



For Better Built Environment – Do Thinking Styles of Project Managers Matter in Project Success?

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ABSTRACT

Background: The evolution in project management was triggered by the changes in management philosophy and practices in order to maintain competitive advantage and continuous success in the field. The purpose of this paper is to highlight the practicality of project manager's thinking styles or also known as cognitive styles in influencing the achievement of project success by project managers. It discusses the concept of planning, knowing and creating styles from cognitive styles field in the light of achieving time, cost, and quality and stakeholders appreciation in project success context. The paper bases itself on literature review from established disciplines like psychology, sociology and philosophy regarding cognitive styles and project success in construction management context. The analysis and synthesis of literature in the subject area form a conceptual paper which is utilized as the basis of future research to establish general guidelines that provides information on managing cognitive styles for project managers in enhancing the project management competency for a better built environment.

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INTRODUCTION

In construction industry, project manager has been identified as the most highly cited stakeholder when measuring project success. Project managers are being investigated on the most critical issues they face include quality, profitability, cost control, productivity and overall performance. These success factors are considered hard issues. Many studies focus on the hard issues because they are easy to see, recognize, measure and easier to address. Researchers also place importance on hard issues because they seemingly are based on fact and factual matters that can be proved and strategized for a successful project delivery. On top of this, researchers find it easier to address concrete, nonhuman issues. However, the underlying cause of hard issues is often found in the soft issues in a project management knowledge base [1]. The soft issues are the human issue – the fundamental mindset issues of people in the industry. These soft issues consist of less tangible aspects that are much more subjective and less easily measured than the hard issues. When it comes to discussion on the mindset, an individual's performance is directly related to his/her state of mind- a soft issue [2]. Performance, which can often be measured, is a hard issue. On the other hand, state of mind, is a soft issue. As such, it has been argued that an effective mindset creates good performance and desirable results [3]. Unfortunately, a more detailed development of the soft issues was limited by the lack of available research in this field [4, 5].

Therefore, this conceptual paper is an attempt to propose the potential relationship between project manager's cognitive styles (which stemmed from taxonomy of personality - state of mind to be precise) and project success in the construction management discipline. The definition of cognitive styles and project success are described to provide an initial idea on the subjects. In Rayner and Cools's study (as cited in [6]), cognitive styles is defined as: "consistent individual differences in ways of perceiving, organizing, and processing information" which represent a fundamental factor in determining individual and organizational behaviour [7]. The cognitive styles is believed to be a critical variable that influence the management practise [8]. Meanwhile project success is generally accepted as achieving project targets within budget, schedule and quality [9]. It has been noted that during the past few decades there has been a broadening of success measures. As such, the

project success identified in this study was based on Pinto and Slevin's [10] project implementation profile (PIP) which covered the common measures of project success: the schedule, on budget and the performance.

Purpose of Inquiry and Inquiry Questions:

Although the body of project management continues to grow on a range of diverse subjects, however there are still only limited results of the literature on the subject of cognitive. Review of previous literature reveals that there is not enough knowledge on cognitive perspective in project management setting and there is a need to welcome research on the cognitive aspects of project success [11]. There are few conceptual and empirical studies discuss cognitive in project management context where researchers include cognitive as a dimension in relation to leadership ability and the behavioural competencies of project manager [1, 12]. Much of the discussions in this subject is tied to a general description rather than its internal characteristics in order to support management practice [13-15]. Even though the cognitive aspect, cognitive styles in particular has been identified as an excellent indicator for managerial performance [16, 17], however little attention has been paid to this area. There is an evident to investigate how the cognitive styles and its attributes contributes as one of the important personality traits dimensions in achieving project success. Thus, referring to an ancient phrase, 'A journey of a thousand miles begins with a single step', this study attempts to fill this gap by providing empirical evidence of cognitive styles influences in the context of project success by Malaysian project managers. Therefore, there are three (3) questions are raised in this study. These questions are directed to address how cognitive style influences the achievement of project success by project managers:

1. In recognition of the unique and challenging construction project environment, what cognitive styles are appropriate for engendering the project manager's performance in achieving the project success?
2. How does the project manager's cognitive styles relate to project success?
3. Are there any relationships between the variables of cognitive styles and project success constructs?

