

Association for Information Systems AIS Electronic Library (AISeL)

CONF-IRM 2016 Proceedings

International Conference on Information Resources
Management (CONF-IRM)

2016

The Factors Affecting the Lack of Post-project Reviews in IT Projects

J. L. Howard
University of Cape Town

D. C. Smith
University of Cape Town, derek.smith@uct.ac.za

Follow this and additional works at: <http://aisel.aisnet.org/confirm2016>

Recommended Citation

Howard, J. L. and Smith, D. C., "The Factors Affecting the Lack of Post-project Reviews in IT Projects" (2016). *CONF-IRM 2016 Proceedings*. 14.
<http://aisel.aisnet.org/confirm2016/14>

This material is brought to you by the International Conference on Information Resources Management (CONF-IRM) at AIS Electronic Library (AISeL). It has been accepted for inclusion in CONF-IRM 2016 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

66. The Factors Affecting the Lack of Post-project Reviews in IT Projects

J. L. Howard
University of Cape Town

D. C. Smith
University of Cape Town
derek.smith@uct.ac.za

Abstract

Post-Project Reviews are highly rated as a process to evaluate project outcomes and to leverage learning. Nevertheless they have remained the least-developed area of project management although the incidence of failed projects remains persistently high. The purpose of this research was to determine factors which affect the slow uptake and often ineffectual application of Post-Project Reviews. A case study was undertaken in a large, multinational, mobile Services Provider with an ad-hoc approach to Post-Project Reviews. Storytelling was the approach employed to extract information from stakeholders and role-players, representing both project and business areas. Thematic analysis of the stories revealed that business personnel and project teams had widely opposing views. It was also determined that although there were sufficient frameworks available most of the stakeholders required executive direction to compel them into action, which was not forthcoming. Areas identified for further research are methods for effective transference of tacit data into organisational learning, and development of strategies to align project outputs to expected and successful business outcomes.

Keywords

Post-Project Review, Project Post Mortem, Storytelling, Lessons Learned.

1. Introduction

Post-Project Reviews have been widely regarded as good practice for many years, both for project evaluation and as convenient forums from which to leverage organizational learning: to leverage insight from the investigation of the causes for success and failure. Birk et al (2002) regarded post mortem analysis as being an “excellent method for knowledge management” with which to encapsulate experience and elicit recommendations for improvement. Nelson (2010) described project success in terms of outcome and process. Outcomes encompass value obtained from perceived usefulness of the product or service. These views were more recently affirmed, amongst others, by Schindler and Eppler (2003), Nelson (2005), Williams (2007) and Smith and Crossland (2008). Anbari et al (2008) countered by declaring that Post-Project Reviews were seldom performed or used effectively because project stakeholders did not perceive them to be capable of contributing discernible value to their own particular environments. Despite of and due to these facts, research continues to indicate that project failure remains an enduring phenomenon (Abdelmoniem, Mazen, & Hassanein, 2012).

A substantive longitudinal literature review was undertaken to establish previous research conclusions and shortfalls, with emphasis placed on factors that affect the value outcomes delivered by Post-Project Reviews. The prominent emergent theme was that causes and solutions had long been known but not implemented. The resultant information was incorporated when crafting the new research strategy: using a contemporary methodology, storytelling, to enable more profound extraction, and possible discovery of previously unexplored material, from tacit knowledge (Alvarez & Urla, 2002).

2. Literature review

Post-Project Reviews are a relatively old concept and yet they seldom enjoy maturity of vision in practice; exploitation of their full potential rarely realized. Although numerous information systems and business interviewees intuitively advocated Post-Project Reviews, recognizing value in the many potential beneficial outcomes, scant passion was apparent during the research: interviewees did not ascribe significant value to the actual process for a variety of reasons.

