gain and diversify skill sets. Participants 1,2,3,4,5,8,9,10,12,14,17 and 18 showed similar thoughts based on the responses. For example, Participant 20 stated, "We closely monitor and ensure that vendors goal is in alignment with our objectives to ensure overall process efficiency and accuracy. I do believe that working with multiple external companies or vendors help shrink project risks, increase and diversify skill sets." Nine out of the 20 (45%) study participants believe that working with multiple vendors create competition that leads to improve project performance. Participants 1-6, 8, 11, and 18 showed similar thoughts based on the responses. For example, Participant 8 stated, "Vendors are vendors have an agenda to meet and as manager, I need to ensure that their goals in alignment priority and goals. My experiences with vendors they help to create completion that leads to improve project performance." Eight out of the 20 (40%) study participants believe that when working with multiple vendors leaders need to ensure vendors processes or tools are uniform, alignment, and thoroughly tested. Participants 6, 8, 10, 11, 13, 15, 17, 19 and 20 showed similar thoughts based on the responses. Participant 7 stated, "As a project manager, I need to ensure vendors processes or tools are uniform, alignment, and thoroughly tested." Seven out of the 20 (35%) study participants believe that when working with multiple vendor leaders need to decipher hidden agenda and remind them main goals. Participants 4, 6-8, 11, 13, and 15 showed similar thoughts based on their responses. Participant 7 stated, "As a project manager, it is my job to decode the concealed agendas, and prompt the vendors of the primary goal or agenda." Six out of the 20 (30%) study participants believe to invite vendors to teleconference meetings. Participants 3, 5, 11, 19 and 20 showed similar thoughts based on the responses. Participant 9 stated, "Vendors need to be invited to the conference if necessary if they are the contributor to the project."

Four out of the 20 (20%) study participants believe that organizational differences has minimum effect when leaders and team members remotely work well together. Participants 5, 8, and 18 showed similar thoughts based on the responses. Participant 15 stated, "I believe that organization differences have minimum effect when leaders and team members remotely work well together."

On the contrary, eight out of the 20 (40%) study participants believe that multiple vendors working with multiple vendors presents conflicting sets of agreements, goals, duties and success measures and increase project complexity. Participants 2, 3, 4, 5, 6, 7 and 11 showed similar thoughts based on the responses. Participant 1 stated, "The drawback I see is that handing multiple vendors increases project complexity as an outcome of distinct and sometimes conflicting sets of agreements, goals, responsibilities and success measures." Five out of the 20 (25%) study participants believe that working with multiple vendors, virtual team needs a full time collaboration manager that aims on alignment. Participants 14 and 19-20 showed similar thoughts based on the responses. Participant 11 stated, "In case there must be more than 3 vendors, it is important to have a full time collaboration manager that focuses on alignment of all involved parties."

4.4.4. Coping Variables Help Shape Project Outcomes

Researchers noted that leaderships with effective project management and appropriate leadership styles use have significant effect on project results. Leadership with effective decision making and project management skills have significant impact on project outcomes as well as appropriate leadership styles usage depend circumstances [117]. Additionally, workplace factors such as cultural, functional and organization differences have impact on project outcomes [67]. Furthermore, coping variables such as GVPT coordination (e.g., task programming and team communication), trust, and knowledge sharing and knowledge management also help shape workplace factors outcomes [67].

Question 5. Question 5 was "What is your lived experience on how effective virtual team coordination (e.g., task programming and team communication) could enhance the chance of success of IT projects success?"

As shown in Table 7, thirteen out of the 20 (65%) study participants believe that effective team coordination help achieve more tasks in short time frame. Participants 1, 3-5, 7, 9, 11-12, 14, 16, and 18-19 showed similar thoughts based on the responses. Participant 20 stated, "I personal believe that effective team coordination helps us to accomplish more task in short time frame." Twelve out of the 20 (60%) study participants believe that effective team coordination help establish improving working relationships among team members. Participants 1-5, 8, 10, 12, 14-15 and 17 showed similar thoughts based on the responses. Participant 20 stated, "Effective coordination is vital to our daily work mission and it help improving our working relationships our cross-functional team and clients." Ten out of the 20 (50%) study participants believe that effective team communication help smooth team meetings or teleconference and improve team performance. Participants 1-5, 9, 11, 13 and 17 showed similar thoughts based on the responses. Participant 20 stated, "I believe due to lack of F2F interactions, thus, effective communication help smooth team meetings or teleconference as a result it aid to improve team performance." Nine out of the 20 (45%) study participants indicated that they daily use ICTs such as IM, audio and video teleconferences. Participants 2, 4, 7, 9, 12, 16 and 19-20 showed similar thoughts

based on the responses. Participant 17 stated, "The use of teleconference calls IM, video, and audio meetings is crucial to team members knowing where the success and failures are occurring during software testing." Eight out of the 20 (40%) study participants believe team is accountability (e.g., timelines & communication methods) for daily mission success. Participants 2, 4, 7, 9, 12, 16 and 19-20 showed similar thoughts based on the responses. Participant 17 stated, "Better team members' daily accountability (e.g., timelines and communication techniques) is critical to our mission success and also helps improve effective coordination." Seven out of the 20 (35%) study participants believe that the project manager is a key success for communication and agenda must deliver prior meetings. Participants 6, 8-9, 12, 14, and 18 showed similar thoughts based on the responses. Participant 10 stated, "The project leader is key in this coordination effort and agenda must deliver prior meetings. The use of a focal point for all schedules and deliverables, and minutes is helpful." Six out of the 20 (30%) study participants believe that effective coordination consist of frequent (daily) team status update conference calls are critical to process success. Participants 1, 8, 10, 12, and 20 showed similar thoughts based on the responses. Participant 14 stated, "Frequent (daily) team status update conference calls were essential for coordination / troubleshooting / team building."

Table 7: Responses to Question 5 (N = 20)

Prevalent theme	Frequency	%
Positive		
Achieve more tasks in short time frame	13	65
Establish improving working relationships	12	60
Help smooth team meetings or teleconference and improve team performance	10	50
Use ICTs such as IM, audio and video teleconference	9	4
Accountablity (e.g., timelines & communication methods)	8	40
Project manager a key success for communication and agenda must deliver prior meetings	7	35
Frequent (daily) team status update conference calls	6	30
Negative		
Challenges to do schedule with different time zones and demand more coordination and clearer communication	3	15
Generally it takes some time to find the right times that work for everyone	2	10

On the contrary, three out of the 20 (15%) study participants believe that virtual team coordination present challenges to do with different time zones and demand more coordination and clearer communication. Participants 14 and 18 showed similar thoughts based on the responses. Participant 12 stated, "In my experience teams with members that work in different time zones are challenging. Arranging times when team members can conduct Agile team meetings such as daily scrums, planning and reviews is the most challenging aspect. Thus, it demands more coordination and clearer communication." Two out of the 20 (10%) study participants believe that generally it takes some time to find the right times that work for everyone. Participants showed similar thoughts based on the response. Participant 12 stated, "Generally it takes some time to find the right times that work for all team members."

Question 6. Question 6 was "What is your lived experience on how effective virtual team trust could heighten the likelihood of IT project success?"

Table 8: Responses to Question 6 (N = 20)

Prevalent theme	Frequency	%
Positive		
An effective way to manage team members and trust is essential to PS	13	65
Team dedication to user stories and task completion must be maintained	11	55
Key role in effective information sharing and positive impact on knowledge sharing	10	50
Bridge the psychological space between team members	9	45
Effective communication and honesty is key and trust must understood	8	40
Full trust in each other is significant to project success	7	35
Significant to establish trust when first forming a team	6	30
Priority issues should address in timely manner and measure what to do today, tomorrow and roadblocks	5	25
Negative		
Avoid "my garden <> FENCE <> others garden" approach	3	15
A strong project leader, consistent meetings and good documentation plan	2	10

As shown in Table 8, thirteen out of the 20 (65%) study participants believe an effective way to manage team members and trust is essential to project success is the most important virtual team trust. Participants 1-5, 8-9, 11, 14-15, 17 and 19 showed similar thoughts based on the responses. Participant 12 stated, "I personally believe that trust on virtual teams is essential to success and an effective way to manage team members. Especially when working across time zones and team members are dispersed. " Eleven out of the 20 (55%) study participants believe team dedication to user stories or requirements and task completion must be maintained. Participants 4, 6, 8, 10, 12-14, 16-17, 19, and 20 showed similar thoughts based on the responses. Participant 12 stated, "Team commitment to user stories and task completion must be maintained as team members rely on each other to complete their tasks on time so the complete user story can be accomplished on time." Ten out of the 20 (50%) study participants believe trust is key in effective information sharing and positive effect on knowledge sharing. Participants 1-6, 8, 11 and 13 showed similar thoughts based on the responses. Participant 18 stated, "I believe that better trust helps improve communication, knowledge sharing, working relationships, and as well as help achieve more tasks this lead to better team performance. Trust is also a key for knowledge sharing." Nine out of the 20 (45%) study participants believe trust bridges the psychological space between team members. Participants 12, 3, 4, 5, 9 and 12 showed similar thoughts based on the responses. Participant 15 stated, "People must trust each other in order to work together. Thus, effective trust helps bridge the psychological space between team members." Eight out of the 20 (40%) study participants believe that communication and honesty is the key and trust must be understood. Participants 6-8, 12-14, 18 and 19 showed similar thoughts based on the responses. Participant 17 stated, "I believe effective communication and honest is the key and trust is understood.**"** Seven out of the 20 (35%) study participants believe that full trust in each other is significant to project success. Participants 5, 8, 10, 17-18 and 20 showed similar thoughts based

on the responses. Participant 13 stated, "My partner and I had full trust in each other. This is important to the success of IT projects." Six out of the 20 (30%) study participants believe that it is significant to establish trust when first forming a team. Participants 1-4 showed similar thoughts based on the responses. Participant 14 stated, "Trust is probably the most important aspect of managing virtual teams to ensure success. Therefore, it is significant to establish trust when first forming virtual teams." Five out of the 20 (25%) study participants believe that priority issues should address in timely manner and measure what to do today, tomorrow and roadblocks. Participants 6, 7, and 16 showed similar thoughts based on the responses. Participant 8 stated, "If a dilemma arises, no matter how small it may appear, do not cover it. Prioritize issues and address all issues immediately manner."

On the contrary, three out of the 20 (15%) study participants believe that avoid "my garden <> FENCE <> others garden" approach is also good when building trust. Participants 6 and 14 showed similar thoughts based on the responses. Participant 11 stated, "It is wise to avoid my garden <> FENCE <> others garden approach." The team must work as one family within the given roles." Two out of the 20 (10%) study participants believe that effective trust needs strong project leader, consistent meetings and good documentation plan. Participants 7 showed similar thoughts based on the responses. Participant 10 stated, "My lived experience with effective virtual teams is that there needs to be a strong project leader and a good, documented plan, with consistent progress meetings to enhance the chance of success."

Question 7. Question 7 was "What is your lived experience on how effective virtual team knowledge sharing could heighten the chance of IT projects success?"

Table 9: Responses to Question 7 (N = 20)

Prevalent theme	Frequency	%
Use Sharepoint and we create team folders on the sites and obtain high quality decision	15	75
Positively affect team performance and associated with decision and improve team operation	10	50
Create knowledge transfer and transparency	9	45
Effective knowledge sharing is effective through conference calls / phones, training, and online	7	35
Negative		
Members guard knowledge and leaves adversely affect team performance	4	20

As shown in Table 9, fifteen out of the 20 (75%) study participants believe use Sharepoint and we create team folders on the sites and obtain high quality decision is the most important virtual team knowledge sharing. Participants 1-10 and 16-19 showed similar thoughts based on the responses. Participant 20 stated, "I believe that effective knowledge sharing obtain high decision making among team members. The team utilized document repositories such as Sharepoint to upload word documents, spreadsheets, and track issues that they are

working on." Ten out of the 20 (50%) study participants believe that effective knowledge sharing positively effect team performance and associated with decision and improve team operation. Participants 1-10 and 16-19 showed similar thoughts based on the responses. Participant 20 stated, "I find that effective knowledge sharing is critical to my team project success. Thus, effective knowledge sharing positively effect team performance and associated with decision and improve team operation." Nine out of the 20 (45%) study participants believe that effective knowledge sharing is to create knowledge transfer and transparency. Participants 2, 4, 7, 9-10, 14, 16, 18, and 20 showed similar thoughts based on the responses. Participant 16 stated, "I have found that knowledge sharing and transparency to be the best solution. This has usually been in a central repository such as SharePoint for project documentation." Seven out of the 20 (35%) study participants believe that effective knowledge sharing is effective through conference calls / phones, training, and online. Participants 5-6, 8, 10, 13 and 18 showed similar thoughts based on the responses. Participant 15 stated, "The sharing of knowledge is through conference calls / phones, training, and online mechanism." Four out of the 20 (40%) study participants believe that members guard knowledge and leaves adversely effect team performance. Participants 5, 6 and 14 showed similar thoughts based on the responses. Participant 8 stated, "Sometimes members will secure knowledge, and will not share knowledge. This could adversely effect team performance if that member leaves the company."

Question 8. Question 8 was "What is your lived experience on how effective virtual team knowledge management could heighten the likelihood of IT projects success?"