Summary of Conceptual Framework:

Apparently, a project manager's role is challenging especially in the built environment where the projects are unique and often related with complexity and ambiguity. However, there seems to be little support for the study on the effect of project managers on the positive project success [18]. A large and growing body of literature focuses on the technical proficiencies associated with project managers but it is noted that in the recent studies, there is a shifting from a technical skills to project manager soft skills [18-20]. Furthermore, scholar in this field [21] also commented that soft skills or competencies (human-related factor) contribute more to project success than technical skills. There is also an assertion different types of task associated with different types of project out which must be managed differently in order to achieve project success [22]. Hence, it is the role of project leadership to determine specific application in the context of each different project even though the practise and accompanying tools are transportable between different types of project [23]. Therefore, this study proposes a need to extend management practises for project manager by incorporating the cognitive styles approach towards the achievement of project success. The proposed conceptual model integrates the cognitive styles and project success variables. According to [24], a model is not typically used for explaining complicated process, but it does assist by simplifying the process and making it more understandable. The model was adapted and modified from the model that integrates different elements which consisted of influencing factors, contingency factors and outcomes factors that were built as the basis for a project management theory [25]. For the purpose of this study, the independent variables which consists of cognitive styles construct were adopted from Cools and Van de Broeck's (2007) Cognitive Styles Indicator (CoSI). The three variables describing cognitive styles are knowing style, planning style and creating style.

Meanwhile, for dependent variable, this study selected PSQ (Project Success Questionnaire) which is based on Pinto and Slevin's project implementation profile (PIP) that uses a model of two key themes: the project and the client [11]. The main reason for adopting this construct as dependent variable was because of its coverage on the common measures of project success: the schedule, on budget, and the performance, which have been developed and tested as a generalized project manager success measure [10, 11].

Delimitations and Limitations:

It is critically important to point out three guiding issues that informed this study. First, the topic of cognitive styles is through the lens of the personality traits where it is one specific aspect of one's cognitive behaviour. This study is not concerned on the other aspects of personality traits such as emotional and motivational dimensions of competencies [2] which were outside the scope of this study. The subject of cognitive has a broad application where it belongs to various discipline. The topic mainly found in the different branches of psychology, but also from sociology, business studies, management and education [26]. Therefore, in this study, the researcher concerned with how the dimension of cognitive has a significant relationship towards the achievement of project success at the individual level. Further to this, the researcher focuses upon cognitive styles as a central characteristic of one's role that may assist for a successful project. Secondly, issues regarding the subject on project success. In the field of project management, the subject of project success is the

heart of the field where it varies with project phases. For the purpose of this study, the project success covered the common measures of project success: schedule, budget, performance and client measures. The impact of the project life cycle on the relative importance of the project success was not considered in this study. Finally, the construction industry comprises of multidisciplinary professionals who are employed by different organisations which are diverse in the service they provide [27]. Therefore, a typical construction project involves many organisations as stakeholders of the project. However, this study only covers project managers from construction organization while excluding other stakeholders.

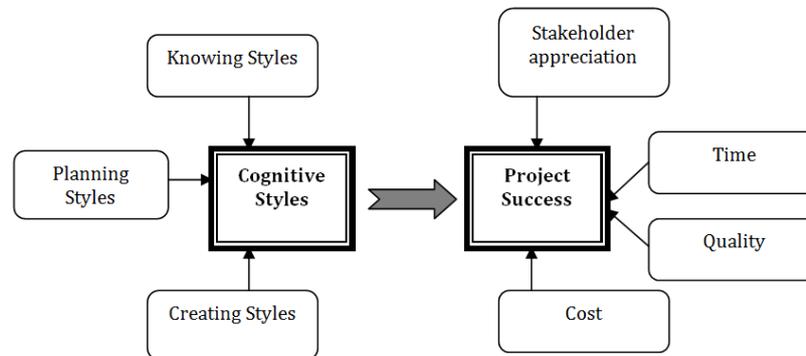


Fig. 1: Conceptual Research Model.

