Project Success

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Introduction

With *project success* defined as: 1) on time, 2) on budget, and 3) with required features and functions (aka scope) projects succeed only 32% of the time (Altuwaijri & Khorsheed, 2012). This is an alarming failure rate. Depending on how *failure* is measured, the rate has been calculated anywhere from a low 30% to a whopping 78% of the time (Allen, 2014; Altuwaijri & Khorsheed, 2012).

Background

The opportunity this research examines is: *Project Success*. What is it? Is project success being on budget, on schedule, within scope or is it much, much more? There is a clear difference between Project Success and Project Management Success (Sutton, 2005b). Success, while in and of itself, is a rather ambiguous term, clearly, there is Project Success where at the end of the day, the product or service does what it is supposed to (according to all stakeholders) successfully at good or better quality.

Project Management Success is where the iron triangle concepts of cost, schedule, and quality (scope), are met (2005b) and has its own level of success. But, truly, does project management success mean anything, or is it just a factor that is important for an organization that wants to perform multiple *successful* projects. Good and repeatable project management is important (2005b), but the challenge is met when the project's product or service exceptionally meets the stakeholder's needs (satisfies scope and quality). Then the words *project success* can be used.

Business Technical Problem

The amount of literature, over the years, on project success is quite overwhelming. But it as is kind of like Twain's comment (attributed to him by most or may have actually been Charles Dudley Warner (Quoteinvestigator, 2010)) about the weather "Everyone talks about the weather, but no one ever does anything about it!" Project success suffers from a similar predicament, although there is much talk, there is little definitive research on all the aspects and a narrowing down to specific, useful success criteria. Frequently, in project management, the triple constraints of cost, schedule, scope are thrown up, but really cost and schedule are irrelevant if in the end, the project does not fulfill the stakeholder needs (scope), so on budget on time then means nothing. Also, if the project is over budget and not on time, but the result is hugely successful (to the stakeholders), it may be listed as a failed project – but there is a successful outcome? So, is the project a true failure?

Definition of Terms

The topic of Project Success was addressed in 2011 by Emanuel Camilleri in his book, **Project Success**, Gower Publishing, Surrey, England. Since that time, there has been another several years and numerous literature on project success. This study will use Camilleri's Factors (11) for success, The Standish Group (10) project success approaches, and PMI's (5) Processes, PMI's Management (10) and compare conclusions to the most recent success criteria and work in the literature to bring an understanding of the evolution of *project success* over the last five years. These 36 factors will be the starting point for examining the success criteria.

Camilleri's 11 Success Factors

Project Strategic Fit	Everything undertaken within an organization must be in support of the organization's strategy.

Project Scope	Project managers must have complete understanding of purpose of project and incorporate it within mission statement.
Project Organization Structure	The goal is to have a suitable project organization structure that supports the project team with efficiency and effectiveness.
Project Teams Structure	Success depends on a team being able to work well, together, within the specific environment.
Project Planning and Control	Must understand what project delivers (outputs) and plan, schedule, and control accordingly.
Information Flow and Knowledge Management	Management identification of what information is critical and deliver to team.
Project Risk Management	Foresee and deal with project uncertainties that jeopardize project success.
Project Competency Development	Understanding employee and team development must be a continuous process and must be addressed at all times.
Management and Leadership	Continuous behavioral and management focus on project outcomes and focus on project success.
Employee Commitment and Participation	Committed employees are loyal and actively devoted to the project success and organizations they work for.
Internal and External Communication	Key components to the success of the project is effective and useful internal and external communications.

(Camilleri, 2011).

Ultimately, critical success factors shall be narrowed down to the top factors and lead to a theory of project success which can be applied to most any project. Use of techniques of meta-ethnographies, meta-synthesis, and grounded theory constant comparison, the ultimate theory(s) of project success shall be revealed.