Table 10: Responses to Question 8 (N = 20)

Prevalent theme	Frequency	%
Use Sharepoint and to create team folders on the sites	15	75
Vital to remain competitive and improve team performance	13	65
Assist teams in handling with dynamic and complex situation	12	60
Knowledge should be shared with all the team members	11	55
Maintained a detailed project plan	10	50
Member know how to access proper persons, resources, and knowledge	9	45

As shown in Table 10, 14 out of the 20 (75%) study participants believe that use Sharepoint and to create team folders on the sites is the most virtual team knowledge management. Participants 1-10 13, 19, and 20 showed similar thoughts based on the responses. Participant 16 stated, "I believe that effective knowledge management obtain is vital to process success. The team utilized document repositories such as Sharepoint to upload word documents, spreadsheets, and track issues that they are working on**."**

Thirteen out of the 20 (65%) study participants believe that is vital to remain competitive and improve team performance. Participants 1-10 13, 19, and 20 showed similar thoughts based on the responses. Participant 16 stated, "I have found that knowledge sharing and transparency to be the best solution. Thus, effective knowledge management is vital to remain competitive as well as it helps improve team performance." Twelve out of the 20 (60%) study participants believed that effective knowledge management assisted teams in handling with

dynamic and complex situations. Participants 1-6, 8, 10, 12, 15, and 18 showed similar thoughts based on the responses. Participant 16 stated, "Better knowledge management is vital to stay competitive. Additionally, it aid teams in coping with dynamic and complex situation." Eleven out of the 20 (55%) study participants believed that effective knowledge management should be shared with all the team members. Participants 2-3, 5, 7, 9, 11, 13, 16, and 18 showed similar thoughts based on the responses. Participant 17 stated, "Most knowledge was shared freely with all team members because team success came before individual success."

Ten out of the 20 (50%) study participants believe that effective knowledge management is to maintain a detailed project plan. Participants 2, 4-5, 7, 10, 9, 14, 16, 18, and 20 showed similar thoughts based on the responses. Participant 13 stated, "We maintained a detailed project plan using Microsoft Project." Nine out of the 20 (45%) study participants believed that effective knowledge management is when member know how to access proper persons, resources, and knowledge. Participants 4, 6, 9, 12, 14, 17, and 19 showed similar thoughts based on the responses. Participant 7 stated, "Effective knowledge management is when member know how to access proper persons, resources, and knowledge."

Question 9: Question 9 was "What managerial style is best suited for managing virtual team?"

Table 11: Responses to Question 9 (N = 20)

Prevalent theme	Frequency	%
Allow members use creativity and talent	14	70
A managerial style use depends on a situation	13	65
Delegating, engaging and empowering	12	60
A democratic style	11	55
Transformational leadership	10	50
Transactional leadership	9	45
Hold members accountable to deadlines and quality work	8	40
Dynamic and foster teamwork	7	35
Flexible in their style of management to adapt	4	20

As shown in Table 11, fourteen out of the 20 (70%) study participants believe allow members use creativity and talent style is the most important for managing virtual team. Participants 1-2, 4, 6-9, 11, 13, 16-17, 19, and 20 showed similar thoughts based on the responses. Participant 15 stated, "I believe that allow members use creativity and talent is most effective style when managing virtual team members." Thirteen out of the 20 (65%) study participants believe that a managerial style use depends on a situation. Participants 2-8, 10, 12, 14, 18, and 19 showed similar thoughts based on the responses. Participant 1 stated, "I use transaction leadership style when it has to do with team rewards, clear goal setting, and structured guidance. Thus, it is all depend on situation." Twelve out of the 20 (60%) study participants believe that a managerial style use consist of delegating, engaging and empowering. Participants 1, 3-4, 6, 9, 12, 14, and 17-19 showed similar thoughts based on the responses. Participant 20 stated, "Delegating, engaging and empowering managerial styles of immediate trust and confidence in her and his team to deliver." Eleven out of the 20 (55%) study participants believe that an

appropriate managerial style use is democratic style. Participants 1, 3, 5, 7, 8, 10, 13, 15, and 18-19 showed similar thoughts based on the responses. Participant 16 stated, "A firm but democratic style of management is best suited. One should be flexible in their style of management to adapt to what works best for different team members." Ten out of the 20 (50%) study participants believe that an appropriate managerial style use is transformational leadership. Participants 3, 5, 7, 8, 10, 13, 15, and 18-19 showed similar thoughts based on the responses. Participant 1 stated, "I use transformation leadership style tactics while leading my team to do their daily work." Nine out of the 20 (45%) study participants believe that an appropriate managerial style use is transactional leadership. Participants 1, 6, 7, 8, 11, 13, and 17 showed similar thoughts based on the responses. Participant 16 stated, "I use transaction leadership style when it has to handle with team rewards and clear goal setting." Eight out of the 20 (40%) study participants believe that an appropriate managerial style use is to hold members accountable to deadlines and quality work. Participants 1, 3, 5, 8, 12, 14, and 17-18 showed similar thoughts based on the responses. Participant 17 stated, "One should be flexible in their style of management to adapt to what works best for different team members. Hold members accountable to deadlines and quality work is also an appropriate managerial style." Seven out of the 20 (35%) study participants believe that an appropriate managerial style use should be dynamic and foster teamwork. Participants 1-2, 7, 9, 11, and 14 showed similar thoughts based on the responses. Participant 6 stated, "The manager should be dynamic and forge a sense of teamwork." Four out of the 20 (20%) study participants believe that an appropriate managerial style use should be flexible in their style of management to adapt. Participants 3, 7, and 16 showed similar thoughts based on the responses. Participant 18 stated, "As a project manager, I also found be flexible and the ability to adapt managerial style work well, too."

Emergent themes. The emergent themes are those with the highest frequency (e.g., number of study participants who stated the theme in the interview questionnaire) for each question shown in the synapses of responses. As shown in Table 11, the emergent theme for question 1 is broader array of knowledge and experience with a frequency of fifteen. The emergent theme for question 2, is to appreciate other cultures create a more trusted working with a frequency of nine. The emergent theme for question 3 is leverage technical expertise and skills and foster team effectiveness with a frequency of thirteen. The emergent theme for question 4 is to reduce project risks, gain and diversify skill sets with a frequency of twelve. The emergent theme for question 5 is to achieve more tasks in short time frame with a frequency of thirteen. The emergent theme for question 6 is an effective way to manage team members and trust is essential to project success with a frequency of thirteen. The emergent theme for question 7 is use Sharepoint and to create team folders on the sites and obtain high quality decision with a frequency of fifteen. The emergent theme for question 8 is use Sharepoint and to create team folders on the sites with a frequency of fifteen. Lastly, the emergent theme for question 9 is to allow members to use creativity and talent with a frequency of fourteen.

5. Discussion, Conclusions, and Recommendations

The purpose of this phenomenological research study was to understand the lived experiences of IT managers who experienced the workplace factors of cultural, functional, and organizational differences at global workplaces in the United States. The lived experiences and perceptions of 20 IT managers who experienced a GVPT success were explored to understand the workplace factors they believed to be of value. A qualitative

research approach was appropriate for the study because qualitative inquirers depict and explicate research and interpret or establish theories [45].

The primary themes found in the analysis are as follows. The themes associated with Interview Question 1 (see Table 2) were a broader array of knowledge and experience, leverage technologies, diverse and skills. The themes connected with Interview Question 2 (see Table 3) were concerned appreciating other cultures to create a more trusted working environment and allow time for each member to speak. The themes connected with Question 3 (see Table 4) were boost team overall performance and outcome and that the right expertise or people at the table is critical to project success.

Table 11: Emergent Themes Identified from Responses (N = 20)

Question	Emergent theme	Frequency	%
Question 1 Broader array of knowledge and experience		15	75
Question 2 Appreciate other cultures create a more trusted working environment		9	45
Question 3 Leverage technical expertise and skills and foster team effectiveness		13	65
Question 4 Reduce project risks, gain and diversify skill sets		12	60
Question 5 Achieve more tasks in short time frame		13	65
Question 6 An effective way to manage team members and trust is essential to project success		13	65
Question 7 Use Sharepoint and to create team folders on the sites and obtain high quality decision		15	75
Question 8 Use Sharepoint and to create team folders on the sites		15	75
Question 9 Allow members use creativity and talent		14	70

The themes connected with Question 4 (see Table 5) were reduce project risks, gain and diversify skill sets, and create competition that leads to improve project performance. The themes connected with Question 5 (see Table 6) were to achieve more tasks in a short time frame, and improve working relationships. The themes connected with Question 6 (see Table 7) were finding an effective way to manage team members and trust is essential to project success and team dedication to user stories and task completion must be maintained.

The themes connected with Question 7 (see Table 8) were use Sharepoint and create team folders on the sites, obtain high-quality decisions, positively effect team performance, improve team operation, and create knowledge transfer and transparency. The themes connected with Question 8 (see Table 9) were use Sharepoint, create team folders on the sites, remain competitive and improve team performance, and assist teams in handling with dynamic and complex situation. The themes connected with Question 9 (see Table 10) were allow members to use creativity and talent and use a managerial style that depends on a situation to delegate, engage, and empower a democratic style.

5.1. Interpretation of the Findings

The problem was the limited understanding of the lived experiences of persons who have experienced the following workplace factors: cultural, functional, and organizational differences [67, 157, 169,187]. An open-ended questionnaire and follow up e-mails were sent to ensure that the study participants (managers or leaders) completed all of the questions accurately about their lived experiences on virtual teams. Oza and Hall [157], Espinosa et al. [67], Sharma et al. [187], and Reed and Knight (2009) argued that workplace factors such as cultural, functional, and organizational differences effect IT project success; however, limited studies are available to confirm the statement. As noted by Espinosa et al. [67], Nair [146], and Reed and Knight [169], most researchers have studied specified variables of cost, scope, and schedule. Therefore, the findings of the study was to understand the workplace factors IT project managers believed to be of value, which is beneficial in reducing the gap and extending the existing literature. Emam and Koru [65]) found that software development projects' failure and cancellation rates are high. Ke and Wei [110] posited that the success rate of enterprise resource planning (ERP) designs is approximately 20. More study is needed to understand why IT projects continue to fail at a high rate [41,40,204, 78, 167,227].

The main focus of the findings was on the specific and most prevalent themes among the study participants' responses to answer the three research study questions. The most common theme in Question 1, based on 15 out of the 20 (75%) participants, was that a broader array of knowledge and experience increased leverage technology. The most common theme linked with Question 2, based on nine out of the 20 (45%) participants, was that appreciating other cultures creates a more trusted working environment and allows time for each member to speak.

The most common theme linked with Question 3, based on 13 out of the 20 (65%) participants, was that leveraging technical expertise and skills fosters team effectiveness. The most common theme linked with Question 4, based on 12 out of the 20 (60%) participants, was to reduce project risks to gain and diversify skill sets. The most common theme linked with Question 5, based on 13 out of the 20 (65%) participants, was to achieve more tasks in a short time frame. The most common theme linked with Question 6, based on 13 out of the 20 (65%) participants, was to find an effective way to manage team members and that trust is essential to project success. The most common theme linked with Question 7, based on 15 out of the 20 (75%) participants, was to use Sharepoint to create team folders on the sites and obtain high-quality decision. The most common theme linked with Question 8, based on 15 out of the 20 (75%) participants, was use to Sharepoint and to create team folders on the sites. The most common theme linked with Question 9, based on 14 out of the 20 (70%) participants, was to allow members to use creativity and talent. The most common themes among the study participants' responses were used to address the three research questions to build a more comprehensive and in-depth understanding of how IT company managers or leaders perceive the effects of workplace factors to be of value.

5.2. Limitations of the Study

The findings of the study facilitated one limitation indicated in Section 1, which were email interviews. I was

able to reach my study target sample size without having to include a monetary incentive (e.g., $15) to address possible issues with voluntary participation. I also did not face any issues with response rates from using an e-mail questionnaire, as all participants were familiar with the capabilities of email; therefore, I did not have to exercise the monetary incentive (e.g., $15).

However, a few limitations still existed. For instance, the transferability of the findings led to a limitation because of the inquiry method and design of the study, the imminent sample size used, and the aim on the IT industry [161]. Lincoln and Guba noted that transferring findings into positions outside of the study setting might be challenging for inquirers because of minimal resemblance between the two settings [172]. The introduced descriptive data (e.g., population and sample) in the research study might not be adequate for other inquirers to apply the findings to other settings. Transferring the study findings to other industries might be difficult because of the specific focus on the IT industry and the sample used in the study.

Another limitation was the creation of participant biases, which might have shaped the study results. The bias was that the participants seemed to believe that the workplace factors he or she stated were the most effective and no other factors were as effective in assuring project success. Therefore, the participants did not appear to conceive a wide spectrum of other workplace factors that might be more effective than what he or she had experienced.

5.3. Implications and Recommendations

IT projects continue to fail at an unacceptable rate despite the steps taken by organizational managers to streamline the processes [171,225]. The implications of the research study may be significant to IT project managers, management teams, and resources working from global workplaces. Business managers in the IT industry, and managers from other industries, can use the data gathered in the research study to develop strategies to improve project management and benefits to reduce IT project failures and cancellation rates. The links between workplace factors and IT project success reconfirm the significance to the outcome of projects. Researchers may use the current study to explore additional workplace factors and different contexts. The findings from the research study include some productive considerations for managers who wish to succeed in IT project endeavors. Workplace factors such as cultural, functional, and organizational differences play a role in the project success. Organizational managers should be aware that ignoring workplace factors could threat the success of GVPT projects [171].

IT organizational leaders are seeking for the root causes of project failure. The findings from the research study offer the ground for future studies to explore the effect of workplace factors on IT project success. The following factors, if included, may gain accomplish a positive and generalized result. Failure to conceive and leverage the findings may lead to project failure. The factors to be conceived are (a) employ a larger sample size, (b) employ quantitative methodologies to corroborate the outcomes obtained from the current study, (c) encompass IT professionals from various firms and global workplaces, and (d) carry out a mixed research study on the effect of workplace factors on IT project success.

There are several recommendations for future studies. The first recommendation is with the same sample size and method; future researchers should encompass (a) participants' work location based in China or other countries, (b) participants consist of virtual team leaders instead of managers, (c) participants consist of virtual team members instead of managers, and (d) participants consist of virtual team members who work for the IT industry. The second recommendation is for a larger sample size and same method; scholars should include participants as mentioned in (a) to (d) above. The third recommendation is for future researchers to use a large sample size and a quantitative study.