Research found that project value outcomes were determined by project teams, receiving business teams, and the environments in which they operated. Due to time constraints, and because project teams have more control over their own practices than over the business outcomes, review focus does not usually tend towards business outcomes - often only quantifiable after the teams had moved on to new projects. Essentially business was excluded from value contribution. Learning appeared to be the biggest value prize both for project teams and for business teams: it engenders sustained avoidance of repetitive mistakes and facilitates the re-use of successful instances. Learning was construed to save time and money, be useful in future proofing, helpful in building competence and confidence and thereby team morale, instrumental in improving customer satisfaction and, significantly, learning was believed to greatly enhance competitive advantage. Surprisingly, far less research was directed to establishing value achieved from measuring project outputs against project expectations. Realization of business expectations and outcomes attracted even less significance.

Poor value was most evident in reporting and dissemination of information and learning. Reasons for this varied from disinterest, lack of skills and knowledge, distrust of the process, lack of guidelines, informality, inadequate resources (time, finance and people), exclusion of relevant parties, political power plays, to the highest percentage (24%) attributed to personal bias and dishonesty for reasons of self-interest.

There were recommendations for the transformation of project team learning into project-to-project learning, and for the incorporation into wider company knowledge culture. These recommendations were not widely adhered to. Research attributed the paucity of Post-Project Review intellectual property and learning transfer to the lack of executive management awareness and support.

Many of the studies researched in this review indicated that tacit knowledge, although encompassing vital experiential knowledge (that could be universally exploited), remains an elusive phenomenon.

In conclusion, the review found that, in reality, the potential for bad value delivery was more probable than for good, and that effective Post-Project Reviews are not yet the norm in project management despite the numerous benefits continuously expounded since the late nineties. Failings highlighted in the literature review are summarized below, the lowest percentage appearing at the top of the list (2% - lack of motivation/incentive).