Analysis And Discussion Of The Literature:

Project Management of Construction Industry in Global and Local Context:

Research on project management (PM) has created an extraordinary development since the mid 1990s and this area has been criticized for being hard to coordinate in traditional management disciplines regardless of the fact that the topic has get to be more far reaching since the turn of the 21st century [28]. A great amount of debate has been ranging about the soundness of the PM theoretical foundation and theories [29, 30]. Somehow, the power and flexibility that PM brings to organizations could not be denied through the literatures [31] because if the project management is developed in a right way both deliberately and strategically, it could increase the value of an organization [32-34]. It is notable that the discipline of project management has experienced huge changes in the past decades, which contributed to a large amount of project work from diverse industries, which lead to an interesting fact where some scholars even portray a “projectification” of entire societies [25, 35]. In spite of these developments, project management continues to receive criticism for its lack of relevance to practice and this field is urged to improve performance of projects across diverse sectors [36, 37]. Even though there are so many criticisms have arises, but the main argument of this paper was not to argue or to investigate in detail the worthiness of its concepts, methodologies and tools. This section intended to highlight that in order to connect the project management practice closely to its contemporary challenges, new research system is needed to enrich the field beyond its current intellectual foundations [37].

Back in year 2000, Crawford argued that there are growing number of studies focusing in people skills of project managers and in standards for development and assessment of project management competence due to the fact that more organizations implement project management as a modus operandi to deliver work while at the same time increasing demand on project managers [38]. It was further supported by recent research findings that construction organizations now focusing on the core competencies of project managers to achieve success in their assignments [39]. The reason why project manager competences have been suggested as important factors is that the project manager who, at the centre of the project network, is responsible for orchestrating the whole construction process even though a successful project delivery requires the concerted effort of the project team to carry out the various project activities [40]. After all, possessing the core project management competence would help to define the ability of project managers to deliver good performance towards the attainment of project success [41]. Scholars in the project management area also confirmed that competent project managers are vital to project success, and several studies have highlighted critical skills [38, 42, 43] which necessary for efficient project performance [39].

From time to time, scholars suggest further investigation that supports the need for new and improved effective people skills which associated with project managers [44-46]. After further exploration in the subject area, it is interesting to discover human skills of project managers have the greatest influence on project management practices and technical skills the least [47] which directly give impact on the achievement of project success because project manager has direct influence over 34–47% of project success [48]. Adding to the literature, communication, organisational effectiveness, leadership, problem solving, teambuilding, flexibility, creativity and trustworthiness have been identified as key soft skills essentially required to manage

projects successfully [49, 50]. Pant and Baroundi [50] echoes this further by emphasizing that, to manage project successfully, the required essential soft skills are including interpersonal ability, technical proficiency, and cognitive aptitude, along with the capability to identify and take control the situation and people and take a role as leader through effective leadership behaviour. Halstead [51] argued that if a project manager wants to achieve a successful project, managing human issues within a project certainly cannot be considered 'optional'. The author further described that real success comes from knowing how to get things done through soft issues by a project manager.

Meanwhile from Malaysian construction industry perspective, there are not much scholars investigated the impact of the human-related factors or soft skill in project management but in the most recent study, Abu Hassan Abu Bakar *et al.*, [52], have confirmed from their study that the human-related factors are essential for the growth performance of construction companies performance in the industry. Against this background, the questions then arise as to how well our industry equips potential project managers in the area of human-related factors.