I trusted in the data offered by the participants that was rooted on a survey questionnaire. By interviewing the IT professionals or managers, greater details about project success or failure could be obtained. Moreover, the triangulation technique could be used to corroborate the findings. By encompassing IT professionals from distinct firms around the globe, a representative sample could be obtained that could be employed to generalize the findings.

The final recommendation is to carry out a mixed-methodology research study on the effect of workplace factors on IT projects. I found significant links between workplace factors and IT project success. A mixed-methodology research study could be employed to reconfirm and generalize the findings.

5.3.1. Recommendations for Actions

In order for IT organizations to remain competitive, software quality, employee satisfaction, and safer and healthier organization should be used to help reduce the current project cancellation and failure rates; project managers need to proactively implement new GVPT practices. To help accomplish this, the following recommendations or strategies for organizational managers and HR personnel work together to build an effective virtual project team: (a) establish cultural awareness and training programs to help train new team members, (b) select new candidates with good communication skills as well as prior or current experience virtual team practices, (c) institute continuous training programs to encourage team members to improve their technical skills as well as communication skills; and (d) routinely conduct risk assessment on current project and its team members technical skills.

Without designing formal reporting structures, there is a risk that the distant team members may not report properly, due to misunderstandings and cultural differences. The threat here is that GVPT members may accept tasks that they are badly equipped to perform; risk management should be integrated into well-planned GVPT software projects. GVPT projects bring additional exposure to risks, which are linked with dealing a culturally diverse global team.

5.3.2. Implications for Positive Social Change

This study has implications for positive social change. The literature review depicted that the body of knowledge available covers several internal factors such as project planning, project and resource management, leadership styles, and time allocated, and how they effect project success. If the linkage between workplace factors and project success can be documented and researched, firms will be able to extradite services to

customers, heightening efficiency with fewer defects or errors, resulting in a safer and healthier organization.

Because IT is a critical element in public and private sectors, this research study has important implications for IT project management. This research study suggests an approach that can enhance IT project success. This study contributes to IT by understanding the workplace factors of cultural, functional, and organizational differences that could have an effect on IT project success. This research study offers a better understanding of the effect of workplace factors when resources work from distinct workplaces.

5.3.3. Implication for Practice

Managing a virtual teamwork in the global workplace is challenging. Numerous managers have an ongoing struggle to establish commitment to common goals, align and enforce performance expectations, build trust, motivate members to collaborate and share knowledge and navigate personality issues. GVPT members must be able to adapt to distinct cultures and work styles, leverage harmonious team processes, and use appropriate ICTs to produce efficiencies in the global workplace. The findings from this research study are significant step in this guidance. Managers and leaders who are involved in the operating of GVPTs need to understand diversity and its diverse forms. Managers should understand the possible presence of deep degree attributes in team members and as such, training should be offered to aid in the process of relationship establishing among GVPT members. Furthermore, managers themselves should be trained and advised on the development and improvement of GVPT processes in order to harvest greater effectiveness and effective team performance returns from their teams. Managers or leaders also need to understand the interaction between team diversity and task programming requirements; the study outcomes indicate that more diverse GVPTs can be confined with interdependent tasks that demand higher degrees of motivation from team members.

GVPTs usually rely on ICTs, such as email, IM, teleconferences, videoconferences and group decision support systems. The study findings indicate that decision makers should aim on the collaborative facets of the technology. For instance, managers should select an ICT that encourages parallelism, transparency, and sociality. Designers of ICT should integrate such features when developing new technology. Once the ICTs have been selected, managers need to offer training to promote the utilization of these new features. Implementation of language policies and training is a path worth pursuing for the GVPT manager as outcomes from F2F teams indicate that common language proficiency has a firm impact on communication effectiveness. Cultural training and facilitation aiming on cultural differences in media utilization and communication could also evidence beneficial for GVPT functioning. Ultimately, the physical presence of an individual who can work as inter-unit mediator could countermeasure the negative effects of intercultural ICT communication.

5.4. Conclusion

The purpose of this phenomenological study was to understand the lived experiences of IT managers with the workplace factors of cultural, functional, and organizational differences at global workplaces based in the United States. By comparing the outcomes of the opened interview questionnaires to the literature in this research study, it is clear that workplace factors such as cultural, functional, and organizational differences

could effect IT project success. The current literature emphasizes the significance of cultures and suggests avenues to bridge the differences among them. Software developers or engineers who spend time operating together with resources from distinct countries have a better opportunity of shrinking risks linked with misunderstandings caused by cultural differences. The on budget, time, and accurate extradite of a software development project depends on the amount of time of experience during which a software engineer had utilized the same language in a work climate as his or her counterpart working from other workplaces.

IT managers identified cultural and functional differences as the most significant barriers to project success. The study findings indicate that effective teams were able to overcome these barriers to accomplish success, but this success was accomplished through the implementation of special alignment, communication, and cognitive processes oriented to aid teams to work through barriers but with considerable additional cost and effort.

Author Biography

Dr. Dan S. Nguyen, obtained his Bachelor of Science in Electrical Engineering, a Master of Science in Computer Science, and a Ph.D. in Management with specialization in Information Systems Management from the Illinois Institute of Technology, Northeastern Illinois University, and Walden University respectively. Currently Dr. Nguyen is a project technical lead at DFAS I&T. Dr. Nguyen's research interest includes Global Virtual Teams, Computer Security, Information Assurance, Software Engineering, and Artificial Intelligent. Dr. Dan can be reached via email:dan.s.n.linkedin@gmail.com

Dedication

First, the researcher would like to dedicate this research study to God who saved me three times from drowning at sea; and another time while he was on a kayak fishing at lake in Texas. Secondly, the researcher would also like to dedicate this research study to my blood parents Do Nguyen and Tai Thi Dang; and my American parents Raymond L. Schilling and Lucille M. Schilling who raised and influenced me since seventh grade and throughout high school and my sponsors (Ms. Alinda, Ms. Hildegarde, and Ms. Renata Weiss). Third, the researcher would like to dedicate this research to my wife, Hồng Nhung Trương, and my sons (Bill Lê and Jacob Schilling). Finally, this research study would not have been possible and successful without those American soldiers (58,226) and South Vietnamese soldiers (1,250,000) who fought and died for the war.

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References

[1] Adams, J., Broom, A., & Jennaway, M. (2012). Qualitative methods in research: One

framework for future inquiry. Journal of Manipulative and Physiological

Therapeutics, 18(3), 55-60. Retrieved from http://www.jmptonline.org

[2] Ahuja, J. (2010). A study of virtuality impact on team performance. The IUP Journal of Management Research, 9(5), 27-56. Retrieved from http://www.iupindia.in/710/IJMR_Study_Virtuality_Impact_27.html

[3] Ambler, S. W. (2007). Defining success: There are lessons to be learned when defining IT project success. Dr. Dobbs Journal, 32(12), 60–62. Retrieved from http://www.Drdobbs.com/architecture-and-design/defining-success/20280777

[4] Addison, T., & Vallabh, S. (2002). Controlling software project risks – an empirical study of methods used by experienced project managers. Proceedings of SAICSIT, (2002), 128-140. Retrieved from http://www.itu.dk/~katten/speciale/Controlling_Software_Project_Risks_an_Empirical_Study_of_Methods.pdf

[5] Alnuaimi, O. A., Robert, L. P., & Maruping, L. M. (2010). Team size, dispersion, and social in technology-supported teams: A perspective on the theory of moral disengagement. Journal of Management Information Systems, 27, 203-230. doi:10.2753/MIS0742-1222270109

[6] Aloini, D., Dulmin, R., & Mininno, V. (2011). Risk management in ERP project. Information Systems, 37(2012), 183–199. doi:10.1016/j.is.2011.10.001

[7] Agarwal, N., & Rathod, U. (2006). Defining 'success' for software projects: An exploratory revelation. International Journal of Project Management, 24(4), 358–370. doi:10.1016/j.ijproman.2005.11.009

[8] Ambler, S. W. (2007). Defining success: There are lessons to be learned when defining IT project success. Dr. Dobbs Journal, 32(12), 60–62. Retrieved from http://www.drdobbs.com/architecture-and-design/defining-success/202800777

[9] Amurgis, W. (2007). Paving the way for an intranet revolution at AEP. Strategic Communication Management, 11(3), 8-102. Retrieved from http://www.melcrum.com/products/journals/scm.shtml

[10] Anantatmula, V. S. (2010). Impact of cultural differences on knowledge management in global projects. The Journal of Information and Knowledge Management Systems, 40(3/4), 239-253. doi:10.1108/03055721011071377

[11] Ang, S., & Inkpen, A. (2008). Cultural intelligence and offshore outsourcing success: A framework of firm-level intercultural capability. Decision Sciences, 39(3), 337-358. doi:10.1111/j.1540-5915.2008.00195.x

[12] Baglione, S. L. (2008). The influence of internal ethics and values and external

perceptions of values and needs on profitability: An empirical study of U.S.

executives. Review of Business Research, 8(5), 89-95. Retrieved from http://www.questia.com/library/1G1-190699924/the-influence-of-internal-ethics-and-values-and-external

[13] Bannerman, P. L. (2008). Risk and risk management in software projects: A reassessment. The Journal of Systems and Software, 81(2008), 2118–2133. doi:10.1016/j.jss.2008.03.059

[14] Barclay, D. W., & Smith, J. B. (1997). The effects of organizational differences and trust on the effectiveness of selling partner relationship. Journal of Marketing, 61(1997), 3-21. Retrieved from http://business.highbeam.com/138375/article-1G1-19213908/effects-organizational-differences-and-trust-effectiveness

[15] Bass, B., & Avolio, B. (1993). Transformational leadership and organizational culture. Public Administration Quarterly, 17, 112-121. doi:10.1080/01900699408524907

[16] Beers, P. J., Boshuizen, H. P. A., Kirschner, P. A., & Gijselaers, W. H. (2005). Computer support for knowledge construction in collaborative learning environments. Computers in Human Behavior, 21, 623-643. doi:10.1016/j.chb.2004.10.036

[17] Benbya, H., & McKelvey, B. (2006). Toward a complexity theory of information systems development. Information Technology & People, 19, 12-34. doi:10.1108/09593840610649952

[18] Berg, B. L. (2006). Qualitative research methods for the social sciences (6th ed.). Boston, MA: Allyn and Bacon.

[19] Berry, G. R. (2011). Enhancing effectiveness on virtual teams. Journal of Business Communication, 48(2) 186-206. doi:10.1177/0021943610397270

[20] Bielski, L. (2005). What makes a good leader? American Bankers Association, 97(12), 21-24. Retrieved from http://www.aba.com/

[21] Boehm, B. W. (1989). Software risk management tutorial. Washington, DC: IEEE Computer Society.

[22] Boban, M., Pozgaj, Z., & Sertic, H. (2007). Effective information systems development as a key to successful enterprise. Management, 12, 65-86. Retrieved from http://www.efst.hr/management/

[23] Bolin, A. U. (2012). Salvaging value from project failure. Performance Improvement, 51(5), 12. doi:10.1002/pfi.21262

[24] Brandt, V., England, W., & Ward, S. (2011). Virtual teams. Research-Technology Management, 54(6) 62-63. Retrieved from http://www.questia.com/library/1P3-2521947141/virtual-teams

[25] Branson, L., Bin, F. S., Sung, C. H., & He, F. (2011). The influence of team functional processes on investment team performance. International Journal of Business, Marketing, and Decision Sciences,

4(1), 56-65. doi:10.1207/S15327043HUP1701_2

[26] Breslin, M., & Buchanan, R. (2008). On the case study method of research and teaching in design. Design Issues, 24(1), 36-40. Retrieved from http://www.mitpressjournals.org/doi/abs/10.1162/desi.2008.24.1.36

[27] Bretherton, P., & Chaston, I. (2005). Resource dependency and SME strategy: An empirical study. Journal of Small Business and Enterprise Development, 12(2), 274–289. doi:10.1108/14626000510594656

[28] Brett, J., Behfar, K., & Melymuka, K. (2006). Managing multicultural teams. Computerworld, 40(47), 36. Retrieved from http://www.computerworld.com/s/news

[29] Brown, F. W., & Moshavi, D. (2005). Transformational leadership and emotional intelligence: A potential pathway for an increased understanding of interpersonal influence. Journal of Organizational Behavior, 26, 867-871. doi:10.1002/job.334

[30] Bryman, A. (2007). Barriers to integrating quantitative and qualitative research. Journal of Methods Research, 1, 8-22. doi:10.1177/2345678906290531

[31] Buyl, T., Boone, C., Hendriks, W., & Matthyssens, P. (2011). Top management team functional diversity and firm performance: The moderating role of CEO characteristics. Journal of Management Studies, 48(1), 151-176. doi:10.1111/j.1467-6486.2010.00932.x

[32] Callen, D. (2008). How intercultural competence drives success in global virtual teams: Leveraging global virtual teams through intercultural curiosity, sensitivity, and respect. Retrieved from http://gbr.pepperdine.edu/2010/08/how-intercultural-competence-drives-success-in-global-virtual-teams/

[33] Calloway, J., & Awadzi, W. (2008). Trust, communication, and leadership challenges in virtual teams. Consortium Journal of Hospitality & Tourism, 12(2), 25-32. doi:10.1008/s10726-006-9055-8

[34] Carte, T. A., Chidambaram, L., & Becker, A. (2006). Emergent leadership in selfmanaged virtual teams. Group Decision and Negotiation, 15(4), 323. doi:10.1007/s10726-006-9045-7

[35] Casey, V. (2010). Developing trust in virtual software development teams. Journal of Theoretical and Applied Electronic Commerce Research, 5(2), 41-58. doi:10.4067/S0718-18762010000200004

[36] Cerpa, N., & Verner, J. (2009). Why did your project fail?. Communications of the ACM, 52(12), 130–134. doi:10.1145/1610252.1610286

[37] Chang, H. H., Chuang, S. S., & Chao, S. H. (2011). Determinants of cultural adaptation,

communication quality, and trust in virtual teams' performance. Total Quality Management, 22(3), 305–329. doi:10.1080/14783363.2010.532319

[38] Charette, R. N. (1989). Software engineering risk analysis and management. New York, NY: McGraw-Hill.

