Success Factors That Influence Agile Software Development Project Success

Dan Schilling Nguyen, Ph.D*

Mt Washington College National Online Program, 1015 Windward Ridge Parkway, Alpharetta, GA 30005, USA

Email: Dan.s.n.linkedin@gmail.com

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 agile managers and the following success factors: people, process, technical, and technologies and development tools. The purpose of this phenomenological study was to understand these lived experiences of 10 agile software development team project managers or leaders at global workplaces based in the United States. The research questions were focused on the effect of these success factors on agile software development 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, agile software development team needs strong customer involvement; good agile project management processes; product owner helps maximize business value delivered by team and priority and engage stakeholders; good agile engineering techniques or practices; and good technologies and development tools. This study has implications for positive social change because organizations that understand the critical 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: Agile Software Development Teams; Success Factors.

----

1. Introduction to the Study

Many public and private sector organizations compete in the global marketplace. Some organizations are using agile software development (ASD) teams (ASDTs) as a way of developing software solutions for customers more efficiently and effectively [149,167]. Such ASDTs are employing state-of-the-agile software development methodologies (ASDMs), technologies, and processes [149, 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 [40,149, 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. One study, published in 2012 by Dr.Dobbs indicated that Agile had a 72% success rate, compared to a 64% success employing traditional methodologies. While better, an 8% betterment is barely a revolution. In today's competitive business environment, we need to do improve in terms of success rate [84, 149]. Another study, carried out by McKinsey, indicated that half of IT projects with budgets of over $15 million dollars run 45% over budget and deliver 56% less functionality than anticipated. Put plainly, Agile is not a silver bullet. Projects still fail at approximately the same rate today as in 2001. It appears little has altered or evolved in this respect [84]. Additionally, Kropp's [120] agile study outcomes and argued that with respect to ASD methodologies what works for one team will not work on other.

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. 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, 149].

1.2. Research Questions

The research questions were (a) what are the lived experiences of managers or leaders regarding the effects of the success factors of engineering, management, organization, and stakeholders on agile software development team project success? These research questions are as follows:

1. What is your lived experience with agile software development team people factor (e.g. product owner, scrum master) that could effect agile project success that could effect agile project success. Please explain in two to three sentences.

2. What is your lived experience with agile software development team process factor (e.g. during initial phase) that could effect agile project success? Please explain in two to three sentences.

3.What is your lived experience with agile software development team organizational factor (e.g. multiple vendors or structures increases project complexity as an outcome of different and sometimes conflicting sets of goals and success measures)? Please explain in two to three sentences.

4. What is your lived experience with agile software development team technical factor (e.g. requirement, development, and testing)? Please explain in two to three sentences.

5. What is your lived experience with effective agile development team technologies and development tools factor that could enhance the chance of success of agile projects? Please explain in two to three sentences.

In accordance with the nonrandom, purposeful sampling strategies, I employed a snowball technique to find more participants. A pilot test of the interview 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. One study, published in 2012 by Dr.Dobbs indicated that Agile had a 72% success rate, compared to a 64% success employing traditional methodologies. While better, an 8% betterment is barely a revolution. In today's competitive business environment, we need to do improve in terms of success rate [84]. Put plainly, Agile is not a silver bullet. Projects still fail at approximately the same rate today as in 2001. It appears little has altered or evolved in this respect [84]. Additionally, Kropp's [120] agile study outcomes and argued that with respect to ASD methodologies what works for one team will not work on other.

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 success factors: people, process, organizational, technical and technologies and development tools [67,120, 149, 157,169].

The purpose of this qualitative, phenomenological research study was to understand the lived experiences of IT managers with the success factors of people, process, organizational, technical, and technologies and development tools 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 [36,65,67,120, 149, 157,169]. However, limited information is available regarding success factors that have an effect on Informational Technology ASDT projects [36,65,67,120,149, 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 success factors that effect the success of IT may develop strategies to improve project management and cost benefits leading to higher efficiency, profitability, and productivity.

The literature review in this chapter includes success factors of success factors of engineering, management, organization, and stakeholders that shape agile software development team project success and a research method review.

2.1. Literature Review

2.1.1. People Factors

The success of an ASD project is often linked to people factors. Human resources factors are also hypothesized as significant factors for the success ASD projects. Some of the ASD project success factors will be addressed below could equally be classified as people factors. Additionally, Cao [35] study found success people factors comprised of: (a) Team members with high competence and expertise; (b) Team members with great motivation; (c) Managers knowledgeable in agile process; (d) Managers who have light-touch or adaptive; (e) Management style; (f) Coherent, self-organizing teamwork; and (g) Good customer relationship (p. 963). However, rather than getting bogged down into the not significant issue of which class they belong to, the researcher simply will further addressed them.

2.1.1.1. Competency

Competency implies whether an individual has real-world experience in the technology domain, has developed similar systems in the past, and has good communication and interpersonal skills [19]. Competency also means that one acquired the necessary skills and abilities to perform the job well overtime for the similar systems. Using the skills requirement matrix as a competency model, organizations can access any skill gaps in ASDT members and distinguish the members who will require further training in a particular competency [2]. These team members competencies concur with [19] study findings.