Cognitive Styles and Project Success:

Cognitive Styles:

As mentioned before, in the preceding section, the review of the literature in the project management area have received considerable attention in recent years the importance of human-related factors to the success of construction projects [53]. Even though the human-related factors usually deals with the 'soft' issues and are much more subjective and difficult to measure, but these factors have been identified as subjects that deal with the root cause of the problems in the construction industry by understanding and fostering long-term attitudinal [53]. Thus, the cognitive styles has been chosen as a potential soft skill factor in determining the project success because of the supremacy of the attributes that being explored in the correlation of individual performance [54]. Another reason why this study focused on the cognitive styles is due to the long lasting dilemma of whether effective managerial action is better served by analytical or intuitive judgments in project management [56] remains questionable. Furthermore, Allison & Hayes [57] also agreed that the cognitive styles have a potential value in the study of organizational behavior and the understanding of management problems. Thus, there can be no doubting in evaluating the cognitive styles as a crucial factor that promotes soft skill performance in project management professionalism by project managers. Therefore, an evaluation of the influence of cognitive styles towards project success may enhance project manager's work performance which indirectly improves the construction industry's quality, the most men-dominated and aggressive industry [58].

For the purpose of this study, the cognitive styles variables are adopted from Cools and Van de Broeck's (2007) Cognitive Styles Indicator (CoSI) because in the cognitive styles literature, it is recommended to focus on more recent theoretical constructs and measures [6]. Cognitive Styles Indicator (CoSI) is a multidimensional cognitive framework which is created for business and psychology research. Selecting appropriate theoretical constructs and measure is very important as only rigorous research can ultimately build a bridge between science and practice, which is so often called for in business and psychology studies [59, 60]. The three variables describing the cognitive styles are: knowing style, planning style and creating style. In general, people with knowing style are described as a person who looks for data, want to know exactly the way things are and tend to retain many facts and details, like complex problems and try to find rational and logical solutions [61]. Meanwhile, planning style [60][60] implies a preference for a structured, organized, efficient way of information processing [7]. The final variable is the creative style which explains the characteristic of people who prefer to be creative and experimentation, forecast problems as opportunities and challenges and like uncertainty and freedom [62].

Project Success:

In simple definition, project success consist standards or criteria that evaluate project outcomes or results. Over a period, project success from narrow but universally accepted group of criteria of scope, cost and time, has included other criteria as well [63]. Even though a number of scholars have called for a wider set of success criteria [64] but it is noted that no common set has been established yet [65]. However, according to Muller [65], time plays a significant indicator when suggesting a distinction between project success and project management success because project success deals with the success criteria (i.e. long term) while project management success prioritize the importance of success factors (i.e. short term). It has been highlighted that project managers assign higher importance to project success while other stakeholders emphasize on the importance of success factors related to project management success [66]. Thus, this study concerns with the relative importance of success criteria at the level of project success. Considering the definitions of project success, this study selected PSQ (Project Success Questionnaire) which is based from Pinto and Slevin's [10] project implementation profile (PIP) that uses a model of two key themes: the project and the client [11]. The main reasons for adopting this construct as dependant variable, was because of its coverage on the common measures of project success: the schedule, on budget, the performance and has been developed and tested as a

generalized project manager success measure[11]. For the purpose of this study, the project success factors are grouped into three factors which were named: usability, value of project outcome to project users and project delivery. The factors were excellently separated by Geoghegan[11] who conducted an investigation on the project manager's leadership influences on the project success. The details are as summarized below.

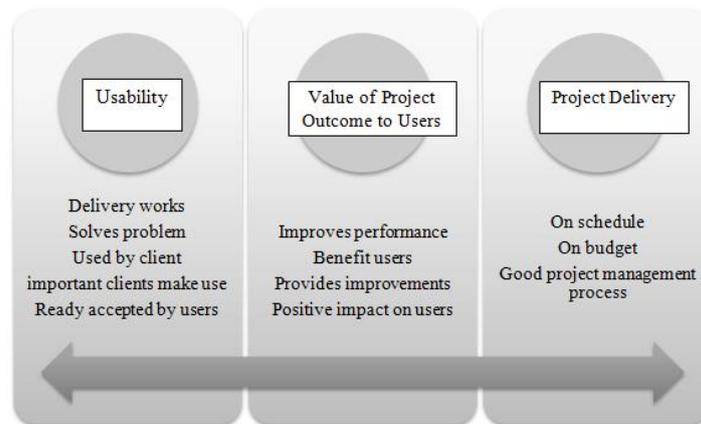


Fig. 2: Description on Project success (Source: Geoghegan & Dulewich [11]).