[39] Charette, R. N., 1996. The mechanics of managing IT risk. Journal of Information Technology, 11(4), 373–378.doi:10.1057/jit.1996.10

[40] Chen, C. C., Wu, J., Ma, M., & Knight, M. B. (2011). Enhancing virtual learning team performance: A leadership perspective. Human Systems Management, 30(4), 215. doi:10.4018/978-1-60566-958-8

[41] Chen, H. L. (2011). Predictors of project performance and the likelihood of project success. Journal of International Management Studies, 6(2), 1-10. Retrieved from http://www.jimsjournal.org/11%20Hong%20Long%20Chen.pdf

[42] Chew, J., & Chan, C. (2008). Human resource practices, organizational commitment and intention to stay. International Journal of Manpower, 29(6), 503–522. doi:10.1108/01437720810904194

[43] Chulkov, D. (2009). De-escalation of commitment in MIS projects: The implications of three economic theories. Review of Business Research, 9(1), 48–55. Retrieved from http://www.freepatentsonline.com/article/Review-Business-Research/208534997.html

[44] Clark, D., & Gibb, J. (2006). Virtual team learning: An introductory study team exercise. Journal of Management Education, 30(6), 765-787. doi:10.1177/1052562906287969

[45] Coast, J., & Horrocks, S. (2007). Developing attributes and levels for discrete choice experiments using qualitative methods. Journal of Health Services Research and Policy, 12(1), 25-30. Retrieved from http://jhsrp.rsmjournals.com/content/12/1/25.abstract

[46] Colfax, R. S., Santos, A. T., & Diego, J. (2009). Virtual leadership: A green possibility in critical times but can it work? Journal of International Business Research, 8, 133-139. Retrieved from http://www.jibs.net/

[47] Colquitt, J., & Piccolo, R. (2006). Transformational leadership and job behaviors: The mediating role of core job characteristics. Academy of Management Journal, 49, 327-340. doi:10.5465/AMJ.2006.20786079

[48] Conger, J. (1999). Charismatic and transformational leadership in organizations: An insider's perspective on these developing streams of research. Leadership Quarterly, 10(2), 145-69. doi:10.1016/S1048-9843(99)00012-0

[49] Cooper, D. R., & Schindler, P. S. (2003). Business research methods (8th ed.). Boston: McGraw-Hill

Irwin.

[50] Copeland, M. (2006). The mighty micro-multinational. Business, 7(6), 106-114. Retrieved from http://money.cnn.com/magazines/business2/

[51] Coughlan, J., Lycett, M., & Macredie, R.D. (2003). Communication issues in requirements elicitation: A content analysis of stakeholder experiences. Information and Software Technology, 45(2003), 525–537. Retrieved from http://www.sciencedirect.com/science/article/pii/S0950584903000326

[52] Cramton, C. D. (2001). The mutual knowledge problem and its consequences for dispersed collaboration. Organization Science, 12, 346-371. doi:10.1287/orsc.12.3.346.10098

[53] Crow, G., Wiles, R., Heath, S., & Charles, V. (2006). Research ethics and data quality: The implications of informed consent. International Journal of Social Research Methodology, 9(2), 83-95. Retrieved from http://www.tandfonline.com/doi/abs/10.1080/13645570600595231#preview

[54] Dani, S., Burns, N., Backhouse, C., & Kochhar, A. (2006). The implications of organizational culture and trust in the working of virtual teams. International Journal of Networking and Virtual Organizations, 220, 951-960. doi:10.1243/09544054JEM415

[55] Davidson, J., & Jacobs, C. (2012). The implications of qualitative research software for doctoral work. Qualitative Research Journal, 15(3), 72-80. doi:10.2835794579434

[56] Davis, D. (2005). New projects: Beware of false economies. Boston, MA: Harvard Business School Press.de Oliveira, S.B, Valle, R., & Mahler, C.F. (2010).A comparative analysis of CMMI software project management by Brazilian, Indian and Chinese companies. Software Quality Journal, 18(2), 177–194. doi:10.1007/s11219-009-9087-6.

[57] DeRosa D, & Lepsinger R (2010). Virtual team success. San Francisco, CA: Jossey-Bass. Dibbern, J., Winkler, J., & Heinzl, A. (2008). Explaining variations in client extra costs between software projects offshored to India. MIS Quarterly, 32(2), 333–366. Retrieved from https://wb-madoc.bib.uni-mannheim.de/1815/1/Working_Paper_8_2007_aktualisiert.pdf

[58] Dionne, S. D., Yammarino, F. J., Atwater, L. E., & Spangler, W. D. (2004). Transformational leadership and team performance. Journal of Organizational Change Management, 17, 177-193. doi:10.1108/09534810410530601

[59] Doh, J. (2005). Offshore outsourcing: Implications for international business and strategic management theory and practice. Journal of Management Studies, 42(3), 695–704. doi:10.1111/j.1467-6486.2005.00515.x

[60] Drouault, S. C. (2006). Participatory budgeting: A developing country process? A comparative

analysis of the experiences of PB in Brazil, France, and Spain. Retrieved from http://tel.archives-ouvertes.fr/tel-00283658/en

[61] Eberly, M. B., Holley, E. C., Johnson, M. D., & Mitchell, T. B. (2011). Beyond internal and external: A dyadic theory of relational attributions. Academy of Management Review, 36(4), 731–753. http://dx.doi.org/10.5465/amr.2009.0371

[62] Ebrahim, N., Ahmed, S., & Taha, Z. (2009). Virtual teams: A literature review. Australian Journal of Basic   &   Applied   Sciences,   3(3),   2653-2669.   Retrieved   from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1501443

[63] Eissa, G., Fox, C., Webster, B. D., & Kim, J. (2012). A framework for leader effectiveness in virtual teams. Journal of Leadership, Accountability and Ethics, 9(2), 12-21. Retrieved from http://www.nabusinesspress.com/JLAE/FoxC_Web9_2_.pdf

[64] Elloy, D. F. (2008). The relationship between self-leadership behaviors and organization variables in a self-managed   work   team   environment.   Management   Research   News,   31,   801-809. doi:10.1108/01409170810913015

[65] Emam, K., & Koru, A. (2008). A replicated survey of IT software project failures. IEEE Software, 25(5), 84–90. doi:10.1109/MS.2008.107

[66] Eom, M. (2009). Cross-cultural virtual team and its key antecedents to success. The Journal of Applied Business   and   Economics,   10(1),   1-14.   Retrieved   from   http://www.na-businesspress.com/JABE/EomWeb.pdf

[67] Espinosa, J. A., DeLone, W., & Lee, G. (2006). Global boundaries, task processes and IS project success: A   field   study.   Information   Technology   &   People,   19(4),   345-370. doi:10.1108/09593840610718036

[68] Fink, R. C., James, W. L., & Hatten, K. J. (2010). Customer perceptions of dependencies in customer–supplier   relationships.   Journal   of   Strategic   Marketing,   19(1),   73–89. doi:10.1080/0965254X.2010.537764

[69] Fisher, E. (2005). Facing the challenges of outcomes measurement: The role of transformational leadership. Administration in Social Work, 29(4), 35-49. doi:10.1300/J147v29n04_03

[70] Florin, I., & Minodora, U. (2009). The shift to IT governance—A global approach. Annals of the University   of   Oradea,   Economic   Science   Series,   18(4),   954–958.   Retrieved   from http://steconomice.uoradea.ro/anale/volume/2009/v4-management-and-marketing/195.pdf

[71] Fowler, F. (2008). Survey research methods (4th ed.). London, England: Sage.

[72] Frye, C. M., Bennett, R., & Caldwell, S. (2006). Team emotional intelligence and team interpersonal process effectiveness. Mid-American Journal of Business, 21, 49-56. doi:10.1108/19355181200600005

[73] Gaan, N. (2012). Collaborative tools and virtual team effectiveness: an inductively derived approach in India's software sector. Decision, 39(1), 6-27. Retrieved from http://facultylive.iimcal.ac.in/content/collaborative-tools-and-virtual-team-effectiveness-inductively-derived-approach-india's-soft

[74] Gay, L., Mills, G., & Airasian, P. (2006). Educational research: Competencies for analysis and application (8th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

[75] Gerhard, T. (2008). Bias: Considerations for research practice. American Journal of Health-System Pharmacy, 65(15), 2159–2169. doi 10.2146/ajhp070369

[76] Gilb, T. (2010). What's wrong with requirements specification? An analysis of the fundamental failings of conventional thinking about software requirements, and some suggestions for getting it right. Journal of Software Engineering & Applications, 3(9), 827–838. Retrieved from http://www.scirp.org/Journal/PaperInformation.aspx?paperID=2671

[77] Gil, N., & Tether, B. S. (2010). Project risk management and design flexibility: Analyzing a case and conditions of complementarity. Research Policy, 40(2011), 415–428. doi:10.1016/j.respol.2010.10.011

[78] Ginsburg, J. P. (2009). Determining the personality characteristics that identify a successful global virtual team members (Doctoral dissertation). Retrieved from ProQuest Dissertation and Theses database. (UMI No. 3394314)

[79] Goman, C. K. (2012). Virtual teams. Sales & Service Excellence, 12(7), 6. Retrieved from http://www.forbes.com/sites/carolkinseygoman/2012/06/05/5-tips-for-virtual-collaboration/

[80] Gonzalez, R., Gasco, J., & Llopis, J. (2008). Information systems outsourcing reasons and risks: An empirical study. Engineering & Technology, 31, 382–393. Retrieved from http://www.waset.or/journals/ijhss/v4/v4-3-24.pdf

[81] Gratton, L., & Erickson, T. J. (2007). Eight ways to build collaborative teams. Harvard Business Review, 85(11), 100-109. Retrieved from http://hbr.org/

[82] Guba, E. G. (1981). Criteria for assessing the trustworthiness of naturalistic inquiries. Educational Communication and Technology Journal, 29 (1981), 75–91. doi:10.1007/BF02766777

[83] Guindon, G., Lavis, J., Boupha, B., Guang, S., Sidibe, M., & Turdaliyeva, B. (2010).

Bridging the gaps among research, policy, and practice in ten low- and middle income countries: Development and testing of questionnaire for health-care providers. Health Research Policy &

Systems, 8-81. doi:10.1186/1478-4505-8-3

[84] Haag, S., Cummings, M., & McCubbrey, D. (2005). Management information systems, for the information age (5th ed.). New York, NY: McGraw-Hill.

[85] Havelka, D., & Rajkumar, T. (2006). Using the troubled project recovery framework: Problem recognition and decision to recover. e-Service Journal, 5(1), 43–73. Retrieved from http://www.bupedu.com/lms/admin/uploded_journal/5.1havelka.pdf

[86] Heath, C., Svensson, M. S., Hindmarsh, J., Luff, P., & Vom Lehn, D. (2002).

Configuring awareness: Computer supported cooperative work. Journal of Collaborative Computing, 11, 317-347. doi:10.1023/A:1021247413718

[87] Herath, T., & Kishore, R. (2009). Offshore outsourcing: Risks, challenges, and potential solutions. Information Systems Management, 26(4), 312–326. doi:10.1080/10580530903245549

[88] Hessels, J., & Terjesen, S. (2010). Resource dependency and institutional theory perspectives on direct and indirect export choices. Small Business Economics, 34(2), 203–220. doi:1941130911

[89] Hirschy, M. J. (2011). Virtual team leadership: A case study in Christian Higher Education. Christian Higher Education, 10, 97–111. doi:10.1080/15363751003676613

[90] Hofstede, G. (1993). Cultural constraints in management theories. The Executive, 7(1),

81. doi:129324

[91] Holden, R. (2009). People or systems? Professional Safety, 54(12), 34–41. Retrieved from http://vanderbilt.academia.edu/RichardHolden/Papers/524569/People_or_Systems_To_blame_is_human._The_fix_is_to_engineer

[92] Huang, H. (2006). Cross-cultural issues in global information systems development. Emerging Trends and Challenges in Information Technology Management, 1(2), 930-931. Retrieved from http://www.irma-international.org/viewtitle/32957/

[93] Hunsaker, P. L., & Hunsaker, J. S. (2008). Virtual teams: a leader's guide. Team Performance Management, 14(1/2), 86-101. doi:10.1108/13527590810860221

[94] Hutcheson, P. G. (2006). Creating a development culture through mentoring. Employment Relations Today, 33(2), 25-33. doi:10.1002/ert.20105

[95] Hutchison, A., Johnston, L., & Breckon J. (2010). Using QSR-NVivo to facilitate the

development of grounded theory project: An account of worked example.