The Standish Group

These 10 success factors from Standish Group, again like Camilleri's 11 factors, are just too many to use and apply to a project being managed. In and of themselves, they too represent way too many even broader factors to usefully manage and apply daily. Project success

approaches must be narrowed down to a useful level of management. The Standish Group 10 are:

Executive Support	When an executive or group of executives agrees to provide both financial and emotional backing. The executive or executives will encourage and assist in the successful completion of the project.	15%
Emotional Maturity	Is the collection of basic behaviors of how people work together. In any group, organization, or company it is both the sum of their skills and the weakest link that determine the level of emotional maturity.	15%
User Involvement	Takes place when users are involved in the project decision-making and information-gathering process. This also includes user feedback, requirements review, basic research, prototyping, and other consensus-building tools.	15%
Optimization	Is a structured means of improving business effectiveness and optimizing a collection of many small projects or major requirements. Optimization starts with managing scope based on relative business value.	15%
Skilled Staff	Are people who understand both the business and the technology. A skilled staff is highly proficient in the execution of the project's requirements and delivery of the project or product.	10%
Standard Architectural Management Environment	The Standish Group defines SAME as a consistent group of integrated practices, services, and products for developing, implementing, and operating software applications.	8%
Agile Proficiency	Means that the agile team and the product owner are skilled in the agile process. Agile proficiency is the difference between good agile outcomes and bad agile outcomes.	7%
Modest Execution	Is having a process with few moving parts, and those parts are automated and streamlined. Modest execution also means using project management tools sparingly and only a very few features.	6%
Project Management Expertise	Is the application of knowledge, skills, and techniques to project activities in order to meet or exceed stakeholder expectations and produce value for the organization?	5%
Clear Business Objectives	Is the understanding of all stakeholders and participants in the business purpose for executing the project? Clear Business Objectives could also mean the project is aligning to the organization's goals and strategy.	4%

(The Standish Group, 2015)

PMI 5 Process Group Criteria

Project management processes are grouped into five categories known as Project Management Process Groups (or Process Groups):

Initiating Process Group	Those processes performed to define a new project or a new phase of an existing project by obtaining authorization to start the project or phase**.**
Planning Process Group	Those processes required to establish the scope of the project, refine the objectives, and define the course of action required to attain the objectives that the project was undertaken to achieve.
Executing Process Group	Those processes performed to complete the work defined in the project management plan to satisfy the project specifications.
Monitoring and Controlling Process Group	Those processes required to track, review, and regulate the progress and performance of the project; identify any areas in which changes to the plan are required; and initiate the corresponding changes.
Closing Process Group	Those processes performed to finalize all activities across all Process Groups to formally close the project or phase.

(PMI, 2012)

Project Management Process Groups are linked by the outputs they produce. The Process Groups are seldom either discrete or one-time events; they are overlapping activities that occur throughout the project. Projects and project management take place in an environment that is broader than that of the project itself. Understanding this broader context helps ensure that work is carried out in alignment with the organization's goals and managed in accordance with the organization's established practices.

A process is a set of interrelated actions and activities performed to create a pre-specified product, service, or result.

PMI 10 Knowledge Areas

Project Scope Management	Includes the processes required to ensure that the project includes all the work required, and only the work required, to complete the project successfully. Managing the project scope is primarily concerned with defining and controlling what is and is not included in the project.
Project Time Management	Includes the processes required to manage the timely completion of the project.
Project Cost Management	Includes the processes involved in planning, estimating, budgeting, financing, funding, managing, and controlling costs so that the project can be completed within the approved budget.
Project Quality Management	Includes the processes and activities of the performing organization that determine quality policies, objectives, and responsibilities so that the project will satisfy the needs for which it was undertaken.
Project Human Resource Management	Includes the processes that organize, manage, and lead the project team. The project team is comprised of the people with assigned roles and responsibilities for completing the project.
Project Communications Management	Includes the processes that are required to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring, and the ultimate disposition of project information.
Project Risk Management	includes the processes of conducting risk management planning, identification, analysis, response planning, and controlling risk on a project. The objectives of project risk management are to increase the likelihood and impact of positive events and decrease the likelihood and impact of negative events in the project.
Project Procurement Management	includes the processes necessary to purchase or acquire products, services, or results needed from outside the project team. The organization can be either the buyer or seller of the products, services, or results of a project.
Project Stakeholder Management	Includes the processes required to identify the people, groups, or organizations that could impact or be impacted by the project, to analyze

	stakeholder expectations and their impact on the project, and to develop appropriate management strategies for effectively engaging stakeholders in project decisions and execution.
Project Integration Management	Includes the processes and activities to identify, define, combine, unify, and coordinate the various processes and project management activities within the Project Management Process Groups.