2.1.1.2. Personal characteristics

People factor plays a central persona in the success of ASD methods. Alistair Cockburn, asserted that Good people are primal to success with big teams. Ken Auer considers that having high quality people does not inevitably implies having the appropriate experienced ones. ASD members may not be inevitably highly experienced skilled people consisted of having collaborative attitude, honesty, sense of responsibility, eagerness to learn, and willingness work with others are believed equally significant, if not more [10, 149].

2.1.2. Organizational Factors

The Organization has a great outcome on the success of the project. The culture can shape many things in the ASD project. Various researchers shown that organizational factors are also significant success factors in order for agile project to be successful. These factors will be further addressed consist of customer commitment, decision time, team distribution, corporate culture, planning and control, and business/safety criticality. Cao [35] research found that success organization factors as follow: (a) Strong executive support; (b) Committed sponsor or manager; (c) Cooperative organizational culture instead of hierarchal; (d) Oral culture placing high value on face-to-face; (e) Communication; (f) Organizations where agile methodology is universally accepted; (g) Collocation of the whole team; (h) Facility with proper agile-style work environment; and (i) Reward system appropriate for agile (p. 963)

2.1.2.1. Customer commitment

The Agile Manifesto preaches customer collaboration as one of the significant requirements for successful ASD [11]. One of the principles of ASD is bringing highest priority to attaining customer satisfaction through early and continuous extradite of valuable software [11]. This necessitates that the customers are not just available on site with the ASDT, but also highly active, motivated, and view themselves responsible components in the ASD project. Customer commitment is, thus, a signification success factor.

2.1.2.2. Team Distribution

One of the factors that is potentially to positively shape the success of an ASD project is the centralized establishment of the ASDTs. Ken Schwaber [10] asserted that collocated teams are one of the substantial vehicles for successful communication, which is, in turn, distinguished by Scott Ambler [10] as one of the significant success factors of ASD. Organization engaged in distributed offshore projects will be impacted by the cultural, and political places in those regions.

2.1.2.3. Corporate Culture

Lindvallet al. [17] argued that "to be agile is a culture thing", hence if organization culture is not right then the company can't be agile. Having the correct corporate culture is virtually unanimously perceived by agile experts to be an essential factor ascertaining the creation of agile methodologies [10, 17]. Since carrying out agile methodologies demand taking control of individual's own fortune to the uttermost possible extent, the nature of firms people work in is significant. For example, agile is does not suit well in bureaucratic firms [10]. A dynamic, and fast altering firm will discover agile methods extremely suitable for it [3].

2.1.2.4.. Planning and Control

One of the significant facets that characterize the implementation of ASD methodologies is the nature of management, organizational, and project planning and control. For example, documented plans, accompanied by quantitative performance measures are believed primal to the success of firms applying plan-driven methodologies. On the other hand, internalized plans, and qualitative control are believed to succeed firms adopting agile practices [149].

2.1.3. Technical Factors

Technical factors are factors that have an affect on how a project functions and are linked to the software, hardware, or technology employed within the project development process. Various researchers affirmed that technical factors are also central key role in order for ASD projects to be successfully. These technical factors consisted of requirements, development, and testing will be further addressed. Cao [35] study found that technical success factors consisted of: (a) Well-defined coding standards up front; (b) Pursuing simple design; (c) Rigorous refactoring activities; (f) Right amount of documentation; (g) Regular delivery of software, (6) Delivering most important features first; (h) Correct integration testing; and (i)Appropriate technical training to team (p. 963).

2.1.3.1. Requirements

ASD processes espouse altering requirements, even later in the development stage [11]. On the contrary to plan-driven practices, which are most useful in surroundings where there is low rate of alter, ASD practices have been successful in both low and high alter environments. Whereas plan driven practices function best with formalized ASD project requirements, requirements capability, interface, quality, and predictable requirements, ASD practices are successful even in surroundings where requirements undergo unpredictable changes.

2.1.3.2. Development

The success of ASD methodologies are believed to be successful in development atmosphere characterizing short increments, simple design, and inexpensive refactoring [35]. On the contrary to the success of plan-driven development practices is characterized by longer increments in development and extensive design. Refactoring, in which the internal structure of the existing code is altered without altering the external behavior of the system,

is believed expensive in plan-driven practices.

2.1.3.3. Testing

Whereas documented test plans, and procedures characterize the success of plan-driven practices, executable test cases determine the success of requirements and testing in ASD [35]. Testing should identify management commitment in organization and effect of ASD process in quality.

2.1.4. Process Factors

Process factors are those linked to the tasks functions or process of the project itself (e.g. reporting of the project status , testing and reviewing the code of the software, and risk management). Cao [35] study found process factors also signification in ASD project success. These success factors consisted: (a) Following agile-oriented requirement management process; (b) Following agile-oriented project management process ; (c) Following agile-oriented configuration management process; (d) Strong communication focus with daily face-to-face meetings; (e) Honoring regular working schedule – no overtime; (f) Strong customer commitment and presence; and (h) Customer having full authority (p. 963). Whereas the SBOK^{TM} Guide [2] break process factors into five different ASD cycle phase comprised of: (a) Initiate; (b) Plan and Estimate; (c) Implement; (d) Review and Restrospect; and (e) Release [2] as shown in Fig. 2.1.