International Journal of Social Research Methodology, 13, 283-302.

doi:10.1080/13645570902996301

[96] Iivari, N. (2011). Participatory design in OSS development: Interpretive case studies in company and community OSS development contexts. Behaviour & Information Technology, 30(3), 309-323. Retrieved from http://www.tandfonline.com/doi/abs/10.1080/0144929X.2010.503351#preview

[97] Iivari, N. (2008). Constructing the users in open source software development: An interpretive case study of user participation. Information Technology & People, 22(2), 132–156. doi:10.1108/09593840910962203

[98] Jacques, P. H., Garger, J., Brown, C. A., & Deale, C. S. (2009). Personality and virtual reality team candidates: The roles of personality traits, technology anxiety and trust as predictors of perceptions of virtual reality teams. Journal of Business and Management, 15, 143-158. Retrieved from http://news-business.vlex.com/vid/virtual-team-predictors-teams-227787499

[99] Jani, A. (2010). Escalation of commitment in troubled IT projects: Influence of project risk factors and self-efficacy on the perception of risk and the commitment to a failing project. International Journal of Project Management, 29(2011), 934–945. doi:10.1016/j.ijproman.2010.08.004

[100] Jani, A. (2011). Escalation of commitment in troubled IT projects: Influence of project risk factors and self-efficacy on the perception of risk and the commitment to a failing project. International Journal of Project Management, 29(7), 934. doi:10.1016/j.ijproman.2010.08.004

[101] Jarvenpaa, S. L., & Leidner, D. E. (1999). Communication and Trust in Global Virtual Teams. Organization Science, 10(6), 791-815. doi:10.1287/orsc.10.6.791

[102] Johnson, R., Veltri, N., & Hornik, S. (2008). Attributions of responsibility toward computing technology: The role of interface social cues and user gender. International Journal of Human-Computer Interaction, 24(6), 595–612. doi:10.1080/10447310802205784

[103] Johnson, J. (2005). The virtual workplace: The price is right. Network World, 22(36), 1. Retrieved from http://networkworld.com/

[104] Jung, D., & Sosik, J. (2006). Who are the spellbinders? Identifying personal attributes of charismatic leaders. Journal of Leadership and Organizational Studies, 12(4), 12-26. doi:10.1177/107179190601200402

[105] Kahai, S., Fjermestad, J., Zhang, S., & Avolio, B. J. (2007). Leadership in virtual teams: Past, present, and future. International Journal of E-Collaboration, 3, 1–8. Retrieved from http://www.igi-

global.com/journal/international-journalcollaboration-ijec/1090

[106] Kankanhalli, A., Tan, B., & Kwok-Kee, W. (2007). Conflict and performance in global virtual teams. Journal of Management Information Systems, 23(3), 237-274. doi:10.2753/MIS0742-1222230309.

[107] Kauppila, O., Rajala, R., & Jyrämä, A. (2011). Knowledge sharing through virtual teams across borders and boundaries. Management Learning, 42(4), 395–418. doi:10.1177/1350507610389685.

[108] Katzenbach, J. R., & Smith, D. K. (1994). The wisdom of teams: creating the high performance organization. New York, NY: Harper Business.

[109] Kendra, K., & Taplin, L. (2004). Project success: A cultural framework. Project Management Journal, 35(1), 30–45. Retrieved from http://www.cob.unt.edu/mgmt/WHITE/Culture%20kendra_taplin_2004.pdf

[110] Ke, W., & Wei, K. K. (2005). Organization culture and leadership in ERP implementation. Decision Support Systems, 45(2), 208–218. doi:10.1016/j.dss.2007.02.002

[111] Kerzner, H. (2006). Project management: A systems approach to planning, scheduling, and controlling (9th ed.). Hoboken, NJ: John-Wiley & Sons.

[112] Kimble, C. (2011). Building effective virtual teams: How to overcome the problems of trust and identity in virtual teams. Global Business and Organizational Excellence, 30(2), 6-15. doi:10.1002/joe.20364

[113] King, W. (2008). An IS offshore outsourcing framework: Emerging knowledge requirements for IS professionals. Journal of Information Technology Case & Application Research, 10(4), 7–31. Retrieved from http://jitcar.ivylp.org/vol10.htm

[114] Kleinman, C. (2004). The relationship between managerial leadership behaviors and staff nurse retention. Hospital Topics, 82(4), 2-9. doi:10.3200/HTPS.82.4.2-9

[115] Knapik, M. (2006). The qualitative research interview: Participants' responsive

participation in knowledge making. International Journal of Qualitative

Methods, 5(3), 1-13. Retrieved from http://www.socsci.uci.edu/ssarc/sshonors/webdocs/qualitativeinterview.pdf

[116] Kocheria, S., & Korrapati, R. (2010). A qualitative study on determining managerial styles for software development life cycle stages. Proceedings of the Academy of Information and Management Sciences, 14, 54-57. Retrieved from http://www.highbeam.com/doc/1P3-2067167421.html

[117] Korrapati, R., & Rapaka, S. (2009). Successful leadership styles in software projects in offshore centers in India. Allied Academies International Conference: Proceedings of the Academy of Information & Management Sciences (AIMS), 13(2), 56–59. Retrieved from http://www.highbeam.com/doc/1P3-1954977341.html

[118] Knapik, M. (2006). The qualitative research interview: Participants' responsive

participation in knowledge making. International Journal of Qualitative Methods, 5(3), 1-13. Retrieved from http://www.socsci.uci.edu/ssarc/sshonors/~knapik/qualitativeinterview.pdf

[119] Kristensen, N., & Westergaard-Nielsen, N. (2007). A large-scale validation study of measurement errors in longitudinal survey data. Journal of Economic and Social Measurement, 32(2), 65-92. Retrieved from http://ftp.iza.org/dp2329.pdf

[120] Kriyantono, R. (2012). Measuring a company reputation in a crisis situation: An

ethnography approach on the situational crisis communication theory.

International Journal of Business & Social Science, 3(9), 214-223. Retrieved

from http://www.ijbssnet.com

[121] Krosigk, V. B. (2007). A holistic exploration of leadership development. South African Journal of Business Management, 38(2), 25-30. Retrieved from http://www.journals.co.za/ej/ejour_busman.html

[122] Kvedaravišienė, G., & Boguslauskas, V. (2010). Underestimated importance of cultural differences in outsourcing arrangements. Engineering Economics, 21(2), 187-196. Retrieved from http://www.ktu.edu/lt/mokslas/zurnalai/inzeko/67/1392-2758-2010-22-2-187.pdf

[123] Lai, F., Zhao, X., & Wang, Q. (2006). The impact of information technology on the competitive advantages of logistics firms in China. Industrial Management & Data Systems, 106(9), 193–201. doi:10.1108/02635570610712564

[124] Leinonen, P., Jarvela, S., & Lipponen, L. (2003): Individual students' interpretations of their contribution to the computer-mediated discussions. Journal of Interactive Learning Research, 14, 99-122. Retrieved from http://www.aace.org/pubs/jilr/

[125] Li, T. S., & Lin, L. C. (2011). A unified model for the implementation of both CMMI and

6[sigma]. Total Quality Management & Business Excellence, 22(4), 407-437. Retrieved from http://www.deepdyve.com/lp/emerald-publishing/a-unified-model-for-implementing-lean-and-cmmi-for-services-cmmi-svc-fWcdMumS2w

[126] Lin, C., & Tseng, H. (2006). Identifying the pivotal role of participation strategies and information technology application for supply chain excellence. Industrial Management + Data Systems, 106(5), 739–756. doi:1073434211

[127] Lovallo, D., & Kahneman, D. (2003), How optimism undermines executive's decisions, Harvard Business Review, 5, 1-10. Retrieved from http://www.vital.co.kr/harvard/hmmplus/full4/resrcs/solving/4279.pdf

[128] Lucas, B. (2006). A formula for motivating people to learn. People Management, 12(13), 1-3. Retrieved from http://www.peoplemanagement.co.uk/

[129] Mahaney, R. C., & Lederer, A.L. (2011). An agency theory explanation of project success. The Journal of Computer Information Systems, 51(4), 102-113.

[130] Malhotra, A., Majchrzak, A., & Rosen, R. (2007). Leading virtual teams. Academy of Management Perspectives, 2, 60-70. doi:10.5465/AMP.2007.24286164

[131] Mancini, D. J. (2010). Building organizational trust in virtual teams. Journal of

Behavioral Studies in Business, 2, 1-5. Retrieved from http://www.aabri.com/jbsb.html

[132] March, J. G., & Shapira, Z. (1987). Managerial perspectives on risk and risk taking. Management Science, 33(11), 1404–1418. Retrieved from http://www.jstor.org/discover/10.2307/2631920

[133] Marcinowicz, L., Chlabicz, S., & Grebowski, R. (2007). Open-ended questions in surveys of patients' satisfaction with family doctors. Journal of Health Services Research and Policy, 12(2), 86-89. Retrieved from http://www.jhsrp.rsmjournals.com/content/12/2/86.full.pdf

[134] Marrewijk, A. V. (2010). Situational construction of Dutch—Indian cultural differences in global IT projects. Scandinavian Journal of Management, 26, 368-380. doi:10.1016/j.scaman.2010.09.004

[135] McCluskey, S., & Topping, A. E. (2011). Increasing response rates to lifestyle surveys: A pragmatic evidence review. Perspectives in Public Health, 131(2), 89-93. doi:10.1177/1757913910389423

[136] McGehee, P., & Andrew, S. (2009, January). Using resource dependency theory to explain informal ties in emergency management networks. Paper presented at the annual meeting of the Southern Political Science Association, Hotel Intercontinental, New Orleans, LA. Retrieved from http://www.allacademic.com/meta/p284537_index.html

[137] Mehta, A. (2009). Examining the role of personal, social exchange, and contextual fit variables in employee work outcomes under continuous change: A field investigation. (Doctoral Dissertation). University of Northern Iowa, Cedar Falls, IA.

[138] Michaels, P. (2007). Calculating the cost of failed software projects. Retrieved from http://www.computerweekly.com/Articles/2008/05/06/230115/Calculating-thecost-of-failed-software-projects.

[139] Miller, M. (2006). Transforming leadership: What does love have to do with it? Transformation, 23(2), 94-106. Retrieved from http://www.ocms.ac.uk/transformation/

[140] Misra, R. (2004). Global IT outsourcing: Metrics for success of all parties. Journal of Information Technology Cases & Applications, 6(3), 21–34. Retrieved from http://jitcar.ivylp.org/vol6.htm

[141] Mockaitis, A. L., Rose, E. L., & Zettinig, P. (2012). The power of individual cultural values in global virtual teams. International Journal of Cross Cultural Management, 12(2), 193–210. doi:10.1177/1470595812439868

[142] Mortari, L. (2008). The ethic of delicacy in phenomenological research. International Journal of Qualitative Studies on Health and Well-Being, 3(1), 3-17. Retrieved from http://www.ijqhw.net/index.php/qhw/article/download/4967/5235

[143] Moustakas, C. (1994). Phenomenological research methods. Thousand Oaks, CA: Sage.

[144] Moutinho, L., Rita, P., & Li. S. (2006). Strategic diagnostics and management decision making: A hybrid knowledge based approach. Intelligent Systems in Accounting, Finance & Management, 14(3), 129-155. doi:10.1002/isaf.281

[145] Moynihan, D., & Pandey, S. (2008). The ties that bind: Social networks, person organization value fit, and turnover intention. Journal of Public Administration Research and Theory, 18(2), 205–227. doi:1445782861

[146] Nair, H. C. (2011). External factors based on work location that influence information technology project success. Retrieved from ProQuest Dissertation and Theses database.

[147] Nangoli, S., Namagembe, S., Ntayi, J.M., Ngoma, M. (2012). Towards building project-stakeholder commitment. World Journal of Entrepreneurship, Management and Sustainable Development, 8(4), 233-245. doi:10.1108/20425961211276615

[148] Ndofor, H. A., Sirmon, D. G., & He, X. (2011). Firm resources, competitive actions and performance: Investigating a mediated model with evidence from the in-vitro diagnostics industry. Strategic Management Journal, 32, 640-657. doi:10.1002/smj.901

[149] Neuman, W. L. (2003). Social research methods (5th ed.). Upper Saddle River, CA: Prentice Hall.

[150] Nishii, L., Lepak, D., & Schneider, B. (2008). Employee attributions of the ―why of HR practices: Their effects on employee attitudes and behaviors and customer satisfaction. Personnel Psychology,

61(3), 503–545. doi:1548764341

[151] Nixon, P., Harrington, M., & Parker, D. (2012). Leadership performance is significant to project success or failure: a critical analysis. International Journal of Productivity and Performance Management, 61(2), 204-216. doi:10.1108/17410401211194699

[152] Obloj, T., & Capron, L. (2011). Research notes and commentaries role of resource gap and value appropriation: effect of reputation gap on price premium in online auctions. Strategic Management Journal, 32, 447–456. doi:10.1002/smj.902

[153] Ocker, R. J., Huang, H., Fich, R. B., & Hiltz, S.R. (2009). Leadership dynamics in partially distributed teams: An exploratory study of the effects of configuration and distance. Group DecisNegot, 20, 273–292. doi:10.1007/s10726-009-9180-z

[154] Oghojafor, B. E., & Oghojafor, O. O. (2012). Attribution theory and strategic decisions on organizational success factors. Journal of Management and Strategy, 3(1), 32-39. doi:10.5430/jms.v3n1p32

[155] Ooi, K., Lin, B., Tan, B., & Chong, A. Y., (2011). Are TQM practices supporting customer satisfaction and service quality? Journal of Services Marketing, 25/6 (2011), 410–419. doi:10.1108/08876041111161005.

[156] Outlay, C. (2007). Resizing the IS function after outsourcing: Examining psychological contracts, violations, and outcomes (Doctoral Dissertation). University of Illinois, Chicago, IL.

[157] Oza, N., & Hall, T. (2005). Difficulties in managing offshore software outsourcing relationships: An empirical analysis of 18 high maturity Indian software companies. Journal of Information Technology Case and Application Research, 7(3), 25–41. Retrieved from http://130.203.133.150/showciting;jsessionid=03BA48A50E485BE722621C08C CC6F19

[158] Pacheco, C., & Garcia, I. (2012). A systematic literature review of stakeholder identification methods in requirements elicitation. The Journal of Systems and Software, 85(2012), 2171– 2181.Retrieved from http://www.sciencedirect.com/science/article/pii/S0164121212001288

[159] Pan, G., Pan, S., & Newman, M. (2007). Information systems project post-mortems: Insights from an attribution perspective. Journal of the American Society for Information Science and Technology, 58(14), 2255–2268. Retrieved from http://ink.library.smu.edu.sg/soa_research/693/

[160] Pathak, R. C. (2005). Flexibility--thinking shift for organizational excellence. Global Journal of Flexible Systems Management, 6(3/4), 59-69. Retrieved from http://www.springer.com/engineering/production+eng/journal/10696

[161] Patton, M. Q. (2002). Qualitative research and analysis methods (3rd Ed.). Thousand

Oaks, CA: Sage.