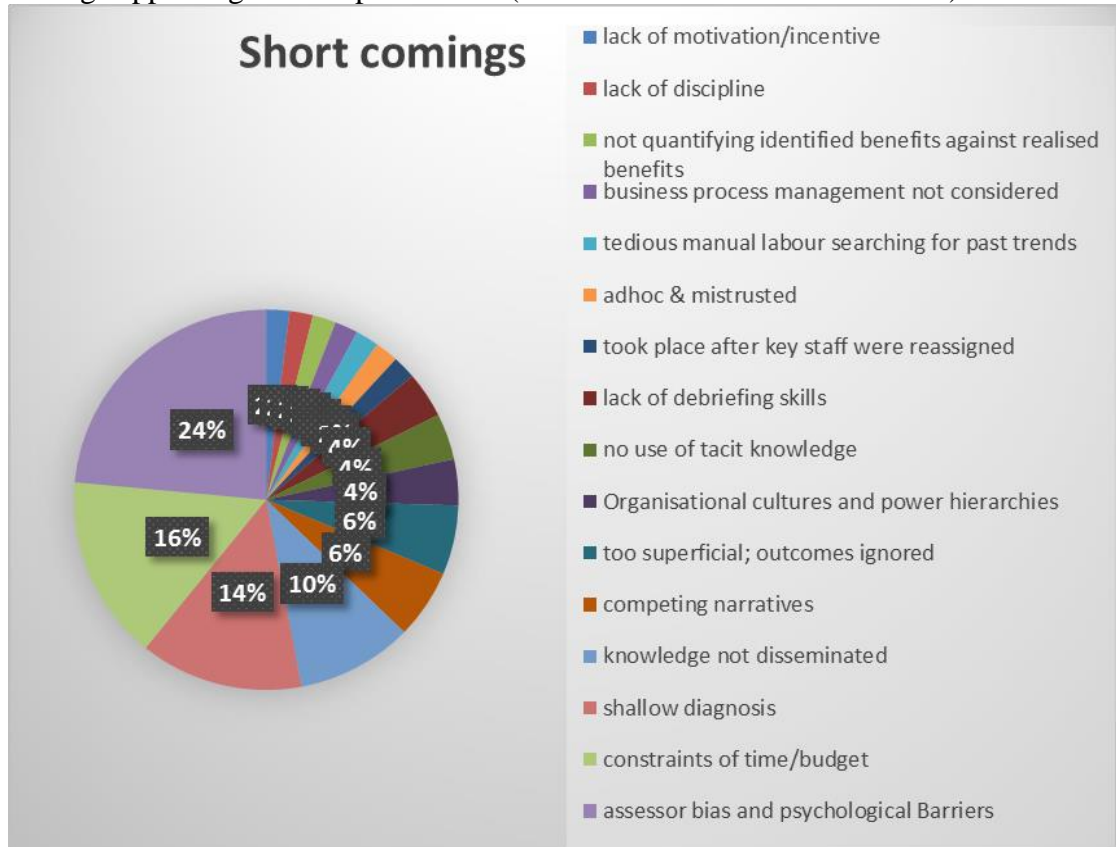


Figure 1: Literature Review shortcomings

2.1. Literature review recommendations for further research:

- Development of systems for harvesting value from the wealth of experience available and conquering psychological barriers ;
- Development of methods for the development of executive participation and sponsorship
- Development of strategies to mitigate factors influencing the gap between professed potential and pragmatic realities.

3. Research Approach and Findings

3.1. Method

Most of the issues and dissatisfactions revealed in the literature reviewed either were soft issues or caused by soft issues, rather than by the actual methodologies (hard issues). Because business and information systems projects are unique and complex, an Interpretivist philosophy was selected to expose the depth and detail specific to each person being interviewed. A goal of this research was to unravel the paradigms between people and

their roles as social actors, both from their own perspective and as they perceive each other's' roles and how these perceptions influenced value proposition of Post-Project Reviews. Storytelling was the selected medium to provide deeper understanding of stakeholders' insights and sensitivities, priorities and processes. Storytelling is recognized for its ability to gather and interpret tacit data and yield pragmatic assessments which include social context (Alvarez & Urla, 2002), thus aligning to the purpose and the ontological approach, discussed below. Tacit knowledge is "practical, unspoken, action-oriented knowledge or 'know-how' based on practice, acquired by personal experience, seldom expressed openly, often resembles intuition" (Smith, 2001).

3.2. Case Study

The chosen case study approach was qualitative to fit with the explorative nature of the research. Emphasis was on illustrating the factors affect the value of Post-Project Reviews from the perspectives of project teams and business groups, including the reasoning behind their suppositions.

A large multinational Mobile Network Operator was selected for the case study because of the abundance of ongoing projects and the absence of formal directives regarding Post-Project Reviews within the company. The research sample spanned a company division comprised of four departments, each headed by an executive head overseeing, development managers, project managers and business teams, incorporating both company and vendor staff members. The time frame of each story was the lifespan of either a single or a series of Post-Project Reviews. Projects included a range of success and size. Size was based on financial commitment and the strategic importance of the system to the company. These aspects were also reviewed as possible causes for participant bias attributed to Attribution Theory, which is a motivational theory concerning the ways in which average people ascribe meaning to events, based on their motives to find a cause and their knowledge of the environment Pan and Flynn (2003).

Cover letters were emailed to thirty-two potential participants explaining the research requirements, together with a pre-defined storytelling framework.

Recipients who had agreed to participate either wrote a story in their own time, which they submitted using email, or they chose to be interviewed with the researcher recording and transcribing their narrations. Eighteen people responded, six of whom emailed their stories without being interviewed. Of the remaining ten, only four agreed to audio recordings. This was slightly restrictive causing the researcher to take manual notes (interviews were limited to forty-five minutes). Both the manual notes and the audio recordings being transcribed within a day of the interviews taking place. All transcriptions were emailed to the relevant participants for their approval or modification. Some replied by email but most gave verbal affirmations when prompted to respond.

3.3. Findings

No theory was formulated from the data collected due to its diversity but it was possible to form generalized concepts from the research material by collating specific participant

anecdotes; the outcome was a pragmatic perspective, which will be used to explain the landscape and suggest improvements.

Two hundred and eighteen statements were initially identified as influential factors on the value derived from Post-Project Reviews. The initial analysis produced forty-five themes and one hundred and twenty-one sub themes. As this was far too detailed to work with a taxonomy was constructed. Goffin and Koners (2011) had cited similar difficulties when attempting to link analogous concepts described with diverse phraseology. Carrillo et al (2011) had proposed the use of specific key words to simplify the extraction of knowledge and concepts from narratives. The resultant framework encompassed the participants' qualified views towards Post-Project Reviews, refined into high level themes, each containing sub-themes. The 3 high level themes identified from which influencing factors were examined, were Learning, People and Process.