Importance of Cognitive Styles in Achieving Project Success:

Cognitive styles drive managerial skills of project managers either directly or indirectly in the use of project management practices. Personal managerial skills of a project manager is steadily gaining emphasis and more widespread acceptance in the construction industry [67]. As example, social skills, decision-making skills and problem handling skills have recognized as personal attributes that affecting project success. Therefore, by understanding the uniqueness of cognitive styles towards the achievement of project success by project managers, offer a promising direction in human-related factor studies. For example, Mazur [68] found that cognitive skills enhances the project success where the authors investigated from the aspect of cognitive flexibility. Dulewicz & Higgs [69] identified three types of leadership competence associated with success: emotional, managerial and intellectual competence. In this research, the cognitive styles contains elements of managerial and intellectual aspects and show they are indeed related to project success supporting the work of Dulewicz and Higgs[69] and the work of Müller and Turner [66]. Therefore, this study does hold potential to strengthen to understand of how people skills can enhance project success. This is supported by previous research which suggested that many factors which drive project to success are derived from the human side [70, 71]. The result also in line with Cooke-Davies [72] who highlighted that people are involved in every process and human dimensions presents in nearly all critical factors related to the project success including the task to determine the sufficiency of each process that has been carried out. Thus, the cognitive styles of project managers contribute significantly to project success in a construction project lifecycle because humanistic approach is crucial for effective project performance [66]. This is also supported by more studies which have featured the role of the human factor as a key element of project success [73, 74]. Even though the performance of leadership is reported as the most researched aspect of human behaviour [69] in contributing to project success, the important role of the cognitive styles from this human-related factor should not be overlooked. It also has been agreed that cognitive styles symbolized as a fundamental factor in determining individual behaviour [7]. Furthermore, the cognitive styles also believed as a crucial variable influencing management practice [8] and performance [7].

Conclusion:

The construction industry is an essential contributor to the economy of many countries and from the project-based industry, it perhaps the largest and most established field. The environment in construction projects is unique market to operate as it is operates with a diverse group of professionals from different organizations who are brought together for a short period and for a specific purpose. In Malaysia, the construction industry performances are beset with inefficiencies. Studies and reports have highlighted negative construction performance such as construction delays, cost overruns and disputes, which seems customary with a low probability of successful project delivery. As such, the importance of the construction industry as vital link to the gross development product and nation building demand the construction industry to improvement of construction projects implementation and enhancement of project success. Subsequently, the effective performance of the project manager is identified to be single most critical factor affecting project success. As such, scholars reported that soft skills or human-related factor contribute more to project success than technical

skills but these soft skills (human-related factors) received insufficient attention especially with regard to the project manager's personality traits. As such, this conceptual paper is in response to these trends and calls for research. This paper provided significant insights into cognitive styles, a fundamental factor in determining individual and organizational behaviour which is believed to be a vital variable influencing management practice and performance [7]. A growing interest in the field of business and psychology on cognitive styles, strongly supported a need for further investigation on the effect of this human-related factor has on the project success by Malaysian project managers for a better built environment.