[162] Peters, L., & Karren, R. J. (2009). An examination of the roles of trust and functional diversity on virtual team performance ratings. Group & Organization Management, 34, 479. doi:10.1177/1059601107312170

[163] Peterson, C. (2000). The future of optimism. American Psychologist, 55(1), 44-55.

Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/11392864

[164] Plano Clark, V. L., & Creswell, J. W. (2008). The mixed methods reader. Thousand

Oaks, CA: Sage.

[165] Pokharel, S. (2011). Stakeholders' roles in virtual project environment: A case study. J. Eng. Technol. Manage, 28(2011), 201–214. Retrieved from http://www.elsevier.com/locate/jengtecman

[166] Prati, L. M., Douglas, C., Ferris, G. R., Ammeter, A. P., & Buckley, M. R. (2003). Emotional intelligence, leadership, effectiveness, and team outcomes. The International Journal of Organizational Analysis, 11, 21-40. doi:10.1108/eb028961

[167] Quisenberry, W. L. (2011). Common characteristics and attributes of self-managed virtual teams. Retrieved from ProQuest Dissertation and Theses database.

[168] Rapisarda, B. A. (2002). The impact of emotional intelligence on work team cohesiveness and performance. The International Journal of Organizational Analysis, 10, 363-378. doi:10.1108/eb028958

[169] Reed, A.H., & Knight, L.V. (2010). Project risk differences between virtual and co-located teams. Journal of Computer Information Systems, 51(1), 19-30. Retrieved from http://iacis.org/jcis/articles/Reed_Knight_51_1.pdf

[170] Remus, U., & Wiener, M. (2009). Critical success factors for managing offshore software development projects. Journal of Global Information Technology Management, 12(1), 6–29. Retrieved from http://edit752.pbworks.com/f/Outsource_SuccessFactors.pdf

[171] Richardson, I., Casey, V., McCaffery, F., Burton, J., & Beecham, S. (2012). A Process Framework for Global Software Engineering Teams. Information and Software Technology, 54(2012), 1175–1191. doi:10.1016/j.infsof.2012.05.002

[172] Roh, B. E. (2011). Organizational structural factors leading to financially successful mergers and

acquisitions: A phenomenological case study. Retrieved from ProQuest Dissertation and Theses database.

[173] Rozell, E. J., & Scroggins, W. A. (2010). How much is too much? The role of emotional intelligence in self-managed work team satisfaction and group processes. Team Performance Management, 16, 33-49. doi:10.1108/13527591011028915

[174] Roy, R. H. (2012). Digital mastery: The skills needed for effective virtual leadership. International J. of E-Collaboration, 3, 56. doi:10.4018/jec.2012070104

[175] Rozman, T., Horvat, & R. V., Rozman, A. (2008). Modeling the standard compliant

software processes in the university environment. Business Process Management Journal, 14(1), 53-63.Retrieved from http://www.emeraldinsight.com/journals.htm?articleid=1669249

[176] Rusu, L., & Rusu, V. (2010). Online project management for dynamic e-collaboration. Informatica Economica, 14, 182-190. Retrieved from http://revistaie.ase.ro/

[178] Sachdeva, D., Mittal, R., & Solanki, R. (2009). HR practice scenario in Indian KPOs. Global Business & Management Research, 1(2), 43–59. Retrieved from http://www.questia.com/library/1G1-205638239/hr-practice-scenario-in-indian-kpos

[179] Sadri, G., & Condia, J. (2012). Managing the virtual world. Industrial Management, 54(1), 21-25. Retrieved from http://www.iienet2.org/details.aspx?id=31596

[180] Salem, O., & Mohanty, S. (2008). Project management practices and information technology research. Journal of Construction Engineering & Management, 134(7), 501–508. doi:10.1061/(ASCE)0733-9364(2008)134:7(501)

[181] Sarigiannids, L., & Chatzoglou, P. D. (2011). Software development project risk management: A new conceptual framework. JSEA, 4, 293-305. doi:10.4236/jsea.2011.45032

[182] Sarker, S., Ahuja, M., Sarker, S., & Kirkeby, S. (2011). The role of communication and trust in global virtual teams: A social network perspective. Journal of Management Information Systems, 28(1), 273-309. doi:10.2753/MIS0742-1222280109

[183] Schenkel, M. T., & Garrison, G. (2009). Exploring the roles of social capital and team efficacy in virtual entrepreneurial team performance. Management Research News, 32, 525-538. doi:10.1108/01409170910962966

[184] Schlenkrich, L., & Upfold, C. (2009). A guideline for virtual team managers: The key to effective social interaction and communication. Electronic Journal of Information Systems Evaluation, 12(1), 109-118. Retrieved from http://www.ejise.com

[185] Schilling, J. (2006). On the pragmatics of qualitative assessment: Designing the process for content analysis. European Journal of Psychological Assessment, 22(1), 2837. Retrieved from http://www.wompt.com.au/lecturing/materials/schilling2006.pdf

[186] Sekiguchi, T. (2004). Person-organization fit and person-job fit in employee selection: A review of the literature. Retrieved from http://www.osaka-ue.ac.jp/gakkai/pdf/ronshu/2003/5406_ronko_sekiguti.pdf

[187] Sharma, D., Stone, M., & Ekinci, Y. (2009). IT governance and project management: A qualitative study. Journal of Database Marketing & Customer Strategy Management, 16(1), 29–50. doi:10.1057/dbm.2009.6

[188] Shenhar, A., & Dvir, D. (2007). Project management research—The challenge and opportunity. Project Management Journal, 38(2), 93–99. doi:10.1109/EMR.2008.4534315

[189] Shepherd, D. A., Patzelt, H., & Wolfe, M. (2011). Moving forward from project failure:

negative emotions, effective commitment, and learning from the experience. Academy of Management Journal, 54(6), 1229–1259. doi:10.5465.amj.2010.0102

[190] Sherrod, M. M. (2006). Using multiple methods in qualitative research design. Journal of Theory Construction and Testing, 10(1), 22-25. Retrieved from http://www.questia.com/read/1P3-1196374911/using-multiple-methods-in-qualitative-research-design

[191] Shih, Y. (2006). The effect of computer self-efficacy on enterprise resource planning usage. Behavior & Information Technology, 25, 407-411. doi:10.1080/01449290500168103

[192] Shuffler, M.L., Wiese, C.W., Salas, E., & Burke, S. (2010). Leading one another across time and space: Exploring shared leadership functions in virtual teams. Revista de PsicologíadelTrabajo y de las Organizaciones, 26(1) 3-17. doi:10.5093/tr2010v26n1a1

[193] Siebdrat, F., Hoegl, M., & Hoegl, E. (2009). How to manage virtual teams. MIT Sloan Management Review, 50(4), 62-68. Retrieved from http://sloanreview.mit.edu/

[194] Silva, N., Hutcheson, J., & Wahl, G.D. (2010). Organizational strategy and employee outcomes: A person–organization fit perspective. The Journal of Psychology, 144(2), 145–161. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/20307020

[195] Simon, M. (2006). Recipes for success: Dissertation & scholarly research. Dubuque, IA:

Kendall/Hunt.

[196] Simons, S. M., & Rowland, K. N. (2011). Diversity and its impact on organizational performance:

The influence of diversity constructions on expectations and outcomes. J. Technology Management Innovation, 6(3), 73-82. Retrieved from http://www.scielo.cl/pdf/jotmi/v6n3/art13.pdf

[197] Singleton, R., & Straits, B. (2005). Approaches to social research (4th ed.). New York,

NY: Oxford University Press.

[198] Sivo, S. A., Saunders, C., Qing, C., & Jiang, J. J. (2006). How low should you go? Low response rates and the validity of inference in IS questionnaire research. Journal of the Association for Information Systems, 7(6), 351-413. Retrieved from http://pegasus.cc.ucf.edu/~ssivo/Distribution/PublishedPapers/2006%20JAIS%20-%20Treating%20Nonresponse%20in%20IS%20Survey%20Research.pdf

[199] Smith, D. C., Bruyns, M., & Evans, S. (2010). A project manager's optimism and stress management and IT project success. International Journal of Managing Projects in Business, 4(1), 10-27. doi:10.1108/17538371111096863

[200] Smite, D., & Wohlin, C. (2011). A whisper of evidence in global software engineering. IEEE Software, 28(4), 15-18. Retrieved from http://www.lu.lv/fileadmin/user_upload/lu_portal/projekti/datorzinatnes_pielietojumi/publikacijas/Smite_7_1.pdf

[201] Sorter, A. O., Connors, S. P., & Rudge, L. (2008). Use of a coding manual when

providing a meta-interpretation of internal-validity mechanisms and demographic data used in qualitative research. Journal of Ethnographic and Qualitative Research, 2(4), 269-280. Retrieved from http://osu.academia.edu/LucilaRudge/Papers/1566788/Use_of_a_coding_manual_when_providing_a_meta-interpretation_of_internal-validity_mechanisms_and_demographic_data_used_in_qualitative_research

[202] Spinelli, R. (2006). The applicability of bass's model of transformational and laissez faire leadership in the hospital environment. Hospital Topics, 84(2), 11-18. doi:10.3200/HTPS.84.2.11-19

[203] Spreitzer, G., Pettula, K., & Xin, K. (2005). Traditional matters: Examination of the effectiveness of transformational leadership in the United States and Taiwan. Journal of Organizational Behavior, 26, 205-227. doi:10.1002/job.315

[204] Standing, C., Guilfoyle, A., Lin, C., & Love, P. (2006). The attribution of success and failure in IT projects. Industrial Management + Data Systems, 106(8), 1148–1165. doi:10.1108/02635570610710809

[205] Standish Group. (2009). New Standish Group report shows more project failing and less successful

projects. Retrieved from http://www.standishgroup.com/newsroom /chaos_2009.php

[206] Standish Group. (2010). CHAOS manifesto: The laws of CHAOS and the CHAOS 100 best PM practices. Retrieved from http://www.standishgroup.com/

[207] Straker, D. (2008). Attribution theory. Retrieved from http://changingminds.org/explanations/theories/attribution_theory.htm

[208] Strang, K. D. (2011). Leadership substitutes and personality impact on time and quality in virtual new product development projects. Project Management Journal, 42(1), 73-90. doi:10.1002/pmj.20208

[209] Straub, D., Weill, P., & Schwaig, K. (2008). Strategic dependence on the IT resource and outsourcing: A test of the strategic control model. Information Systems Frontiers, 10(2), 195–210. doi:1451821551

[210] Strickler, J. (2006). What motivates people? The Journal for Quality and Participation, 29, 26-28. Retrieved from http://asq.org/pub/jqp/

[211] Sutarjo, A. (2011). Ten ways of managing person-organization fit (P-O Fit) effectively: A literature study. International Journal of Business and Social Science, 2(21), 226-233. Retrieved from http://www.ijbssnetcom/journals/Vol_2_No_21_Special_Issue_November_2011/25.pdf

[212] Thomas, D. M., & Bostrom, R. P. (2010). Vital signs for virtual teams: An empirically developed trigger model for technology adaption interventions. MIS Quarterly, 34, 115-142. Retrieved from http://www.misq.org/

[213] Turban, E., Leidner, D., McLean, E., & Wetherbe, J. (2008). Information technology for management: Transforming organizations in the digital economy (6th ed.). San Francisco, CA: Wiley.

[214] Turel, O., & Zhang, Y. (2010). Does virtual team composition matter? Trait and problem-solving configuration effects on team performance. Behaviour & Information Technology, 29(4), 363-375. doi:10.1080/01449291003752922

[215] Trochim, W. M. K., & Donnelly, J. P. (2007). The research methods knowledge base (3rd ed.). Mason, OH: Thompson.

[216] Unwiler, R., & Frolick, M. N. (2008). The IT value hierarchy: Using Maslow's hierarchy of needs as a metaphor for gauging the maturity level of information technology use within competitive organizations. Information Systems Management, 25, 83-88. doi:10.1080/10580530701777206

[217] Vignovic, J. A., & Thompson, L. F. (2010). Computer-mediated cross-cultural collaboration: Attributing communication errors to the person versus the situation. Journal of Applied Psychology, 93, 265-276. doi:10.1037/a0018628.

[218] Wagner, R., & Harter, J. K. (2007, November 8). The seventh element of great managing. Gallup Management Journal Online, 1-7. Retrieved from http://gmj.gallup.com

[219] Wahyuni, D. (2012). The research design maze: Understanding paradigms, methods and

methodologies. Journal of Applied Management Accounting Research, 10, 69-80.

Retrieved from http://cmawebline.org

[220] Weiling, K., & Ping, Z. (2009). Motivations in open source software communities: The mediating role of effort intensity and goal commitment. International Journal of Electronic Commerce, 13(4), 39–66. doi:10.2753/JEC1086-4415130403

[221] Weimann, P., Hinz, C., Scott, E., & Pollock, M. (2010). Changing the communication culture of distributed teams in a world where communication is neither perfect nor complete. Electronic Journal Information Systems Evaluation, 13, 187-196. Retrieved from http://www.ejise.com/

[222] Wisnieski, J., & Soni, R. (2004). Strategic alliance choice: Usefulness of proposed theories. Journal of Applied Management and Entrepreneurship, 9(3), 74–90. doi: 1178660761

[223] Wysocki, R. K. (2007a). Effective project management (4th ed.). Indianapolis, IN: Wiley Publishing.

[224] Wysocki, R.K. (2007a). Effective project management— traditional, adaptive, extreme. Journal of Information Systems Control, 5, 1-2. Retrieved from http://www.isaca.org/Journal/Past-Issues/2007/Volume-5/Documents/jpdf0705-effective-project.pdf

[225] Yang, L. (2012).Implementation of project strategy to improve new product development performance. International Journal of Project Management, 30(7), 760. doi:10.1016/j.ijproman.2011.11.005

[226] Yin, R. K. (2009). Case study research: Design and methods (4th ed.). Thousand Oaks,

CA: Sage.