(PMI, 2012).

Problem Statement

Aga states: "There is no well-established approach in the project management literature for measuring project success, and there is a debate on what constitutes project success (Ika, 2009; Joslin and Müller, 2016; Ngacho and Das, 2014; Todorović et al., 2015)" (Aga, 2016). Project managers tend to focus on schedule and cost and basically not to *quality* (or scope portion of the triangle) (Basu, 2013). Project success is just not clearly defined much beyond the common triangle of cost, budget, and scope, (satisfactory result). As Basu discusses, "the success criteria of a project, *quality* is what the customer expects as a lasting experience" (Basu, 2014, p.178). What can be discovered as key factors of success of projects through a grounded theory review of extant project success literature of the last five years?

While this may seem somewhat harsh, a measurement of how good the project management is mostly pointless. What is important is *"Are the desired outcomes being met?" "Is the product successful?"* Cost and schedule are important, but if one or both fail, and the project outcomes or product succeed should that be considered a failed project? Review success pyramid at:

http://calleam.com/wp-content/uploads/Project_Success_Calleam_Consulting.png

(Goatham, 2016)

Research Purpose

Overall, with a qualitative methodology and grounded theory design and a meta-synthesis of the recent project success literature, will accomplish: *A Theory of "Project Success."* It is not that there is no information on project success: the literature simply provides way too much, and it is not easy to focus in on *key* success factors for a project manager to apply to their specific project. There needs to be a distillation of all the success factors down to a usable amount for project managers to work with.

Research Question

Data (PMI, 2012) show there is significant value in project initiation and project planning. It is areas that are frequently overlooked in projects (Kloppenborg & Tesch, 2015) The following preliminary research question is raised:

Research question: What project initiation and planning tactics can create a better environment for success?

Rationale

Per the Standish Group 2015 Chaos Report software project success rates for the 5 years from 2011 remain flat at an average of 28.8%:

	2011	**2012**	**2013**	**2014**	**2015**
Successful	29%	27%	31%	28%	29%
Challenged	49%	56%	50%	55%	52%
Failed	22%	17%	19%	17%	19%
On time, On Budget, with a Satisfactory Result **(This is known as Triple Constraint)**					

(The Standish Group, 2015)

This means that of the projects they measured, **71.2% were not in the success row.** Not necessarily failing but not successful. https://www.infoq.com/articles/standish-chaos-2015

This is bad business for organizations spending billions of dollars and thousands upon thousands of man hours, the negative problem is: Projects just have a low rate of success (Standish, 2014). Is it that they fail so frequently or is the definition of success the problem? Stakeholder skepticism can run rampant, so effective monitoring the project doubts are essential (Brown, et. al, 2017)

Theoretical Framework

Using grounded theory in a qualitative study allows the researcher to utilize a constant comparison methodology on the data. While most frequently used on interview data, grounded theory also can be utilized to analyze documents (Charmaz, 2014; Glaser & Strauss, 1967). By applying grounded theory analysis to project success literature of the last five years, theory should emerge on the most significant success criteria for projects. Project initiation and planning shall be the focus, but as other data emerges, it will also be discussed. The central research question for the grounded theory analysis will focus on research question:

Research question:

What project initiation and planning tactics can create a better environment for success?

Other research questions will naturally evolve and provide additional referential data, but the key question to building theory will be around initiation and planning.

Significance

This construction of theory will help the project management industry to better understand the significance of project success. While there are always going to be many success factors for many different projects, reviewing this extant body of knowledge should bring light to the most relevant critical success factors (CSFs) for recent success.