REFERENCES

- [1] Eweje, J., 2012. "Maximizing strategic value from megaprojects: The influence of information-feed on decision-making by the project manager," *International Journal of Project Management*, 30: 639-651.
- [2] Creasy, T. and V.S. Anantatmula, 2013. "From Every Direction—How Personality Traits and Dimensions of Project Managers Can Conceptually Affect Project Success," *Project Management Journal*, 44: 36-51.
- [3] Dutta, D.K. and S. Thornhill, 2008. "The evolution of growth intentions: Toward a cognition-based model," *Journal of Business Venturing*, 23: 307-332.
- [4] Skulmoski, G.J. and F.T. Hartman, 2010. "Information systems project manager soft competencies: A project-phase investigation," *Project Management Journal*, 41: 61-80.
- [5] Hyväri, I., 2006. "Project management effectiveness in project-oriented business organizations," *International Journal of Project Management*, 24: 216-225.
- [6] Cools, E., 2013. "Methodological practices in cognitive style research: Insights and recommendations from the field of business and psychology," *European Journal of Work and Organizational Psychology*, 1-15.
- [7] Armstrong, S.J., E. Cools and E. Sadler-Smith, 2012. "Role of Cognitive Styles in Business and Management: Reviewing 40 Years of Research," *International Journal of Management Reviews*, 14: 238–262.
- [8] Hayes, J. and W.C. Allinson, 1994. "Cognitive Style and its Relevance for Management Practice," *Human Relations*, 5: 53-71.
- [9] Elattar, S.M.S., 2009. "Towards developing an improved methodology for evaluating performance and achieving success in construction projects," *Scientific Research and Essay*, 4: 549-554.
- [10] Pinto, J.K., 1986. "Project implementation: a determination of its critical success factors, moderators, and their relative importance across the project life cycle," University of Pittsburg.
- [11] Geoghegan, L., W. Dulewicz, 2008. "Do Project Managers' Leadership Competencies Contribute to Project Success?," *Project Management Journal*, 39: 58–67.
- [12] Turner, J.R., R. Müller, 2005. "The Project Manager's Leadership Style As A Success Factor On Projects: A Literature Review," *Project Management Journal*, 36: 49-61.
- [13] Leban, W. and C. Zulauf, 2004. "Linking emotional intelligence abilities and transformational leadership styles," *Leadership & Organization Development Journal*, 25: 554-564.
- [14] Clarke, N., 2010. "Emotional intelligence and its relationship to transformational leadership and key project manager competences," *Project Management Journal*, 41: 5-20.
- [15] Davis, S.A., 2011. "Investigating the impact of project managers' emotional intelligence on their interpersonal competence," *Project Management Journal*, 42: 37-57.
- [16] Allinson, C.W., E. Chell, J. Hayes, 2000. "Intuition and entrepreneurial behaviour," *European Journal of Work and Organizational Psychology*, 9: 31-43.
- [17] Sadler-Smith, E., 2004. "Cognitive Style and the Management of Small and Medium-Sized Enterprises," *Organization Studies*, 25: 155-181.
- [18] Anantatmula, V.S., 2010. "Project Manager Leadership Role in Improving Project Performance," *Engineering Management Journal*, 22: 13-43.
- [19] Hyväri, I., 2006. "Success Of Projects In Different Organizational Conditions " *Project Management Journal*, 37: 31-41.
- [20] Brown, K., 2000. "Developing project management skills: A service learning approach. ," *Project Management Journal*, 31: 53-58.
- [21] Lechler, T., 1998. "When it comes to project management, it's the people that matter.
- [22] Anantatmula, V.S., 2008. "The role of technology in the project manager performance model," *Project Management Journal*, 39: 34-48.
- [23] Wirth, I., 1992. "Project-management education: current issues and future trends," *International Journal of Project Management*, 10: 49-54.
- [24] Hergenbahn, B.R., M.H. Olson, 2001. *An Introduction to theories of learning*, 6th ed. ed. New Jersey, USA: Prentice-Hall Inc.
- [25] Hanisch, B., A. Wald, 2011. "A project management research framework integrating multiple theoretical perspectives and influencing factors," *Project Management Journal*, 42: 4-22.