Chapter	Phase	Processes
8	Initiate	1. Create Project Vision 2. Identify Scrum Master and Stakeholder(s) 3. Form Scrum Team 4. Develop Epic(s) 5. Create Prioritized Product Backlog 6. Conduct Release Planning
9	Plan and Estimate	7. Create User Stories 8. Approve, Estimate, and Commit User Stories 9. Create Tasks 10. Estimate Tasks 11. Create Sprint Backlog
10	Implement	12. Create Deliverables 13. Conduct Daily Standup 14. Groom Prioritized Product Backlog
11	Review and Retrospect	15. Convene Scrum of Scrums 16. Demonstrate and Validate Sprint 17. Retrospect Sprint
12	Release	18. Ship Deliverables 19. Retrospect Project

Figure 2.1: Scrum Processes. [1]

The five phases above depicted each process in detail comprising their linked inputs, tools, and outputs. In each process, some inputs, tools, and outputs can required or optional. Whether to employ the optional inputs, tools, and/or outputs depend on particular project, industry or company [1].

2.1.5. Technologies and Development Tools

ASDT overall project success or team performance outcomes also depends on how and what technologies and development tools are being use to help team members daily development activities or tasks assigned [19]. Thus, it is imperative for organizational managers to consider what technologies (e.g.,

information and communications technologies (ICTs)) and development tools are needed when establishing ASDT s and how these technologies and development tools will be utilized by ASDT members to perform their daily work. Additionally, Sharifi states that if company desires to bring forth the agile capacity it must employ suitable technology and tools [29]. In 12 principles of agile declaration it posits that we should invariably pay attention to matching of excellent design and technology, so that we can better software the prompt response capability [34].

Technology is at the key of ASDTs [19, 149]. Without email, internet, audio bridges and video conference, ASDTs can't even exist. The competitive collaborative atmosphere support and ascertain ASDT high speed to function and extradite solutions; these characteristics are made rooted on new ICT and Internet technologies by offering progressively richer collaboration tools (advancing from the fax machine and the telephone and to specialized "software tools, video conferencing and virtual workspaces platforms" [149]. Technologies offer some mechanisms for collaborating when people are co-located but are the medium for collaboration when they operate virtually, separated by distance or time. Technologies (e.g., email, conferencing, scheduling tools, and knowledge management tools) can permit teams to function towards a mutual purpose by conveying information and aligning across distinct time workplaces, zones, organizational contexts and cultural backgrounds [149].

2.1.5.1. Education and Training

Martin Fowler said "Whatever you select some technology, it's not easy to make it clear how the specific implementation. Agile methods are particular, because it will need you to change the mind! Many people just focus on specific practices rather than the philosophy behind them. Is it possible that you ignore the philosophy of the system and look forward to good results?" [149]. Wan and Wang [33] empirical study found that education and training play a positive persona in encouraging successful implementation of ASD project.

3. Research Method

The purpose of this qualitative, phenomenological research study was to understand success factors of cultural, functional, and organizational differences that effect the success of ASDT projects. I explored which arbitrating task process variables heighten the likelihood of success, given the presence of these success factors. A qualitative research approach is appropriate for the study because qualitative inquirers depict and explicate

research and interpret or establish theories [45]. The critical factors included in the study are those factors leading to ASDT project success, such people, process, technical, and technologies and development tools on agile software development team project success. The study included 10 IT agile software development managers based in the United States who had successful ASDT experiences. The 10 ASDT 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 [149].

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. and Creswell noted that qualitative inquiry is effective in explaining ideas about a particular phenomenon [149]. 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 ASDT managers in global workplaces based in the United States who experienced an ASDT project success. The chosen sample size, which was 10 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 ASDT success factors that lead to IT project success.

3.1.2. Research Questions

The purpose of this study was to understand the success factors that effect the success of ASDT projects. The three research questions were as follows. What are the lived experiences of managers regarding the effects of the success factors of people, process, technical, and technologies and development tools on ASDT project success? The research question was then functionally expanded into the five subquestions (see Appendix C & D).

3.2. Methodology

3.2.1. Population

The population for the study included ASDT managers based in the United States with direct involvement in ASDT. The inclusion criteria for selecting participants included the volunteers' willingness to participate in the study, participants' prior and current cognition of ASDT processes, and the participants' willingness to share lived experiences and perceptions about success 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 letter requesting to participation (see Appendix A) 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 success factors leading to ASDT project success. The success factors the participants believe are most highly valued at ensuring ASDT 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 C & D) were based on what researchers advised as success factors that could effect ASDT 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 ASDT managers with the success factors of engineering, management, organization, and stakeholder at global workplaces based in the United States. The lived experiences and perceptions of 10 ASDT managers who experienced an ASDT processes were explored to analyze the success 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 ASDT 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 success factors of engineering, management, organization, and stakeholder on ASDT project success?