[227] Zivick, J. (2012). Mapping global virtual team leadership actions to organizational roles. The Business Review, 19(2), 18-25. Retrieved from http://umuc.academia.edu/JeffZivick/Papers/1262725/Mapping_Global_Virtual_Team_Leadership_Actions_To_Organizational_Roles.

Appendix A: Invitation Letter Requesting Participation

Invitation Letter Requesting Participation

Dear _____,

I am a Ph.D. Candidate at Walden University in the Ph.D. in Management Program. The purpose of this letter is to invite you to participate in a research study at Walden University on *Factors Workplace That Shape Information Technology Project Success*. The result of this study may be useful to your organization because as research on these factors has been limited.

I would like to carry out online interview with you. If you currently or had prior experiences with managing or leading a virtual team. Then I would like to interview or collect data on this topic, which will be kept in confidence and analyzed in this research, study. An executive summary of the research will be offered to you at the end of this study by electronic mail. The interview will assume about 20 to 30 minutes.

If you are interested to be a participant in this study, could you please contact me via email or call me. After I have confirmed your interest, you should plan to follow up by me sending the consent form with the questionnaire. Please contact me at dan.nguyen@waldenu.edu or call me, if you have any questions or concerns.

Thank you,

Dan S. Nguyen

Ph.D. Candidate Walden University

Ph.D. in Management

Dan.nguyen@waldenu.edu

Appendix B: Letter of Invitation

Letter of Invitation

Dear_____,

I am a Ph.D. Candidate at Walden University in the Ph.D. in Management Program. The purpose of this letter is to invite you to participate in a research study at Walden University on *Factors Workplace That Shape Information Technology Project Success*. The result of this study may be useful to your organization because as research on these factors has been limited.

I would like to conduct electronic mail open-ended interview with you. If you currently or had prior experiences with managing or leading a virtual team. Then I would like to interview or collect data on this topic, which will be kept in confidence and analyzed in this research, study. An executive summary of the research will be offered to you at the end of this study by electronic mail. The interview will assume about 20 to 30 minutes.

If you are interested to be a participant in this study, could you please contact me via email or call me. After I

have confirmed your interest, you should plan to follow up by me sending the consent form with the questionnaire. Please contact me at dan.nguyen@waldenu.edu or call me, if you have any questions or concerns.

Thank you,

Dan S. Nguyen

Ph.D. Candidate Walden University

Ph.D. in Management

Dan.nguyen@waldenu.edu

Appendix C: Participant Informed Consent Form

Informed Consent: Participants 18 years of age and older

My name is Dan S. Nguyen and I am a Ph.D. Candidate at the Walden University working on a Ph.D. of Information Systems Management degree. I am conducting a research study entitled: Workplace Factors That Shape IT Project Success: A phenomenological study. The purpose of the research study is to examine the workplace factors leading to virtual team project success to aid in the improvement of future project success and reduce the failure and cancellation rates among virtual team projects in the IT industry. The study participants inclusion consists of IT project managers or leaders who currently or had prior experiences with managing or leading a virtual team.

Your participation will involve completing and returning the questionnaire by e-mail to Dan S. Nguyen (dan.nguyen@waldenu.edu), the research student, within seven days of receiving. The questionnaire will take you approximately 20 to 30 minutes to complete. Your participation in this study is voluntary. If you select not to participate or feel free to withdraw from the study at any time you feel stress or pressure, you can do so without penalty or loss of benefit to yourself. Being in this study should not pose risk to your safety or wellbeing. The outcomes of the research study might be published but your identity will remain confidential and your name will not be disclosed to any outside party. Also the researcher will use the email address to provide the responses and results of each participant's individual responses. This is a method known as member checking, and it is utilized to assure that the participant's answers are not misconstrued in any way. This email address will stay confidential along with the rest of the data received in this study and will never be shared with anyone else besides the researcher

In this research, there are no foreseeable risks to you. Although there might be no direct benefit to you, a possible benefit of your participation is to improve the success of virtual team project success among IT companies. The outcomes of the study might assist organizational leaders in various industries reduce the high level of virtual team project failures.

As a participant in this study, you should understand the following:

1. You may decline to participate or withdraw from participation at any time without

consequences.

2. Your identity will be kept confidential.

3. The research student has explained the parameters of the research study and all of your

questions and concerns have been addressed.

4. The research student will structure a coding process to assure that identity of your

name is protected.

5. Data will be stored in a secure and locked area. After five years data will be disposed erasing files on disk.

6. The research results might be used for publication.

7. I understand that I will expect a follow up by the researcher with the study open-ended interview questions (e.g., to carry out data collection on workplace factors) on a separate email to be filled out and return to the researcher.

Compensation:

There will be no compensation furnished for your participation in this study.

Confidentiality:

Any information you offer will be kept confidential. The researcher will not use your data for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could distinguish you in any reports of the study. All information will be kept in password protected electronic files. Only the researcher and Walden faculty mentoring the researcher will have access to these electronic files. After five years data will be disposed erasing files on disk.

Contacts and Questions:

You may ask any questions you have now. Or if you have questions later, you may

contact the researcher via dan.nguyen@waldenu.edu. If you want to talk privately about your rights as a participant, you could call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number is 1-800-925-3368, extension 3121210. Walden University's approval number

for this study is 07-23-13-0266812 and it expires July 22, 2014.

Statement of Consent:

By replying to this e-mail with the words "I Consent". I agree to the terms above.

Please print and retain a copy of this form for your records.

Appendix D: Pilot Tested Questionnaire

Interview Questions – Pilot Test

Project: Workplace Factors That Shape IT Project Success: A Phenomenological Study

Date:

Location:

Participant:

Interviewer:

The purpose of the research study is to explore the workplace factors leading to virtual team project success to aid in the improvement of future project success and reduce the failure and cancellation rates among virtual team projects in the IT industry. The study includes IT company team leader or above whom had prior experienced or current experience in managing a virtual team project. The participants must have knowledge of virtual team processes to be included in the pilot test study.

Your participation in the pilot test study is voluntary. If you choose not to participate or to withdraw from the test at any time, you can do so without penalty or loss of benefit to yourself. There are no foreseeable risks to you from partaking in the pilot test study. Dan S. Nguyen, the interviewer, will not include your responses in the pilot test study and will keep your identity confidential. Your participation will allow Dan to adjust the open-ended questions if necessary to assure clarity, appropriateness, and applicability. I would like to take this opportunity to thanks you in advance for your participation with this pilot test study. After completed filling out the pilot test study interview questions, could you please kindly email them back to me at dan.nguyen@waldenu.edu.

Preliminary questions:

Are at least 18 year of age?

☐ No – Thank you! You can stop from here.

☐ Yes – Please proceed to the next question.

Do you currently or had prior experience with managing or leading a virtual team?

☐ No - Thank you! You can stop from here.

☐ Yes – Please proceed to the next question.

Questions:

1. What is your lived experience on a virtual team? Please explain in two to three sentences.

2. What is your lived experience with virtual team cultural differences that could effect IT project success? Please explain in two to three sentences.

3. What is your lived experience with virtual team functional differences (e.g. when more than one area of functional expertise is represented within a team) that could effect IT project success or related to team-rated performance. Please explain in two to three sentences.

4. What is your lived experience with virtual team organizational differences (e.g. multiple vendors increases project complexity as an outcome of different and sometimes conflicting sets of goals and success measures) that could effect IT project success? Please explain in two to three sentences.

5. What is your lived experience with effective virtual team coordination (e.g., task programming and team communication) that could enhance the chance of success of IT projects? Please explain in two to three sentences.

6. What is your lived experience with effective virtual team trust that could enhance the chance of success of IT projects? Please explain in two to three sentences.

7. What is your lived experience with effective virtual team knowledge sharing that could enhance the chance of success of IT projects? Please explain in two to three sentences.

8. What is your lived experience with effective virtual team knowledge management that could enhance the chance of success of IT projects? Please explain in two to three sentences.

9. What managerial style is best suited for managing virtual teams? Please explain in two to three sentences.

Demographic questionnaire:

1. What is your age? (Please check 1 response)

☐ 19-29 ☐ 30- 39 ☐ 40-49 ☐ 50-59 ☐ 60 +

2. What is your gender? (Please check 1 response)

☐ Male ☐ Female

3. How many years of experience do you have with collocated project teams? (Please check 1 response)

☐ 1- 5 ☐ 6 – 10 ☐ 11 - 15 ☐ 16 - 20 ☐ 21 – 25 ☐ 26+

4. How many years of experience do you have with virtual team projects? (Please check 1 response)

☐ 1- 5 ☐ 6 – 10 ☐ 11 - 15 ☐ 16 - 20 ☐ 21 – 25 ☐ 26+

5. What is your current industry? (Please check 1 response)

☐ Agriculture

☐ Constructions

☐ Finance and Banking

☐ Information Technology

☐ Manufacturing

☐ Pharmaceutical

☐ Retail and Wholesale

☐ Other (Please specify)

Research articles used for the development of the interview questions:

Espinosa, J. A., DeLone, W., & Lee, G. (2006). Global boundaries, task processes and IS project success: A field study. *Information Technology & People*, *19*(4), 345-370. doi:10.1108/09593840610718036

Quisenberry, W. L. (2011). Common characteristics and attributes of self-managed virtual teams. Retrieved from ProQuest Dissertation and Theses database.

Appendix E: Interview Questionnaire

Interview Questions

Project: Workplace Factors That Shape IT Project Success: A Phenomenological Study

Date:

Location:

Participant:

Interviewer: Dan S. Nguyen

The purpose of the research study is to explore the workplace factors leading to virtual team project success to aid in the improvement of future project success and reduce the failure and cancellation rates among virtual team projects in the IT industry. The study includes IT company team leader or above whom had prior experienced or current experience in managing a virtual team project. The participants must have knowledge of virtual team processes to be included in the research study.

Your participation in the research study is voluntary. If you choose not to participate or to withdraw from the test at any time, you can do so without penalty or loss of benefit to yourself. There are no foreseeable risks to you from partaking in the research study. Dan S. Nguyen, the interviewer, will include your responses in the research study and will keep your identity confidential. I would like to take this opportunity to thanks you in advance for your participation with this research study. After completed filling out the study interview questions, could you please kindly email them back to me at dan.nguyen@waldenu.edu.

Preliminary questions:

Are at least 18 year of age?

☐ No – Thank you! You can stop from here.

☐ Yes – Please proceed to the next question.

Do you currently or had prior experience with managing or leading a virtual team?

☐ No - Thank you! You can stop from here.

☐ Yes – Please proceed to the next question.

Questions:

1. What is your lived experience on a virtual team? Please explain in two to three sentences.

2. What is your lived experience with virtual team cultural differences that could effect IT project success? Please explain in two to three sentences.

3. What is your lived experience with virtual team functional differences (e.g. when more than one area of

functional expertise is represented within a team) that could effect IT project success or related to team-rated performance. Please explain in two to three sentences.

4. What is your lived experience with virtual team organizational differences (e.g. multiple vendors increases project complexity as an outcome of different and sometimes conflicting sets of goals and success measures) that could effect IT project success? Please explain in two to three sentences.

5. What is your lived experience with effective virtual team coordination (e.g., task programming and team communication) that could enhance the chance of success of IT projects? Please explain in two to three sentences.

6. What is your lived experience with effective virtual team trust that could enhance the chance of success of IT projects? Please explain in two to three sentences.

7. What is your lived experience with effective virtual team knowledge sharing that could enhance the chance of success of IT projects? Please explain in two to three sentences.

8. What is your lived experience with effective virtual team knowledge management that could enhance the chance of success of IT projects? Please explain in two to three sentences.

9. What managerial style is best suited for managing virtual teams? Please explain in two to three sentences.

Demographic questionnaire:

1. What is your age? (Please check 1 response)

☐ 19-29 ☐ 30- 39 ☐ 40-49 ☐ 50-59 ☐ 60 +

2. What is your gender? (Please check 1 response)

☐ Male ☐ Female

3. How many years of experience do you have with collocated project teams? (Please check 1 response)

☐ 1- 5 ☐ 6 – 10 ☐ 11 - 15 ☐ 16 - 20 ☐ 21 – 25 ☐ 26+

4. How many years of experience do you have with virtual team projects? (Please check 1 response)

☐ 1- 5 ☐ 6 – 10 ☐ 11 - 15 ☐ 16 - 20 ☐ 21 – 25 ☐ 26+

5. What is your current industry? (Please check 1 response)

☐ Agriculture

☐ Constructions

☐ Finance and Banking

☐ Information Technology

☐ Manufacturing

☐ Pharmaceutical

☐ Retail and Wholesale

☐ Other (Please specify)

Appendix F: Pilot Responses

Interview Questions – Pilot Test

Project: Workplace Factors That Shape IT Project Success: A Phenomenological Study

Date:7/24/2013

Location:

Participant:PP1

Interviewer: Dan S. Nguyen

The purpose of the research study is to explore the workplace factors leading to virtual team project success to aid in the improvement of future project success and reduce the failure and cancellation rates among virtual team projects in the IT industry. The study includes IT company team leader or above whom had prior experienced or current experience in managing a virtual team project. The participants must have knowledge of virtual team processes to be included in the pilot test study.

Your participation in the pilot test study is voluntary. If you choose not to participate or to withdraw from the test at any time, you can do so without penalty or loss of benefit to yourself. There are no foreseeable risks to you from partaking in the pilot test study. Dan S. Nguyen, the interviewer, will not include your responses in the pilot test study and will keep your identity confidential. Your participation will allow Dan to adjust the open-ended questions if necessary to assure clarity, appropriateness, and applicability. I would like to take this opportunity to thanks you in advance for your participation with this pilot test study. After completed filling out the pilot test study interview questions, could you please kindly email them back to me at

dan.nguyen@waldenu.edu.

Preliminary questions:

Are at least 18 year of age?

☐ No – Thank you! You can stop from here.

☒ Yes – Please proceed to the next question.