Themes were examined in the contexts of the story tellers' competing narratives, attributed to Agency Theory, which addresses relationships between principals and agents. For example, developers, end users and executives do not share the same personal goals and business priorities. Successful projects must ensure all priorities are negotiated to maintain balance between individual needs and the overall needs of projects (Winter & Szczepanek, 2009). Analysis from these different perspectives was used to highlight the difference in focus and goals, for instance project managers' value perceptions were compared to business analysts' perceptions, project teams perceptions were triangulated with the business unit and the operations team. Success was subjective, based on the project stakeholder assessment, and the factors declared to have influence over the process therefore diverse.

Post-Project Reviews were seen by all to have the potential to deliver good value but that this value was not realized due to a variety of factors. Most respondents attributed this to the company's lack of maturity regarding the implementation of methodologies and the ensuing absence of executive sponsorship and involvement. Nevertheless, one of the managers believed that enough good tools existed within the project team toolbox: Prince2, PMBOK and their own home grown System Design Life Cycle. Notwithstanding some project teams felt that cultural and political pressures, and especially time, were far more real and pressing than the need to follow prescribed methodologies. Styhre et al (2004) had alluded to these circumstances, theorizing that project teams often lacked the energy required to conduct reviews because of the continuous flow of projects they were expected to undertake. Williams (2007), on the other hand, had suggested that the temporary nature of projects together with the focus on action was not conducive to learning. One of the managers referred to the legacy army-like culture which did not encourage initiative.

Critical business assessment was absent from Post-Project Reviews because business representatives unfortunately were not in positions of influence over the outcomes to provide value for their own specific needs, either by inclination or due to political power. There was also no evidence of governance which was probably required as an antidote the repressed-initiative environment.

Analyses of the sample supported both Harris' (2002) observations that measurements of effectiveness were not evident, as well as the conclusions drawn by von Zedtwitz (2002) who described the disconnect during Post-Project Reviews between the perception and focus of contemporary business with those of project teams regarding the factors that affected the value outcomes. The summary of findings below has therefore been grouped by vendor, project team, management and business so as to accentuate this difference in perspective. Findings related to the operational teams have been combined with the business because (in the sample projects) they are also recipients of finished projects.

One of the vendor representatives was involved with a successful project whereas the other was involved in a failed one but there was consensus that relationships had improved due to the reviews, despite heated discussions that had taken place in both instances. The vendor of the successful project formally used and disseminated the lessons learnt from past projects to future projects whereas the failed project vendor representative did not. He was however under considerable resource constraints and had remarked that the format of the review documents had been rejected by his team as being too cumbersome. Necessity probably drove both of these outcomes: The vendor of the unsuccessful project worked for a large company which provided the lion's share of outsourced development to the sample company. Enjoying security of tenure through long term commitments, complacency allowed them to continue on as they had always done. Conversely the vendor of the successful project was part of a much smaller organisation. Enjoying smaller short term contracts, constantly seeking new business opportunities, they could not afford many failures and had to learn to better their practices in order to survive.

3.3.1. Feedback from Business and Operations Personnel

Most of these representatives had either not been invited to Post-Project Reviews or were not aware that any had taken place. In their opinion constraints of time and politics were to blame. Notwithstanding business representatives were adamant that they should always be included and that Post-Project Reviews should take place at regular intervals during and after implementation. This would ensure improved relevancy and efficiency on an on-going basis. The general sentiment was that the project teams did not fully understand business requirements and that what they implemented was not always a good fit. To quote one of the business managers: "in my experience Post Project Reviews have nothing to do with fulfilling business requirements", again supporting von Zedtwitz (2002) conclusions. However it must be noted that the medium sized successful project did not have a business representative and the conclusions drawn here are not necessarily universally enjoyed by the division.