4.1. Pilot Study

One out of three managers were included in the pilot test (see Appendix E), which consisted of open-ended questions supporting the research questions on January 12, 2016. The managers chosen for the pilot test were knowledgeable of ASDT processes and were current or had prior experience in managing or leading a ASDT. 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 success factors: people, process, organizational, technical and technologies and development tools. The participants came from diverse backgrounds and were all either members of an International PM association or group. Five (see Table 1) out of 10 (50%) study participants work in the IT industry. Two out of 10 (20%) participants worked in manufacturing. Three out of 10 (30%) participants worked in the department of defense. By looking at these participant pools, I was able to seize the views of tenured ASDT managers from a variety of backgrounds. Table 1 presents the demographic information offered by each participant.

Table 1: Participant Demographic Information

Participant	Gender	Age group	Virtual Team experience (years)	Collocated team experience (years)	Current industry
SP1	M	50-59	6-10	11-15	IT
SP2	M	60+	11-15	16-20	IT
SP3	F	50-59	6-10	11-15	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	DOD
SP7	F	40-49	6-10	11-15	DOD
SP8	F	40-49	6-10	11-15	DOD
SP9	F	50-59	11-15	26+	Manufacture
SP10	M	50-59	16-20	26+	Manufacture

4.3. Data Collection

4.3.1. Participants

Participant selection using purposeful sampling began on Jan 25, 2016 and ended on Feb 25, 2016. Letter of invitations (see Appendix A), a participant informed consent form (see Appendix B), and the interview questions (see Appendix E) were e-mailed to 40+ participants employed at global workplaces based in the United States. After the 25-day period, a total of 10 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 four interview questions, as noted in my data collection instrument (see Appendix C&D). 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 Section 3 to the actual implementation. I obtained the participants' e-mail addresses during the initial contact via Linked In discussion postings and LinkedIn 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 C&D) 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 C&D) were the result of the cognition gained from the literature review. Research articles on success factors leading to ASDT project success [67,146,169], PMI [199], and ASDT [149,167] were important in developing the nine open-ended questions in the questionnaire.

4.4.2. Agile Software Development Teams

More and more organizations are turning into agile software development team to leverage information and communications technologies (ICTs), development methodologies, and team members' diverse expertise skills around the world [149]. 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 with agile software development team people factor (e.g. sponsor, customer, users) that could effect agile project success?"

Table 2: Responses to Question 1 (N = 10)

Prevalent theme	Frequency	%
Strong customer involvement	9	90
Sponsors fund the project and other resources	8	90
Customers highly active, motivated, and onsite availability	7	80

As shown in Table 2, 9 out of the 10 (90%) study participants believe agile software development team Strong customer involvement. Participants 1, 3, 4, 5, 6, 7, 8, and 9 showed similar thoughts based on the responses. For example, Participant 2 stated, "strong customer involvement is the most important stakeholder of all since they pay for the project." Eight out of 10 (80%) study participants think agile software development team sponsors help fund the project and other resources. Participants 1, 3, 4, 5, 6, 7, and 8 showed similar thoughts based on the responses. For example, Participant 2 stated, "The sponsor help fund the project and other resources, within our agile team lack of sponsor support, the agile project will not be possible." Seven out of 10 (70%) study participants think agile software development team customers need to be highly active, motivated, and onsite availability. Participants 1, 3, 4, 5, 6, 7, and 8 showed similar thoughts based on the responses. For example, Participant 2 stated, "The customers always be available onsite with the agile team project and must be very highly active and highly motivated, and see themselves responsible components in the project."

Question 2

Question 2 was "What is your lived experience with agile software development team process factor that could effect agile project success?"

Table 3: Responses to Question 2 (N = 10)

Prevalent theme	Frequency	%
Good agile project management process	9	90
Following requirement, project, and configuration management processes	8	80
Honoring regular working schedule and strong communication focus with daily face-to-face meetings	7	80

As shown in Table 3, 9 out of the 10 (90%) study participants believe agile software development team members with good agile project management processes are core to project success. Participants 1, 3, 4, 5, 6, 7 and 8 showed similar thoughts based on the responses. For example, Participant 2 stated, "I truly believe that in order for my agile team be successful, our agile software development team leaders developed and put good

agile project management process in place so that our agile software development team members daily to follow and adhere to these processes." Eight out of 8 (80%) study participants think agile software development team members following requirement, project, and configuration management processes. Participants 1, 2, 4, 5, 6, 7 and 8 showed similar thoughts based on the responses. For example, Participant 2 stated, "Our agile leader put in place the agile project management processes consisted of requirement management, project management, and configuration management just to name a few for our agile team to follow and adhere to." Seven out of 7 (70%) study participants believe that agile software development team honoring regular working schedule and strong communication focus with daily face-to-face meetings. For example, Participant 3 stated, "Honoring regular working schedule and strong communication focus with daily face-to-face meetings help our agile software development team stay focus in delivering results."

Question 3

Question 3 was "What is your lived experience with agile software development team organizational factor (e.g. product owner, scrum master, and scrum team) that could effect agile project success?"