Do you currently or had prior experience with managing or leading a virtual team?

☐ No - Thank you! You can stop from here.

☒ Yes – Please proceed to the next question.

Questions:

1. What is your lived experience on a virtual team? Please explain in two to three sentences.

I am currently assigned to a virtual team. My team members are located in Indianapolis, Cleveland, Columbus and Arlington.

2. What is your lived experience with virtual team cultural differences that could effect IT project success? Please explain in two to three sentences.

Some team member are very good communicators when collaborating face to face they are able to get their point across easily and are able to instantly gage the response of team members. Colocation produces a more cohort team.

3. What is your lived experience with virtual team functional differences (e.g. when more than one area of functional expertise is represented within a team) that could effect IT project success or related to team-rated performance. Please explain in two to three sentences.

Problems and issues among virtual team professionals are easily understood and resolve when functional experts are across the table from each other.

4. What is your lived experience with virtual team organizational differences (e.g. multiple vendors increases project complexity as an outcome of different and sometimes conflicting sets of goals and success measures) that could effect IT project success? Please explain in two to three sentences.

To ease the complexity of organizational differences, it is the project manager responsibility to bring together the team with one fundamental goal in mind which is the project deliverables.

5. What is your lived experience with effective virtual team coordination (e.g., task programming and team communication) that could enhance the chance of success of IT projects? Please explain in two to three sentences.

Team coordination in a virtual environment is the order which keeps the team in a step by step process towards the end state of the project.

6. What is your lived experience with effective virtual team trust that could enhance the chance of success of IT projects? Please explain in two to three sentences.

Trust is the glue that keeps a virtual team together, a multiplier which leads to a successful project.

7. What is your lived experience with effective virtual team knowledge sharing that could enhance the chance of success of IT projects? Please explain in two to three sentences.

Information/Knowledge sharing is essential in a virtual team environment; Knowledge sharing inspires a different way of looking at or doing something. A new perspective on an old idea.

8. What is your lived experience with effective virtual team knowledge management that could enhance the chance of success of IT projects? Please explain in two to three sentences.

Knowledge management is very important in a virtual team, without it the potential for unnecessary rework which could influence deadlines.

9. What managerial style is best suited for managing virtual teams? Please explain in two to three sentences.

I like the transformational approach, because the leader has at his disposal different mechanisms to motivate and inspire the members. This approach requires providing caring, nurturing and intellectual support.

Demographic questionnaire:

1. What is your age? (Please check 1 response)

☐ 19-29 ☐ 30- 39 ☐ 40-49 ☒ 50-59 ☐ 60 +

2. What is your gender? (Please check 1 response)

☒ Male ☐ Female

3. How many years of experience do you have with collocated project teams? (Please check 1 response)

☐ 1- 5 ☒ 6 – 10 ☐ 11 - 15 ☐ 16 - 20 ☐ 21 – 25 ☐ 26+

4. How many years of experience do you have with virtual team projects? (Please check 1 response)

☐ 1- 5 ☒ 6 – 10 ☐ 11 - 15 ☐ 16 - 20 ☐ 21 – 25 ☐ 26+

5. What is your current industry? (Please check 1 response)

☐ Agriculture

☐ Constructions

☐ Finance and Banking

☒ Information Technology

☐ Manufacturing

☐ Pharmaceutical

☐ Retail and Wholesale

☐ Other (Please specify)

Interview Questions – Pilot Test

Project: Workplace Factors That Shape IT Project Success: A Phenomenological Study

Date:7/23/2013

Location: Lexington, KY

Participant: PP2

Interviewer: Dan S. Nguyen

The purpose of the research study is to explore the workplace factors leading to virtual team project success to aid in the improvement of future project success and reduce the failure and cancellation rates among virtual team projects in the IT industry. The study includes IT company team leader or above whom had prior experienced or current experience in managing a virtual team project. The participants must have knowledge of virtual team processes to be included in the pilot test study.

Your participation in the pilot test study is voluntary. If you choose not to participate or to withdraw from the test at any time, you can do so without penalty or loss of benefit to yourself. There are no foreseeable risks to you from partaking in the pilot test study. Dan S. Nguyen, the interviewer, will not include your responses in the pilot test study and will keep your identity confidential. Your participation will allow Dan to adjust the open-

ended questions if necessary to assure clarity, appropriateness, and applicability. I would like to take this opportunity to thanks you in advance for your participation with this pilot test study. After completed filling out the pilot test study interview questions, could you please kindly email them back to me at dan.nguyen@waldenu.edu.

Preliminary questions:

Are at least 18 year of age?

☐ No – Thank you! You can stop from here.

x☐ Yes – Please proceed to the next question.

Do you currently or had prior experience with managing or leading a virtual team?

☐ No - Thank you! You can stop from here.

x☐ Yes – Please proceed to the next question.

Questions:

What is your lived experience on a virtual team? Please explain in two to three sentences.

I have witnessed both poor and successful virtual teams. My personal experience has been primarily that they come down to the team members and leadership, just like collocated teams. However, virtual teams are more difficult and require specially guided expertise from leaders and members to truly succeed.

What is your lived experience with virtual team cultural differences that could effect IT project success? Please explain in two to three sentences.

Culture has a significant impact. From my experience I've seen many IT related virtual projects that were on an international scale and were put in jeopardy and experienced turmoil due to various cultures from around the world. For instance, I remember working on a project where members from Cebu Philippines had a significant piece in the project. Their culture can be one based upon saving face, so they would often avoid our phone calls and emails when we were pressuring them for scheduling updates. Their lack of communication would drive the team back in the U.S. nuts because we're more up-front and expect frequent details/updates. When we were unable to go back to the client with respectable updates that put us at-risk of losing contracts.

What is your lived experience with virtual team functional differences (e.g. when more than one area of functional expertise is represented within a team) that could effect IT project success or related to team-rated performance. Please explain in two to three sentences.

My experience on virtual teams with this regard is no different from collocated teams. When you have multiple

functional areas collaborating on one project, there will always be conflict and various degrees of interests/agendas.

What is your lived experience with virtual team organizational differences (e.g. multiple vendors increases project complexity as an outcome of different and sometimes conflicting sets of goals and success measures) that could effect IT project success? Please explain in two to three sentences.

This is a huge risk. When we were deploying large-scale projects that were virtual in nature and had multiple vendors, we would often run into mistakes, miscommunication, scheduling misses, and quality issues. When you are unable to look over an unreliable vendors' shoulder to ensure that they are doing things correctly, you run the risk of many misses and failures. We often would have to spend a lot of money on travel to go into the field and ensure that vendors were accurately completing assignments according to the SSOW. This actually defeats the purpose of using virtual teams if you have to constantly travel into the field and look over everyone's shoulders.

What is your lived experience with effective virtual team coordination (e.g., task programming and team communication) that could enhance the chance of success of IT projects? Please explain in two to three sentences.

This really just depends on the project leader. If the leader lacks communication, they will be horrible at coordinating projects. Additionally, leaders that are unorganized also do not do well with this regard. It takes a strong supporting cast to make this piece work…if there is someone who is more technical in nature and then another member that is more administrative, it typically improves the flow of the project significantly.

6. What is your lived experience with effective virtual team trust that could enhance the chance of success of IT projects? Please explain in two to three sentences.

Trust is definitely a big deal. My experience has been when there is a lack of trust, it ruins the project success and vibe. This is even more so in virtual climates where it is very difficult to establish strong relationships built upon trust due to the dispersion involved.

7. What is your lived experience with effective virtual team knowledge sharing that could enhance the chance of success of IT projects? Please explain in two to three sentences.

Knowledge sharing is horrible in virtual atmospheres. It is not unusual for different members that are dispersed to receive updates late and not to be in the loop. Using communities of practice or having regular conference calls can help overcome this risk.

8. What is your lived experience with effective virtual team knowledge management that could enhance the chance of success of IT projects? Please explain in two to three sentences.

Again, communities of practice contribute to improving this piece. Additionally, having on-going training and development is always a plus. Pointless staff meetings with project managers do not contribute to improved KM and are a waste of time. I've seen many PMOs want to have these weekly or biweekly meetings where all of the PMs discuss issues they are seeing on their projects or to provide some type of training. They seemed fake, vague, and very unproductive. I believe a dedicated team within the organization should be focused on this piece ensuring that top-notch OD methods are being utilized.

9. What managerial style is best suited for managing virtual teams? Please explain in two to three sentences.

A combination of transformational and transactional styles. Primarily, a transformational style that is very hands off, autonomous, and focused on being a project sponsor or champion works best. However, there needs to be some type of rewards as well, given to the team as a whole and not to individuals. This is where the transactional piece comes in handy.

Demographic questionnaire:

1. What is your age? (Please check 1 response)

☐ 19-29 ☐x **30- 39** ☐ 40-49 ☐ 50-59 ☐ 60 +

2. What is your gender? (Please check 1 response)

☐x Male ☐ Female

3. How many years of experience do you have with collocated project teams? (Please check 1 response)

☐ 1- 5 ☐x 6 – 10 ☐ 11 - 15 ☐ 16 - 20 ☐ 21 – 25 ☐ 26+

4. How many years of experience do you have with virtual team projects? (Please check 1 response)

☐ 1- 5 ☐x 6 – 10 ☐ 11 - 15 ☐ 16 - 20 ☐ 21 – 25 ☐ 26+

5. What is your current industry? (Please check 1 response)

☐ Agriculture

☐ Constructions

☐ Finance and Banking

☐ Information Technology

☐ Manufacturing

☐ Pharmaceutical

☐ Retail and Wholesale

☐ x Other (Please specify) – Higher Education and Consulting

Interview Questions - Pilot

Project: Workplace Factors That Shape IT Project Success: A Phenomenological Study

Date:7/24/2013

Location:

Participant: PP3

Interviewer: Dan S. Nguyen

The purpose of the research study is to explore the workplace factors leading to virtual team project success to aid in the improvement of future project success and reduce the failure and cancellation rates among virtual team projects in the IT industry. The study includes IT company team leader or above whom had prior experienced or current experience in managing a virtual team project. The participants must have knowledge of virtual team processes to be included in the pilot test study.

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Preliminary questions:

Are at least 18 year of age?

☐ No – Thank you! You can stop from here.

☒ Yes – Please proceed to the next question.

Do you currently or had prior experience with managing or leading a virtual team?

☐ No - Thank you! You can stop from here.

☒ Yes – Please proceed to the next question.

Questions:

1. What is your lived experience on a virtual team? Please explain in two to three sentences.

- Leading production support team, 2~ years

- Leading corporate consulting team, 2~ years

2. What is your lived experience with virtual team cultural differences that could effect IT project success? Please explain in two to three sentences.

- Teams have been diverse demographically and culturally. No obvious patterns in outcomes linked to that diversity. Individuals have been flexible with each other and the virtual arrangement, relatively autonomous, professional, and reliable with corresponding positive outcomes.

3. What is your lived experience with virtual team functional differences (e.g. when more than one area of functional expertise is represented within a team) that could effect IT project success or related to team-rated performance. Please explain in two to three sentences.

- Same as "in the office" experience. Individuals bring their competencies, mesh, and produce.

4. What is your lived experience with virtual team organizational differences (e.g. multiple vendors increases project complexity as an outcome of different and sometimes conflicting sets of goals and success measures) that could effect IT project success? Please explain in two to three sentences.

- I&T being a service organization inherits goals/success measures from those it serves. Alignment is straightforward. Communication up, down, and across is the key.

5. What is your lived experience with effective virtual team coordination (e.g., task programming and team communication) that could enhance the chance of success of IT projects? Please explain in two to three sentences.

- Same as "in the office" experience. There are ready tool sets to organize, task, and communicate. The key is to use them effectively and consistently, and not over rely on any one method. Stay in touch with the people performing, maintain the human element.

6. What is your lived experience with effective virtual team trust that could enhance the chance of success of IT

projects? Please explain in two to three sentences.

- Encouraging and demonstrating individual autonomy and initiative works well. Try to keep the organization flat and responsibilities and tasks well defined and "owned". Do not "over status", but keep an open door.

7. What is your lived experience with effective virtual team knowledge sharing that could enhance the chance of success of IT projects? Please explain in two to three sentences.

- Same as "in the office" sharing. There needs to be a collaborative environment that is easy to access, easy to use, easy to reconfigure, has basic document services (see Gartner), etc. It should be there when you need it, but not a crutch (substitute for human resource) or forced (documenting for the sake of documenting/process).

8. What is your lived experience with effective virtual team knowledge management that could enhance the chance of success of IT projects? Please explain in two to three sentences.

- Same as above. KM is rarely done formally, especially on a localized basis. There needs to be a platform and some general intended use rules/strategy.

9. What managerial style is best suited for managing virtual teams? Please explain in two to three sentences.

- Keep your eye on the target, but do not compulsively manage individuals towards the target or over-specify tasks and schedules. Provide objectives, guidance when sought, trust and empower individuals to be self-directed and achieving. Ask, listen and look for ways to improve or help the individuals work experience/environment/etc. (needs to be done more often!)

Demographic questionnaire:

1. What is your age? (Please check 1 response)

☐ 19-29 ☒ 30- 39 ☐ 40-49 ☐ 50-59 ☐ 60 +

2. What is your gender? (Please check 1 response)

☒ Male ☐ Female

3. How many years of experience do you have with collocated project teams? (Please check 1 response)

☐ 1- 5 ☒ 6 – 10 ☐ 11 - 15 ☐ 16 - 20 ☐ 21 – 25 ☐ 26+

4. How many years of experience do you have with virtual team projects? (Please check 1 response)

☐ 1- 5 ☒ 6 – 10 ☐ 11 - 15 ☐ 16 - 20 ☐ 21 – 25 ☐ 26+

5. What is your current industry? (Please check 1 response)

☐ Agriculture

☐ Constructions

☐ Finance and Banking

☒ Information Technology

☐ Manufacturing

☐ Pharmaceutical

☐ Retail and Wholesale

☐ Other (Please specify)