3.3.2. Feedback from Project Team Members

Of the four business analysts in the sample, only one had been involved with the sample projects' reviews. She identified lessons learnt during a previous Post-Project Review as having been followed through to the sample project. However these lessons were in respect of the vendor deliverables and had nothing to do with the project team gaining insight into problems experienced by the business. Another admitted that he had not gained value from Post-Project Review reviews in any of his previous appointments. Even so he thought a lot of value could be gained from lessons learnt providing there was a formal structure to the

reviews and a knowledge management system for consequent information dissemination. This was echoed by all the business analysts in the sample. One lamented that opportunities to share valuable insights had been missed and therefore probably had a negative effect on future projects and reviews. Others mentioned that good value could be obtained from improved skill sets and vendor relationships, quicker response to issues occurred and the review outputs could possibly be used as inputs to the company's strategic planning. Again time constraints and politics, including the lack of executive support, were mentioned as causative factors for non-existent and unsatisfactory reviews. McAvoy (2006) had also encountered many project teams that enthusiastically supported Post-Project Reviews but noted that their convictions seldom resulted in effective action.

There were four project managers in the sample, excluding the vendor project manager. One of these did not perform Post-Project Reviews. It was his perception that they were hardly ever carried out because there was no directive from management. He also regretted not being able to share valuable stakeholder insights and thereby influence the success of future projects. Some project managers emphasized soft issues to encourage participation and the development of initiative, suggesting that team morale could be improved by using Post-Project Reviews as a forum from which to praise personal. However one project manager did not accept that it was a suitable forum for personal praise and encouragement.

One of the project managers admitted that, in retrospect, he would have included a wider range of stakeholders to synthesize more value from the broader perspective (database, storage, infrastructure, architecture). In some instances documentation took place but only in one case was it re-used to provide of value to other projects. Factors influencing the paucity of interest were ascribed to the unacceptable documentation format, lack of knowledge management and the non-existent learning environment. Over a decade prior to this research Busby (1999) had promoted the importance of people's perceptions in achieving organisational efficiency and bemoaned the statistics that revealed these were not generally referred to or seen outside of Post-Project Reviews.

The absence of executive direction, support and involvement was regretted by most although one project manager did not think it necessary to include executives in order to leverage maximum value from Post-Project Reviews.

All of the team members believed that optimal time to conduct Post-Project Reviews in order to gain the most value was one month after project implementation which was contrary to the views of business, previously quantified. Superficially projects appeared to be successful but after more time elapsed business representatives maintained that business issues would become more apparent. This was a paradox because the project teams did not appear to have time to wait for these issues to surface.

3.3.3. Feedback from General Management

One of the managers attributed the lack of maturity in the Post-Project Review process to senior management's immaturity in this arena. The other believed that senior management input was not required because a sufficient supply of efficient tools was available to the project teams. Instead of waiting for instructions he believed that project teams should take

the initiative and implement the methodologies that they were most comfortable with. However, no governance existed to ensure this behavior again reflecting Agency Theory. At reviews one of the managers asked was whether the project should have been done at all rather than asking whether it was done in a smart way. The other manager asked “what’s in it for you?” hoping to inspire stakeholders to contribute their best and so ensure successful projects. He appeared to be the only project team member who believed that reviews should take place “after each output, at every stage, at each gate, after each delivery”, believing that everybody should be equally valued and involved in these reviews in order to elicit maximum value. He stressed the importance of soft issues, for example empathy towards personal circumstances and the creation of safe environments, to encourage people to express their true opinions and thus unearth hidden problems.

4. Conclusion

Post-Project Reviews are considered ineffectual for a number of reasons. It was apparent from this research that various role players were under-represented in these reviews, especially executive management and business teams. Although Post-Project Reviews are traditionally regarded as the domain of project teams they are not fully effective when devoid of business context (Shenhar, Dvir, Levy & Maltz, 2001). Business representatives indicated enthusiasm towards being included postulating that they would contribute significantly towards performance measurement and organizational learning. This should solve the dichotomy of views caused project teams’ self-evaluation.