Table 4: Responses to Question 3 (N = 10)

Prevalent theme	Frequency %
PO: Maximize business value delivered by team and priority and engage stakeholders	9 90
ST: Highly motivated, engaged, self organizing, and collaborative	8 80
PO: has the most gain or lose from the project outcome	7 70
ST: TDD, automation, and best practices key to project success	7 70

As shown in Table 4, 9 out of the 10 (90%) study participants believe agile software development team product owner help maximize business value delivered by team and priority and engage stakeholders. Participants 1,,3, 4, 5, 6, 7,8, and 9 showed similar thoughts based on the responses. For example, Participant 2 stated, "I believe that product owner help maximize business value delivered by team and priority and engage stakeholders." Eight out of 10 (80%) study participants think agile software development team members need to be highly motivated, engaged, self-organizing, and collaborative. Participants 1, 3, 4, 5, 6, 7 and 8 showed similar thoughts based on the responses. For example, Participant 2 stated, "Team members need to be highly motivated, engaged, self-organizing, and collaborative is key for project success." Seven out of 10 (70%) study participants think agile software development team employs TDD, automation, and best practices key to project success. For example, Participant 2 stated, "Scrum team employs TDD, automation, and best practices key to project success within our organization." Seven out of 10 (70%) study participants think agile software development team product owner has the most gain or lose from the project outcome. Participants 1, 2, 4, 5, 6, and 7 showed similar thoughts based on the responses. Participant 2 stated, "I also believe that the product owner has the most gain or lose from the project outcome." .

Question 4

Question 4 was "What is your lived experience with agile software development team technical factor (e.g. requirement, development, and testing) that could effect agile project success?"

Table 5: Responses to Question 4 (N = 10)

Prevalent theme	Frequency	%
Good agile engineering techniques or practices	9	90
Automate builds, continuous integration, and design patterns help reduce technical debt	8	80
Code and template reuse: speed up development time and quicker solution to customer	7	70
Clean Code: eliminate bug, save maintenance cost, and provide better quality software	6	60

As shown in Table 5, 9 out of the 10 (90%) study participants believe agile software development team employ good agile engineering techniques or practices are key to project success. Participants 1, 3, 4, 5, 6, 7, 8, and 9 showed similar thoughts based on the responses. For example, Participant 2 stated, "I also truly believe that in order for my agile team be successful, good agile engineering techniques or practices for agile software development team members daily to follow and adhere to are required. Thus, our agile software development team leaders developed and put good agile engineering techniques or practices for them to follow." Eight out of 10 (80%) study participants think agile software development team employ automate builds, continuous integration, and design patterns help reduce technical debt. Participants 1, 3, 4, 5, 6, 7, and 8 showed similar thoughts based on the responses. For example, Participant 2 stated, "Our agile team employs and embraces automate builds, continuous integration, and design patterns this in turn help our organization reduce technical debts." Seven out of 10 (70%) study participants think agile software development team employ code and template reuse: speed up development time and quicker solution to customer. Participants 1, 3, 4, 5, 6, and 7 showed similar thoughts based on the responses. For example, Participant 2 stated, "Code and template reuse help our agile team to speed up the process in delivering a new solution to customer. For instance, by reusing a very well defined code, we just need to do a few modifications for another customer. Our team can deliver a new solution to another customer within 2-3 months." Six out of 10 (60%) study participants think agile software development team employ Clean Code: eliminate bug, save maintenance cost, and provide better quality software. Participants 1, 3, 4, 5, 6, and 7 showed similar thoughts based on the responses. For example, Participant 2 stated, "I believe that clean the will help eliminate bug and provide better quality software solution to customer. Clean code will in the long run will save maintenance cost."

Question 5

Question 5 was "What is your lived experience with agile software development team technologies and development tools that could enhance the chance of success of agile projects?"

As shown in Table 6, 9 out of the 10 (90%) study participants believe agile software development team employ good technologies and development tools are also key to project success. Participants 1, 3, 4, 5, 6, 7, 8, and 9 showed similar thoughts based on the responses. For example, Participant 2 stated, "I also truly believe that good technologies and development tools in place is also the hallmark for our agile software development team

to be successful." Eight out of the 10 (80%) study participants believe agile software development team employ email, IM, video conferencing, scheduling tools, and knowledge management tools. Participants 1, 3, 4, 5, 6, 7, 8, and 9 showed similar thoughts based on the responses. For example, Participant 2 stated, "Technologies such email, video conferencing, scheduling tools, and knowledge management tools just to name a few. Our agile development team daily using them for communication and collaboration with other team members." Seven out of the 10 (80%) study participants believe agile software development team employ Sharepoint, Oracle APEX, Jdevloper, Visual Studio and Toad. Participants 1, 3, 4, 5, 6, 7, 8, and 9 showed similar thoughts based on the responses. For example, Participant 2 stated, "Our agile software development employ development tools such as Sharepoint, Oracle APEX, Jdevloper, Visual Studio and Toad us to name a few which help them daily perform their work."