Constant comparison of the CFS for Camilleri's 11 Success Factors, The Standish Group 10, The PMI 5 Process Group Criteria, and the PMI 10 Knowledge Areas, will provide 36 areas of investigation and comparison to lay against a background of project literature. After a thorough, constant comparative process of analyzing the literature, relevant theory will emerge and provide a clearer understanding on practical processes leading to project success.

The assumptions are that the true success of projects is within the literature of the last 5 years. While this may or may not be valid, the support of project management seminal literature will also be included with works of Pinto, Cooke-Davies, Wysocki , et. al, along with supporting seminal literature from the Project Management Institute.

While this is mostly a study using secondary data, the depth and background of the various authors will produce relevant emergent theory. While there will not necessarily be any supporting data, there may also be some survey results from practitioners who have volunteered to a subsequent survey (30) from the ProjectManagement.Com, as related to the ProjectManagementInstitute.ORG.

Organization of the Remainder of the Study

As a study based on the grounded theory constant comparison of documents, key to this study will be the literature review. Not only will it have significance in evaluating the state of the problems (as outlined in the research questions) it will provide the key secondary data for the emergent grounded theory analysis.

As such, the literature review shall comprise the most significant portion of the paper. After emergent theory has been determine, follow-up with the specific grounded theory methodology will be clearly explained so the resulting theory may be substantiated. Following

with a discussion section that clearly shows the results of the constant comparison, and finally recommendations for future study.

While, the study should provide substantive theory on project success, further recommendations will help other researchers understand where to pick up and go forward. It is here, where the use of the study should hopefully lead other project success researchers to other practical ideas and tactics to improve overall project succeed. 28.8% success rate is just too low…in the near future, it would be nice to have at least a 50% project success rate emerge.

References and Literature Review Documents

Aga, D. A., Noorderhaven, N., & Vallejo, B. (2016). Transformational leadership and project success: The mediating role of team-building. International Journal of Project Management, 34(5), 806-818. doi:http://dx.doi.org.library.capella.edu/10.1016/j.ijproman.2016.02.012

Baratta, A. (2006). The triple constraint, A triple illusion. *2006 PMI Global Congress Proceedings*, Seattle, WA. 1-6.

Basu, R. (2013). Managing Quality in Projects.: Ashgate Publishing Ltd. Retrieved from http://www.ebrary.com.library.capella.edu

Basu, R. (2014). Managing quality in projects: An empirical study. International Journal of Project Management, 32(1), 178-187. doi:http://dx.doi.org.library.capella.edu/10.1016/j.ijproman.2013.02.003

Bhoola, V. (2015). Impact of project success factors in managing software projects in India: An empirical analysis. Business Perspectives & Research, 3(2), 109-125. doi:10.1177/2278533715578555

Brown, K. A., Hyer, N. L., & Ettenson, R. (2017). Protect your project from escalating doubts. MIT Sloan Management Review, 58(3), 79-87. Retrieved from https://library.capella.edu/login?url=http://search.proquest.com.library.capella.edu/docview/1885859512?accountid=27965

Bryman, A. (2008). Social research methods (3rd ed.). Oxford: Oxford University Press.

Camilleri, E. (2011). Project success: Critical factors and behaviors. Farnham, England: Gower Publishing Limited.

Charmaz, K. (2014). Constructing grounded theory (2nd ed.). London: Sage Publications.

Christensen, L., Johnson, R., & Turner, L. (2014). Research methods, design, and analysis (12th ed.). Upper Saddle River, NJ: Pearson Education.

Cooke-Davies, T. J. (2001). Towards Practices through empirical research proved project management practice: Uncovering the evidence for effective Dissertation.Com.

Cooke-Davies, T., Crawford, L. H., & Lechler, T. G. (2009). Project management systems: Moving project management from an operational to a strategic discipline. Project Management Journal, 40(1), 110-123. doi:10.1002/pmj.20106

Creswell, J. (2014). Research design: Qualitative, quantitative, and mixed methods approaches (4th ed.). Thousand Oaks, CA: Sage.