- [26] Cofield, C., D. Moseley, E. Hall, K. Ecclestone, 2004. "Learning styles and pedagogy in post-16 learning : A systematic and critical review," Learning and Skills Development Agency, London.
- [27] Barlow, J., A. Jashapara, 1998. "Organisational learning and inter-firm "partnering" in the UK construction industry," *The Learning Organization*, 5: 86-98.
- [28] Garel, G., 2013. "A history of project management models: From pre-models to the standard models," *International Journal of Project Management*, 31: 663-669.
- [29] Packendorff, J., 1995. "Inquiring into the temporary organization: new directions for project management research," *Scandinavian Journal of Management*, 11: 319-33.
- [30] Söderlund, J., 2004. "Building theories of project management: past research, questions for the future," *International Journal of Project Management*, 22: 183-191.
- [31] Ives, M., 2005. "Identifying the contextual elements of project management within organisations and their impact on project success," *Project Management Journal*, 36: 37-50.
- [32] Winter, M., Szczepanek, Tony, 2008. "Projects and programmes as value creation processes: a new perspective and some practical implications," *International Journal of Project Management*, 26: 95-103.
- [33] Thiry, M., 2002. "Combining value and project management into an effective program management model," *International Journal of Project Management*, 20: 221-227.
- [34] Crawford, P., P. Bryce, 2003. "Project monitoring and evaluation: a method for enhancing the efficiency and effectiveness of aid project implementation," *International Journal of Project Management*, 21: 363-373.
- [35] Lundin, R.A., A. Söderholm, 1995. "A theory of the temporary organization " *Scandinavian Journal of Management*, 11: 437-455.
- [36] Markoczy, L., 2006. "Book Review: G. P. Hodgkinson and P. R. Sparrow: The Competent Organization: A Psychological Analysis of the Strategic Management Process," *Organization Studies*, 27: 154-157.
- [37] Winter, M., C. Smith, P. Morris, S. Cicmil, 2006. "Directions for future research in project management: The main findings of a UK government-funded research network," *International Journal of Project Management*, 24: 638-649.
- [38] Crawford, L., 2000. "Project management competence for the new millenium," in *Proceedings of 15th World Congress on Project Management*, London, England.
- [39] Hwang, B.G., W.J. Ng, 2012. "Project management knowledge and skills for green construction: Overcoming challenges," *International Journal of Project Management*.
- [40] Bayliss, R., 2002. "Project partnering—a case study on MTRC Corporation Ltd's Tseung Kwan O Extension," *HKIE Transactions*, 9: 1-6.
- [41] Abu Bakar Abu Hasan, A.A.R., Shardy Abdullah, Aidah Awang, 2009. "Project Management Success Factors For Sustainable Housing: A Framework," in *International Conference Of Construction Industri*, Padang Indonesia.
- [42] Avots, I., 1969. "Why does project management fail?," *California Management Review*, 24: 77-88.
- [43] Belassi, W., O.I. Tukel, 1996. "A new framework for determining critical success/failure factors in projects," *International Journal of Project Management*, 14: 141-151.
- [44] Blackburn, S., 2001. "Understanding project managers at work," DBA, Henley Management College, Brunel University.
- [45] Dainty, A.R.J., M.I. Cheng, D.R. Moore, 2005. "A Comparison of the Behavioural Competencies of Client-Focused and Production-Focused Project Managers in the Construction Sector.," *Project Management Journal*, 36: 39-48.
- [46] Moore, D.R., M.I. Cheng, A.R.J. Dainty, 2003. "What makes a Superior Management Performer: The Identification of Key Behaviours in Superior Construction Managers," *Construction Information Quarterly*, 5: 6-9.
- [47] El-Sabaa, S., 2001. "The skills and career path of an effective project manager," *International Journal of Project Management*, 19: 1-7.
- [48] Frank, T., 2002. *The superior project manager*. New York: Marcel Dekker.
- [49] Belzer, K., 2001. *Project Management : Still More Art than Science*. Available: <http://www.pmforum.org/library/papers/2001/ArthanScience.pdf>
- [50] Pant, I., B. Boroudi, 2008. "Project management education: The human skills imperative," *International Journal of Project Management*, 26: 124-128.
- [51] Halstead, S., 1999. "Soft options [project management]," in *The Management of Soft Projects: The People Issues*, *IEEE Afternoon Seminar*, 4/1-4/4.
- [52] Abu Hassan Abu Bakar, A.A.T., Arman Abdul Razak, Mohamad Nizam Yusof, 2012. Key Factors Contributing to Growth of Construction Companies: A Malaysian Experience," *World Applied Sciences Journal*, 19: 1295-1304.
- [53] Yong, Y.C. and N.E. Mustafa, 2013. "Critical success factors for Malaysian construction projects: an empirical assessment," *Construction Management and Economics*, 31: 959-978, 2013/09/01.