Table 6: Responses to Question 5 (N = 10)

Prevalent theme	Frequency	%
Good technologies and development tools	9	90
Email, IM, video conferencing, scheduling tools, and knowledge management tools	8	80
Sharepoint, Oracle APEX, Jdevloper, Visual Studio and Toad	7	70

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 7, the emergent theme for question 1 is employ strong customer involvement with a frequency of nine. The emergent theme for question 2, is ASDT employs good agile engineering techniques or practices are core to project success. The emergent theme for question 3 is ASDT product owner helps maximize business value delivered by team and priority and engage stakeholders. The emergent theme for question 4 is ASDT employ good agile engineering techniques or practices with a frequency of nine. The emergent theme for question 5 is ASDT employ good technologies and development tools with a frequency of nine.

5. Discussion, Conclusions, and Recommendations

The purpose of this phenomenological research study was to understand the lived experiences of Information Technology ASDT managers who experienced the success factors of people, process, organizational, technical, and technologies and development tools at global workplaces in the United States. The lived experiences and perceptions of 10 IT managers who experienced an ASDT success were explored to understand the success 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, 149].

The primary themes found in the analysis are as follows. The themes associated with Interview Question 1 (see Table 2) were strong customer involvement. The themes connected with Interview Question 2 (see Table 3) were concerned with good agile project management processes are core to project success. The themes

connected with Question 3 (see Table 4) were product owner helps maximize business value delivered by team and priority and engage stakeholders. The themes connected with Question 4 (see Table 5) were good agile engineering techniques or practices. The themes connected with Question 5 (see Table 6) were good technologies and development tools.

Table 7: Emergent Themes Identified from Responses (N = 10)

Prevalent theme	Frequency	%
Strong customer involvement	9	90
Good agile project management processes	9	90
PO: maximize business value delivered by team and priority and engage stakeholders	9	90
Good agile engineering techniques or practices	9	90
Good technologies and development tools	9	90

5.1. Interpretation of the Findings

The problem was the limited understanding of the lived experiences of persons who have experienced the following success factors: people, process, organizational, technical, and technologies and development tools [67, 149, 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 success factors such as people, process, organizational, technical and technologies and development tools 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 success 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 [41,40,149, 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 9 out of the 10 (90%) participants, was ASDT need strong customer involvement. The most common theme linked with Question 2, based on nine out of the 10 (90%) participants, was that good agile project management process are core to project success. The most common theme linked with Question 3, based on 9 out of the 10 (90%) participants, was that product owner helps maximize business value delivered by team and priority and engage stakeholders. The most common theme linked with Question 4, based on 9 out of the 10 (90%) participants, was good agile engineering techniques or practices are core to project success. The most common theme linked with Question 5, based on 9 out of the 10 (90%) participants, was good agile technologies and development tools. The most common themes among the study participants' responses were used to address the research questions to build a more comprehensive and in-depth understanding of how IT company managers or

leaders perceive the effects of success 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 ASDT project for 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 ASDT project for 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 success 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 success factors that might be more effective than what he or she had experienced. Finally, the study sample size (e.g., 10) used was small as well the study participants workplaces based in the United States.

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 [149, 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 success factors and IT project success reconfirm the significance to the outcome of projects. Researchers may use the current study to explore additional success factors and different contexts. The findings from the research study include some productive considerations for managers who wish to succeed in IT project endeavors. Success factors such engineering, management, organization, and stakeholder play a role in the ASDT project success. Organizational managers should be aware that ignoring success factors could threat the success of ASDT 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 success factors on ASDT 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 success factors on ASDT 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 agile team leaders instead of managers, (c) participants consist of agile team members instead of managers, and (d) participants consist of agile 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 success factors on IT projects. I found significant links between success 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 ASDT 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 agile software development team practices; (c) institute continuous training programs to encourage team members to improve their technical skills as well as communication skills; (d) routinely conduct risk assessment on current project and its team members technical skills; (e) Establish strong trust with other team members at the beginning of a new project inception; (f) Encourage team members to work with Sr. engineers and learn from their expertise; (g) Promote team members to do cross-functional training or learning; (h) Invite key stakeholders to attend meetings right at the beginning of project inception; (i) Encourage team members to utilize communication tools; (j) Sr. managers need to provide realistic expectations for all team members to achieve; and (k) Select product owner or scrum Master had prior experience with ASDT project.

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 ASDT members may accept tasks that they are badly equipped to perform; risk management should be integrated into well-planned ASDT software projects. ASDT 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 ASDT project success. If the linkage between success 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 agile software development team project success. This study contributes to IT by understanding the success factors of engineering, management, organization, and stakeholder that could have an effect on ASDT project success. This research study offers a better understanding of the effect of success factors when resources work from distinct workplaces.

5.3.3. Implication for Practice

Managing IT agile software development 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. ASDT 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 [149]. The findings from this research study are significant step in this guidance. Managers and leaders who are involved in the operating of ASDTs 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 ASDT members. Furthermore, managers themselves should be trained and advised on the development and improvement of ASDT 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 ASDTs can be confined with interdependent tasks that demand higher degrees of motivation from team members.

ASDTs 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 ASDT 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 ASDT 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 10 IT agile software development team managers with the success factors of people, process, organizational, technical, and technologies and development tools 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 success factors such as people, process, organizational, technical and technologies and development tools could effect ASDT project success. The current literature emphasizes the significance of success factors such as people, process, organizational, technical and technologies and development tools. 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. Information technology organizations ASDT, managers, and leaders could use this study findings to put engineering, management, and best practices in place to help build a more sustainable ASDT in order to remain competitive [149].