While there was one leader who felt fully endowed to conduct effective Post-Project Reviews with the available resources, the majority of respondents wanted guidance from the executive level to empower them to effectively implement reviews. Although this was not strictly true it was apparent that without executive aegis lessons could not be universally distributed and applied. In addition to these constraints there appeared to be no established technique for the extraction and retention of tacit knowledge and experience, which was deemed to be highly significant to the organisational learning process.

Analysis of the research data indicates that a lot of potential value exists within the Post-Project Review process, which is not being harvested by the company in the sample. To leverage this potential value and so raise the maturity level of the review process, the following problem areas should be addressed:

- inclusion of all stakeholders, notably business and executives
- establishing common understanding between business and development project teams
- disseminating lessons learnt
- executive direction and governance

Perhaps the most important recommendation is to involve business stakeholders. The apparent separation of development project teams and business teams must be remedied. Goals should be shared in order to reach common understanding and thereby to inculcate appropriate strategies for the evolvement of truly successful Post-Project Reviews. Business must always be represented at Post-Project Reviews but other stakeholders should also be considered, for instance operational support, database support and storage. Harris (2002) maintained that excluding the rest of the organisation from measurements of effectiveness

and the detection and analysis of project mistakes removed opportunities to build on success and learn from mistakes.

Most of the respondents never referred back to the lessons learnt in Post-Project Reviews; some lessons were not even recorded. The third recommendation is to establish a learning environment with knowledge management competencies to mitigate significant erosion of the value derived from reviews. As Anbari et al (2008) posited: if there is no executive commitment there will be no organizational learning. These statements aligned to Roth et al (1998) who promoted that not only should executives be involved with reviews, the outputs should be distributed across the organization to invite company-wide participation in learning, advocating formal definition of metrics, likely practices to promote sharing, and the formal classification of actual empirical data required to enhance the published lessons. Williams (2007) continued to warn that lessons that did not result in action would be lessons observed rather than lessons learnt.

The final recommendation related to the sample company is for executive management to drive the vision, encouraging participation by diminishing the pressures of time and budget and by providing leadership which emphasizes the value of Post-Project Reviews. Their global view of company dynamics and would enable them to discern the best technique to implement the changes.

The importance of tacit data has been repeatedly emphasized. However research has proved that methods to encourage, extract, retain and disseminate tacit data are nebulous and insubstantial or simply non-existent (Schindler & Eppler, 2003; Goffin & Koners, 2011; Goes (2012). Methods to trap and utilize tacit data should be more fully investigated.

The final recommendation for further research would be to investigate why project teams are not more inclusive of business stakeholder perspective during Post-Project Reviews. This is detrimental to the comprehensive success where both business and project teams are in accord. Techniques must be sought to provoke a less biased approach and thus yield more meaningful business outcomes.

References

- Abdelmoniem, E. M., Mazen, S. A., & Hassanein, E. E. (2012a). A Framework for governance of Post-Construction activities In IS development Projects (Case study in Egyptian environment). *International Journal of Computer Science*, 9(5), 393–403.
- Abdelmoniem, E. M., Mazen, S. A., & Hassanein, E. E. (2012b). Governance of Post-Construction Activities in IS Development Projects. *International Journal of Computer Science*, 9(5), 428–438.
- Alvarez, R., & Urla, J. (2002). Tell me a good story: Using narrative analysis to examine information requirements' interviews during an ERP implementation. *The Database for Advances in Information Systems*, 33(1), 38–52.
- Anbari, F. T., Carayannis, E. G., & Voetsch, R. J. (2008). Post-project reviews as a key project management competence. *Technovation*, 28(10), 633–643.
- Birk, A., Dingsor, D., & Stalhane, T. (2002). Knowledge Management Postmortem : Never Leave a Project without It. *IEEE Software*, May/June, 43–45.