Dyett, V. (2011). Roles and characteristics of the project manager in achieving success across the project life cycle (Ph.D.). Available from ABI/INFORM Global, ProQuest Dissertations & Theses Global. (869723828). Retrieved from http://search.proquest.com.library.capella.edu/docview/869723828?accountid=27965

Fichera, C. E. (2016). Traditional project management and the visual workplace environment to improve project success (D.B.A.). Available from Dissertations & Theses @ Capella

University, ProQuest Dissertations & Theses Global. (1793942150). Retrieved from http://search.proquest.com.library.capella.edu/docview/1793942150?accountid=27965

Flyvbjerg, B. (2013). Quality control and due diligence in project management: Getting decisions right by taking the outside view. International Journal of Project Management, 31(5), 760-774. doi:http://dx.doi.org.library.capella.edu/10.1016/j.ijproman.2012.10.007

Gallagher, E. C., Mazur, A. K., & Ashkanasy, N. M. (2015). Rallying the troops or beating the horses? how project-related demands can lead to either high-performance or abusive supervision. Project Management Journal, 46(3), 10-24. doi:10.1002/pmj.21500

Gingnell, L., Franke, U., Lagerström, R., Ericsson, E., & Lilliesköld, J. (2014). Quantifying success factors for IT Projects—An expert-based Bayesian model. Information Systems Management, 31(1), 21-36. doi:10.1080/10580530.2014.854033

Goatham, R. (2016). What is project success. Retrieved from http://calleam.com/WTPF/?p=3501

Glaser, B. G., & Strauss, A. L. (1967). The discovery of grounded theory: Strategies for qualitative research. Chicago, IL: Aldine Publishing.

Haverila, M. J., & Fehr, K. (2016). The impact of product superiority on customer satisfaction in project management. International Journal of Project Management, 34(4), 570-583. doi:http://dx.doi.org.library.capella.edu/10.1016/j.ijproman.2016.02.007

Jørgensen, M. (2016). A survey on the characteristics of projects with success in delivering client benefits. Information and Software Technology, 78, 83-94. doi:http://dx.doi.org.library.capella.edu/10.1016/j.infsof.2016.05.008

Joslin, R., & Müller, R. (2016). The relationship between project governance and project success. International Journal of Project Management, 34(4), 613-626. doi:http://dx.doi.org.library.capella.edu/10.1016/j.ijproman.2016.01.008

Kerzner, H. (2009). Project management: A systems approach to planning, scheduling, and controlling (10th ed.). Hoboken, NJ: Wiley.

Kerzner, H. (2010). Project management best practices (2nd ed.). Hoboken, NJ: John Wiley and Sons.

Kerzner, H. R. (2013). Project management: A systems approach to planning, scheduling, and controlling (11) [Capella online]. Somerset, US: Wiley. Retrieved from http://ebookcentral.proquest.com.library.capella.edu/lib/capella/detail.action?docID=1113482

Kloppenborg, T. J., & Tesch, D. (2015). How executive sponsors influence project success. MIT Sloan Management Review, 56(3), 27-30. Retrieved from http://search.proquest.com.library.capella.edu/docview/1670982322?accountid=27965

Koops, L., Bosch-Rekveldt, M., Coman, L., Hertogh, M., & Bakker, H. (2016). Identifying perspectives of public project managers on project success: Comparing viewpoints of managers from five countries in north-west europe. International Journal of Project Management, 34(5), 874-889. doi:http://dx.doi.org.library.capella.edu/10.1016/j.ijproman.2016.03.007

Liu, A. M. M., & Walker, A. (1998). Evaluation of project outcomes. Construction Management & Economics, 16(2), 209-219. doi:10.1080/014461998372493

Md Nasir, M.,Hairul Nizam, Sahibuddin, S., Ahmad, R., & Mohd Fauzi, S. S. (2015). How the PMBOK addresses critical success factors for software projects: A multi-round delphi study. Journal of Software (1796217X), 10(11), 1283-1300. doi:10.17706/jsw.10.11.1283-1300

Mir, F. A., & Pinnington, A. H. (2014). Exploring the value of project management: Linking project management performance and project success. International Journal of Project Management, 32(2), 202-217. doi:http://dx.doi.org.library.capella.edu/10.1016/j.ijproman.2013.05.012