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 [149]. IT managers identified success factors such as people, process, organizational, technical and technologies and development tools as the most significant ASDT 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, collaboration and communication, engineering and management best practices 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 PhD 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 an IT 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.

Acknowledgements

References

[1] A Guide to the SCRUM BODY OF KNOWLEDGE (SBOKTM GUIDE)- 2013 Edition. @2013 SCRUMstudyTM, a brand of VMEdu, Inc.

[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] Cao,B.B. (2008). A Survey Study of Critical Success Factors in Agile Software Projects. Journal of Systems and Software. DOI: 10.1016/j.jss.2007.08.020

[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] Harris. D. (2014). Why we Should Rethink the Agile Manifesto: Projects Still Fail. Retrieved http://www.jamasoftware.com/blog/rethink-agile-manifesto-projects-still-fail/

[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] Kropp, M.(2015). Agile Success Factors - A qualitative study about what makes agile projects

successful. DOI: 10.13140/RG.2.1.3593.2320

[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] Nguyen, D. S. (2016). Success Factors for Building and Managing High Performance Agile Software Development Teams. International Journal of Computer (IJC). Retrieved from http://ijcjournal.org/

[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:10.1108/026355706106710809

[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: Letter of Invitation

Letter of Invitation

Dear_____,

I am Dan Schilling Nguyen. The purpose of this letter is to invite you to participate in a research study on *Success Factors That Influence Agile Software Development 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 15 to 25 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.s.n.linkedin@gmail.com or call me, if you have any questions or concerns.

Thank you,

Dan S. Nguyen

dan.s.n.linkedin@gmail.com

Appendix B: Participant Informed Consent Form

Informed Consent: Participants 18 years of age and older

You are cordially invited to participate in a research study of success factors that influence agile software development team project success. This form is part of a process called –informed Consent– to allow you to understand this study before determining whether to participate. You were selected as a possible candidate for the study because you are a member or affiliate of an organization that has agreed to allow the researcher to solicit participants for the study. This study is being conducted by a researcher named Dan S. Nguyen.

Background   **Information:**

The purpose of the research study is to explore the critical factors leading to agile team project success to aid in the improvement of future project success and reduce the failure and cancellation rates among agile team projects   in   the   IT   industry.

Procedures:

If you agree to be in this study, you will be asked to take a brief electronic questionnaire. The questionnaire takes approximately 15 minutes to complete. The researcher will request that participants provide an email address at the end of the survey (last question). Providing an email address is voluntary. The email address will be used to follow-up with participants concerning any areas of the survey results that may need more clarification. Also the researcher will use the email address to provide the graphical responses and results of each participant's individual survey. This is a method called member checking, and it is used to ensure that the participant's answers are not misconstrued in any manner. This email address will remain confidential along with the rest of the data received in this study and will never be shared with anyone else besides the researcher.

Voluntary Nature of the Study:

Your participation in this research study is voluntary. This implies that everyone will respect your decision of whether or not you would like to be in the study. No one at your company will treat you differently if you determine not to be in the study. If you determine to join the study now, you can still change your mind during the study. If you feel stressed during the study you may stop at any time. You feel free skip any questions that you think are too personal.

Compensation:

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

Confidentiality:

Any data you offer will be kept private. There is no provision for putting a name on the survey; thus, participants will be unknown. All information will be kept confidential on a separate server. Only the researcher and Walden faculty mentoring the researcher will have access to the raw data. 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.

Risks and Benefits of Being in the Study:

Your personal info will rest confidential, so there is no personal risk linked with participating in the inquiry, nor will it have a negative impact on your standing within your firm. The study does not engage any physical risk and it is highly unlikely that you will be psychologically affected. The benefits of the inquiry include improvement to teleworking, agile, dispersed stakeholder networks and teams. This inquiry could assist furnish an improve understanding of what type of individuals should be working in these groups and what type of strategies leaders should use while overseeing these stakeholders.

Appendix C: Pilot Tested Questionnaire

Interview Questions – Pilot Test

Project: Success Factors That Influence Agile Software Development Project Success: A Phenomenological Study

Date:

Location:

Participant:

Interviewer: Dan S. Nguyen

The purpose of the research study is to explore the success factors leading to agile software development team project success to aid in the improvement of future project success and reduce the failure and cancellation rates among agile team projects in the IT industry. The study includes agile development company team leader or above whom had prior experienced or current experience in managing agile team project. The participants must have knowledge of agile 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.s.linkedin@gmail.com.

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 an agile team?

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

☐ Yes – Please proceed to the next question.

Questions:

1. What is your lived experience with agile software development team people factor (e.g. e.g. sponsor, customer, users) that could effect agile project success? Please explain in two to three sentences.

2. What is your lived experience with agile software development team process factor that could effect agile project success. Please explain in two to three sentences.

3. What is your lived experience with agile software development team organizational factor (e.g. product owner, scrum master, and scrum team) that could effect agile project success? Please explain in two to three sentences.