- Boddy, D., & Paton, R. (2004). Responding to competing narratives: lessons for project managers. *International Journal of Project Management*, 30(3), 225–233.
- Bose, I. (2008). Lessons Learned from Distributed Agile Software Projects: A Case-Based Analysis. *Communications of the Association for Information Systems CAIS*, 23(34), 619–632.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Busby, J. A. (1999). An Assessment of Post-Project Reviews. *International Journal of Project Management*, 30(3), 23–29.
- Carrillo, P., Harding, J., & Choudhary, A. (2011). Knowledge discovery from Post-Project Reviews. *Construction Management and Economics*, 29(7), 713–723.
- Corvellec, H. (2010). Organisational Risk as it Derives from What Managers Value: A Practice-Based Approach To Risk Assessment. *Journal of Contingencies and Crisis Management*, 18(3), 145–154.
- Denning, S. (2006). Effective storytelling: strategic business narrative techniques. *Strategy & Leadership*, 34(1), 42–48.
- Gehman, J., Trevino, L. K., & Garud, R. (2012). Values Work: A Process Study of the Emergence and Performance of Organisational Values Practices. *Academy of Management Journal*, 56(1), 84–112.
- Goes, A. d.S., Hisatomi, M., Mesquita, B.O., de Barros, R.M. (2012). Applying Lessons Learned as an Improved Methodology for Software Project Management. *IADIS – March 2012 International Conference Information Systems, Lisbon, Portugal*.
- Goffin, K., Koners, U., Baxter, D., & Van der Hoven, C. (2010). Managing lessons learned and tacit knowledge in new product development. *Research-Technology Management*, 53(4), 39–51.
- Goffin, K., & Koners, U. (2011). Tacit Knowledge, Lessons Learnt, and New Product Development. *Journal of Product Innovation Management*, 28(2), 300–318.
- Gwillim, D., Dovey, K., & Wieder, B. (2005). The politics of post-implementation reviews. *Information Systems Journal*, 15(4), 307–319.
- Harris, L. (2002). The learning organisation – myth or reality? Examples from the UK retail banking industry. *The Learning Organisation*, 9(2), 78–88.
- Hoffman, E. J., & Laufer, A. (2000). *Project Management Success Stories*. New York: John Wiley & Sons.
- Horvath, J. A. (2000). Working with tacit knowledge. *The knowledge management yearbook*, 2001, 34–51.
- Huber, G. P. (1991). Organisational Learning: The Contributing Processes and the Literatures. *Organisation Science*, 2(1), 88–115.
- Kasvi, J. J. J., Vartiainen, M., & Hailikari, M. (2003). Managing knowledge and knowledge competences in projects and project organisations. *International Journal of Project Management*, 21(8), 571–582.
- Koners, U., & Goffin, K. (2005). Learning from New Product Development Projects: An Exploratory Study. *Creativity and Innovation Management*, 14(4), 334–344.
- Korkala, M., & Abrahamsson, P. (2007). Communication in Distributed Agile Development: A Case Study Mikko Korkala and Pekka Abrahamsson. *33rd Euromicro Conference on Software Engineering and Advanced Applications (SEAA 2007)*, 303–210.