Munns, A., & Bjeirmi, B. (1996). The role of project management in achieving project success. International Journal of Project Management, 14(2), 81-87. doi:http://dx.doi.org.library.capella.edu/10.1016/0263-7863(95)00057-7

Murphy, M. R. (2015). Examining the predictive validity of emotional-social intelligence on project success in software development teams (Ph.D.). Available from ProQuest Dissertations & Theses Global. (1730212671). Retrieved from http://search.proquest.com.library.capella.edu/docview/1730212671?accountid=27965

Ngacho, C., Das, D., 2014. A performance evaluation framework of development projects: an empirical study of constituency development fund (CDF) construction projects in Kenya. Int. J. Proj. Manag. 32 (3), 492–507.

Noblit, G.W., Hare, R.D. (1988) Meta-Ethnography: synthesizing qualitative studies. Sage: Newbury Park.

Oun, T. A., Blackburn, T. D., Olson, B. A., & Blessner, P. (2016). An enterprise-wide knowledge management approach to project management. Engineering Management Journal, 28(3), 179-192. Retrieved from http://search.proquest.com.library.capella.edu/docview/1822034004?accountid=27965

Pinto, J. K. (1998). Project leadership: From theory to practice Project Management Institute.

PMI, 2012. A Guide to Project Management Body of Knowledge. 5 ed. PMI Publications, Newtown Square PA.

Quoteinvestigator. (2010 April 23) Charles Dudley Warner, Mark Twain. Retrieved from http://quoteinvestigator.com/2010/04/23/everybody-talks-about-the-weather/

Rezvani, A., Chang, A., Wiewiora, A., Ashkanasy, N. M., Jordan, P. J., & Zolin, R. (2016). Manager emotional intelligence and project success: The mediating role of job satisfaction and trust. International Journal of Project Management, 34(7), 1112-1122. doi:http://dx.doi.org.library.capella.edu/10.1016/j.ijproman.2016.05.012

Rusare, M., & Jay, C. I. (2015). The project implementation profile: A tool for enhancing management of NGO projects. Progress in Development Studies, 15(3), 240-252. doi:http://dx.doi.org.library.capella.edu/10.1177/1464993415578976

Savelsbergh, C. M. J. H., Havermans, L. A., & Storm, P. (2016). Development paths of project managers: What and how do project managers learn from their experiences? International Journal of Project Management, 34(4), 559-569. doi:http://dx.doi.org.library.capella.edu/10.1016/j.ijproman.2016.02.005

The Standish Group. (2015). The chaos report 2015. Retrieved from https://www.infoq.com/articles/standish-chaos-2015

Sutton, B. (2005a). Why projects fail - mastering the monster (part 1). Retrieved from http://www.developerfusion.com/article/84858/why-projects-fail-8211-mastering-the-monster-part-1/

Sutton, B. (2005b). Why projects fail - mastering the monster (part 2). Retrieved from http://itservicetoday.blogs.com/itil/2006/03/why_projects_fa_1.html

Wiewiora, A., Murphy, G., Trigunarsyah, B., & Brown, K. (2014). Interactions between organizational culture, trustworthiness, and mechanisms for inter-project knowledge sharing Project Management Institute. doi:10.1002/pmj.21407

Wikipedia. (2017). Fisher's exact test. Retrieved from https://en.wikipedia.org/wiki/Fisher's_exact_test

Wysocki, R. K. (2013-12-09). Effective Project Management: Traditional, Agile, Extreme, 7th Edition [VitalSource Bookshelf version]. Retrieved from https://bookshelf.vitalsource.com/books/9781118925577

Yalegama, S., Chileshe, N., & Ma, T. (2016). Critical success factors for community-driven development projects: A Sri Lankan community perspective. International Journal of Project Management, 34(4), 643-659. doi:http://dx.doi.org.library.capella.edu/10.1016/j.ijproman.2016.02.006

Yim, R. L., Castaneda, J. M., Doolen, T. L., Tumer, I. Y., & Malak, R. (2015). Exploring the relationship between rework projects and risk indicators. Project Management Journal, 46(4), 63-75. doi:10.1002/pmj.21509

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