4. . What is your lived experience with agile software development team technical factor (e.g. e.g. requirement, development, and testing) that could effect agile project success? Please explain in two to three sentences.

5. What is your lived experience with effective agile development team technologies and development tools factor that could enhance the chance of success of agile projects? 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 D: Interview Questionnaire

Interview Questions

Project: Success Factors That Influence Agile Software Development Project Success: A Phenomenological Study

Date:

Location:

Participant:

Interviewer: Dan S. Nguyen

The purpose of the research study is to explore the success factors leading to agile software development team project success to aid in the improvement of future project success and reduce the failure and cancellation rates among agile team projects in the IT industry. The study includes agile development company team leader or above whom had prior experienced or current experience in managing agile team project. The participants must have knowledge of agile 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.s.linkedin@gmail.com.

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 an agile team?

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

☐ Yes – Please proceed to the next question.

Questions:

1. What is your lived experience with agile software development team people factor (e.g. e.g. sponsor, customer, users) that could effect agile project success? Please explain in two to three sentences.

2. What is your lived experience with agile software development team process factor that could effect agile project success. Please explain in two to three sentences.

3. What is your lived experience with agile software development team organizational factor (e.g. product owner, scrum master, and scrum team) that could effect agile project success? Please explain in two to three sentences.

4. What is your lived experience with agile software development team technical factor (e.g. e.g. requirement, development, and testing) that could effect agile project success? Please explain in two to three sentences.

5. What is your lived experience with effective agile development team technologies and development tools factor that could enhance the chance of success of agile projects? 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 E: Pilot Responses

Interview Questions – Pilot Test

Project: Success Factors That Influence Agile Software Development Team Project Success: A Phenomenological Study

Date: 1/28/2016

Location:

Participant: SP2

Interviewer: Dan S. Nguyen

The purpose of the research study is to explore the success factors leading to agile development team project success to aid in the improvement of future project success and reduce the failure and cancellation rates among agile team projects in the agile development industry. The study includes agile development 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.s.linkedin@gmail.com.

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 an agile team?

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

☒ Yes – Please proceed to the next question.

Questions:

1.What is your lived experience with agile software development team people factor (e.g. sponsor, customer, users) that could effect agile project success. Please explain in two to three sentences.

The sponsor help fund the project and other resources, within our agile team lack of sponsor support, the agile project will not be possible. Strong customer involvement is the most important stakeholder of all since they pay for the project. The customers always be available onsite with the agile team project and must be very highly active and highly motivated, and see themselves responsible components in the project.

2. What is your lived experience with agile software development team process factor that could effect agile project success? Please explain in two to three sentences.

I truly believe that in order for my agile team be successful, our agile software development team leaders developed and put good agile project management process in place so that our agile software development team members daily to follow and adhere to these processes. Our agile leader put in place the agile project management processes consisted of requirement management, project management, and configuration management just to name a few for our agile team to follow and adhere to. Honoring regular working schedule and strong communication focus with daily face-to-face meetings help our agile software development team stay focus in delivering results.

3.What is your lived experience with agile software development team organizational factor (e.g. product owner, scrum master, and scrum team) that could effect agile project success? Please explain in two to three sentences.

I believe that product owner help maximize business value delivered by team and priority and engage

stakeholders. Selecting a product owner who is very engaged, highly motivated, highly knowledgeable, and good technical competency is a key to our agile software development team project in order to be very successful in extraditing a very quality product to customer. Good Product Owner help to finalize Scrum Master for the project and aid to facilitate Scrum Team. I also believe that the product owner has the most gain or lose from the project outcome.   Require cross-functional team accountable for delivering business value interactively. Team members need to be highly motivated, engaged, self organizing, and collaborative is key for project success. Scrum team employs TDD, automation, and best practices key to project success within our organization.

4.What is your lived experience with agile software development team technical factor (e.g. requirement, development, and testing) that could effect agile project success? Please explain in two to three sentences.

I also truly believe that in order for my agile team be successful, good agile engineering techniques or practices for agile software development team members daily to follow and adhere to are required. Thus, our agile software development team leaders developed and put good agile engineering techniques or practices for them to follow. These agile engineering techniques such as well-defined coding standards up front; delivering most important features first; and TDD, automation, and best practices just to name a few.

Additionally, I believe that clean the will help eliminate bug and provide better quality software solution to customer. Clean code will in the long run will save maintenance cost. Code and template reuse help our agile team to speed up the process in delivering a new solution to customer. For instance, by reusing a very well defined code, we just need to do a few modifications for another customer. Our team can deliver a new solution to another customer within 2-3 months. Our agile team employs and embraces automate builds, continuous integration, and design patterns this in turn help our organization reduce technical debts.

5. What is your lived experience with effective agile development team technologies and development tools factor that could enhance the chance of success of agile projects? Please explain in two to three sentences.

I also truly believe that good technologies and development tools in place is also the hallmark for our agile software development team to be successful. Technologies such email, video conferencing, scheduling tools, and knowledge management tools just to name a few. Our agile development team daily using them for communication and collaboration with other team members. Our agile software development employ development tools such as Sharepoint, Oracle APEX, Jdevloper, Visual Studio and Toad us to name a few which help them daily perform their work.

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)