- [54] Muneera Esa, 2013. "Preparing Project Managers to Achieve Project Success - Human Management Perspective," in *International Conference on Innovation and Management*, Barcelona, Spain.
- [55] Muneera Esa, 2013. "Preparing Project Managers to Achieve Project Success - Human Management Perspective," in *International Conference on Innovation and Management*, Barcelona, Spain, 27-28.
- [56] Leybourne, S. and E. Sadler-Smith, 2006. "The role of intuition and improvisation in project management," *International Journal of Project Management*, 24: 483-492.
- [57] Allinson, C.W., J. Hayes, 1996. "The Cognitive Style Index: A Measure Of Intuitionanalysis For Organizational Research," *Journal of Management Education Studies*, 33: 119-135.
- [58] Smithers, G.L. and D.H.T. Walker, 200. "The effect of the workplace on motivation and demotivation of construction professionals," *Construction Management and Economics*, 18: 833-841, 2000/10/01.
- [59] Hodgkinson, G.P., 2001. "Re-aligning the Stakeholders in Management Research: Lessons from Industrial, Work and Organizational Psychology," *British Journal of Management*, 12: S41-S48.
- [60] Hodgkinson, G.P. and D.M. Rousseau, 2009. "Bridging the rigour-relevance gap in management research: it's already happening!," *Journal of Management Studies*, 46: 534-546.
- [61] Cools, E., H. Van den Broeck, 2007. "Development and Validation of the Cognitive Style Indicator," *The Journal of Psychology*, 141: 359-387.
- [62] Cool, E., 2009. "A reflection on the future of the cognitive style field: a proposed research agenda," *Reflecting Education*, 5: 19-34.
- [63] Dyett, V., 2011. "Roles and Characteristics of the Project Manager in Achieving Success across the Project Life Cycle," 3455628 Ph.D., Lynn University, Ann Arbor.
- [64] Atkinson, R., 1999. "Project management: Cost, time and quality, two best guesses and a phenomenon, it's time to accept other success criteria," *International Journal of Project Management*, 17: 337-342.
- [65] Muller, R., R.D. Turner, 2010. "Attitudes and leadership competences for project success," *Baltic Journal of Management*, 5.
- [66] Muller, R., R.D. Turner, 2010. "Leadership competency profiles of successful project managers," *International Journal of Project Management*, 28: 437-448.
- [67] Pheng, L.S. and Q.T. Chuan, 2006. "Environmental factors and work performance of project managers in the construction industry," *International Journal of Project Management*, 24: 24-37.
- [68] Mazur, A., 2014. "Rating defence major project success: The role of personal attributes and stakeholder relationships," *International Journal of Project Management*, 32: 944-957.
- [69] Dulewicz, V., M. Higgs, 2005. "Assessing leadership dimensions, styles and organizational context," *Journal of Managerial Psychology*. 20: 105-23.
- [70] Mullaly, M.E., 2004. "PM Success in Organizations, Trends, Best Practices and Next Steps," in *IPMA*.
- [71] Thamhain, H.J., 2004. "Linkages of Project Environment to Performance: Lessons for Team Leadership," *International Journal of Project Management*, 22.
- [72] Cooke-Davies, T., 2002. "The "real" success factors on projects," *International Journal of Project Management*, 20: 185-190.
- [73] Belout, A., C. Gauvreau, 2004. "Factors influencing project success: the impact of human resource management," *International Journal of Project Management*, 22: 1-11.
- [74] Kendra, K., L.J. Taplin, 2004. "Project success: A cultural framework," *Project Management Journal*, 35: 30-45.