- Lam, A. (2000). Tacit knowledge, organisational learning and societal institutions: an integrated framework. *Organisation studies*, 21(3), 487–513.
- Larsen, M., & Myers, M. (1999). When success turns into failure: a package-driven business process re-engineering project in the financial services industry. *The Journal of Strategic Information Systems*, 8(4), 395–417.
- Lowendahl, B. R., Revang, O., & Fosstenlokken, S. M. (2001). Knowledge and Value Creation in Professional Service Firms: A Framework for Analysis. *Human Relations*, 54(7), 911–931.
- McAvoy, J. (2006). Evaluating the Evaluations: Preconceptions of Project Post-Mortems. *Electronic Journal of Information Systems Evaluation*, 9(2), 65–72.
- Mourkogiannis, N. (2007). The Leader's Guide to Storytelling. Mastering the Art and Discipline of Business Narrative. *Corporate Reputation Review*, 10(2), 154–157.
- Nelson, R.R., (2005). Project Retrospectives: Evaluating Project Success, Failure and Everything in Between. *MIS Quarterly Executive*, 4(3), 361-372.
- Nelson, R.R., (2010). IT Project Retrospectives: Learning from the Past through a Program of Action Research. *AMCIS 2010 Proceedings*, Paper 475.
- Pan, G., & Flynn, D. (2003). Why Information Systems Project Postmortems Fail: An Attribution Perspective Based on a Case Study Analysis. *International Conference on Information Systems*, (Paper 31), 365–377.
- Pan, G., Pan, S.L., Newman, M., Flynn, D., (2006). Escalation and de-escalation of commitment: a commitment transformation analysis of an e-government project. *Information Systems Journal*, 16(1), 3–21.
- Parnell, J.A., von Bergen, C.W., Soper, B. (2005). Profiting from past triumphs and failures: Harnessing history for future success. *SAM Advanced Management Journal*, 70(2), 36–59.
- Peppard, J., & Ward, J. (2005). Unlocking Sustained Business Value from IT Investments. *California Management Review*, 48(1), 1–31.
- Petter, S., Delone, W., & Mclean, E. R. (2012). The Past, Present, and Future of “ IS Success ”. *Journal of the Association for Information Systems*, 13(5), 341–362.
- Remus, U., & Wiener, M. (2010). A multi-method, holistic strategy for researching critical success factors in IT projects. *Information Systems Journal*, 20(1), 25–52.
- Roth, G., & Kleiner, A. (1998). Developing organisational memory through learning histories. *Organisational Dynamics*, Autumn (27), 43–59.
- Sauer, Chris; Reich, Blaize Horner (2009). Rethinking IT project management: Evidence of a new mindset and its implications. *International Journal of Project Management*, 27(2), 182-193.
- Saunders, M., Lewis, P., & Thornhill, A. (2011). *Research methods for business students* (5th ed.). Pearson.
- Schindler, M., & Eppler, M. J. (2003). Harvesting project knowledge: a review of project learning methods and success factors. *International Journal of Project Management*, 21(3), 219–228.
- Shenhar, A J; Dvir, D; Levy, O; Maltz, A C (2001). Project Success: A Multidimensional Strategic Concept. *Long Range Planning*, 34(6), 699–725.

- Smith, D. C., Bruyns, M., & Evans, S. (2011). A project manager's optimism and stress management and IT project success. *International Journal of Managing Projects in Business*, 4(1), 10–27.
- Smith, D. C., & Crossland, M. (2008). Towards Realizing the Value of Business Intelligence. *IFIP International Federation for Information Processing*, 274(1), 163–174.
- Smith, D.C. & Dombo, H. (2008). Benefits Realization Management in Information Technology Projects, *PICMET '08 International Conference on Management of Engineering & Technology*, Cape Town, 1442-1455.
- Smith, E. (2001). The role of tacit and explicit knowledge in the workplace. *Journal of Knowledge Management*, 5(4), 311–321.
- Soderlund, Jonas; Vaagaasar, A. L., Andersen, E. S. (2008). Relating, reflecting and routinizing: developing project competence with others. *International Journal of Project Management* 26(1) 517–526.
- Styhre, A., Josephson, P., & Knauseder, I. (2004). Learning capabilities in organisational networks: case studies of six construction projects. *Construction Management and Economics*, 22(9), 957–966.
- The Business Dictionary. Retrieved May 8, 2013, from <http://www.businessdictionary.com/>
- Vasilachis de Gialdino, I. (2009). Ontological and Epistemological Foundations of Qualitative Research. *Forum: Qualitative Social Research*, 10(2).
- Von Zedtwitz, M. (2002). Organisational learning through Post-Project Reviews in R & D. *R&D Management*, 32(3), 255–268.
- Wagner, E. L., & Newell, S. (2007). Exploring the Importance of Participation in the Post-Implementation Period of an ES Project: A Neglected Area. *Journal of the Association for Information Systems*, 8(10), 508–524.
- Williams, Terry. (2004). Identifying the hard lessons from projects – easily. *International Journal of Project Management*, 22(4), 273–279.
- Williams, T. (2007). *Post-Project Reviews to gain effective lessons learned*. Project Management Institute. Project Management Institute.
- Winter, M., & Szczepanek, T. (2009). *Images of Projects*. Gower Publishing Limited.