

What the Papers Say - Analysis Pro Forma

This pro forma should be used as a guide when reading papers for discussion.

Paper Title:

The utility of rapid application development in large-scale, complex projects

Authors: Berger, H. & Beynon-Davies, P (2009)

Reviewer: Henri Kuijl

Your Summary of Content of Paper:

Rapid Application Development (RAD) is seen as an Information systems development method (ISDM). According to the authors RAD is confirming many principles of the Agile Manifesto. The perception of RAD application is that it is typically appropriate for small/mid-sized projects, with low level of back-end complexity and high levels of front-end interactivity. Using an interpretive stance authors describe a case study at one governmental organisation in the UK. This is a large project with 540 staff and over £200 million annual payments. With this case study the tendency of RAD only being applicable for small/mid-sized projects is challenged. The results support previous research that agile/RAD is problematic in rigid, large and complex environment. The cultural and management style within the organisation impacted the progress of the project and only after 2/3 years and a management intervention the RAD approach proved valuable, backing the statement that RAD is not a static process or decision, but it evolves during the project.

A: Quality of the Research

Item	Your Comments
<i>1. Is the research question or objective clearly stated?</i>	The question is stated in the abstract and it clearly identifies the investigation and case study objectives. The abstract is missing focus on what proof is sought, missing a clear thesis and omits a summary of findings to trigger further reading.
<i>2. Is the research question interesting and important?</i>	Low-code and no-code platforms like Mendix, WEM, Betty Blocks are increasing market exposure. These platforms are based on the RAD model. According to ResearchAndMarkets.com (accessed 25 th sept. 2019) the RAD market in 2023 is expected to grow 6 times the value of 2018. It is expected that the market growth is not only including small/midsized project, so it is interesting to find the application of RAD on large complex projects. This is important because behavioural, cultural and management style issues become more relevant in large projects where Agarwal, Prasad, Tanniru & Lynch (2000) found that RAD risks include declining emphasis on planning & modelling and unrealistic management expectations.

<i>3. Is the work original?</i>	The work is original in the sense that it is presenting a unique case study. The findings in this paper are not new. In 2000 Agarwal et al. (2000) already argues that RAD includes managing cultural change, what was one of the main issues why RAD did not really work appropriately in the first 2-3 years in the case study. On top of that Agarwal et al. (2000), present a study of RAD application in 19 companies with an average of 2.837 employees. One of the findings is that RAD works well in situations with uncertain relationship between structure and development practice. What is presented in this paper is that the blame culture was a dominant aspect in the project. This is not new. Howard (2002) argues that when using RAD, success relies on attitude as much as on skills and tools. RAD founder James Martin (quoted in Agarwal et al., 2000) already emphasized on managing cultural change and potential resistance.
<i>4. Is the background research clear and relevant?</i>	The research is clear and based on qualitative data collection. More insight with tables with number of interviews, results etc. would create a better understanding of the research during the 3 years case study. The research includes interviews, observations and collecting and reading data. The project and institutions' environment and impact on the project is presented, with having the role of the EU mentioned. Further stakeholders, political, ethical and legal aspects are not presented.
<i>5. Are there any ethical problems?</i>	Transcriptions of the interviews are checked by the interviewees; unclear how personal data is stored and what data is saved and what is deleted.

B: The Research Method

Item	Your Comments
<i>Summarise the research method</i>	The three years research in this case study contains: observations across various project settings, document analysis and in-depth interviews with project participants.
<i>Does the research method seem appropriate for the research question?</i>	The focus in the research is on qualitative information, based on the research question whether RAD can appropriately used for large complex project, quantitative research would have made answering the question in more detail possible and increase support for stronger conclusions. The research is limited as the case study only includes one UK Government institution. Answering the research question based on one project within one organisation is putting questions to the findings. Would RAD turn out to be more applicable in different cultural settings?
<i>Are the methods adequately described?</i>	The research method is described in general terms like, 'continual non-participatory observation', 'a number of project documents were collected'. More adequate description is needed, where quantities of meetings attended (including type of meetings) documents (including type of documents) are described. Insight in a timeline with what is undertaken when, would add to underpin the finding that in the beginning RAD was not adding value, having a lot of resistance what was fading away after 2-3 years.

<i>Were the analyses done correctly?</i>	As this is a qualitative research and details (see above) are not presented, the link between the analysis and the finding is weak with a main conclusion "leads us to speculate that ISDM adoption and application is not a static process...."
<i>Are the conclusions supported by the data?</i>	Besides the number of interviews (126) there is no data presented, conclusions are more an opinion from the authors. What is expected in this kind of situation: reflection, limitations and recommendations on topics for further research; all these are missing.

C: Quality of Presentation

Item	Your Comments
<i>Is the work well presented?</i>	The work is presented well, with clear sub titles. Some titles are not clearly linked to the content of the paragraph or vice versa.
<i>Is the paper well structured?</i>	The structure of the paper is readable, but some paragraphs / titles are not clear within the structure, mainly as some parts (like "RAD as an ISDM") are not contributing to the flow towards the conclusions.
<i>Are symbols, terms, and concepts adequately defined?</i>	Terms are all explained in the text. Concepts are adequately defined with reference to prior research.
<i>Would additional tables, figures help to clarify the work?</i>	There are no tables, figures included in this paper, this would have helped significantly to understand the content of the case study and the research.

D: Additional Notes

<i>Use this section to record additional notes on the paper. In particular you should identify any links to other topics and papers from the module</i>	The interpretive approach is showing from the qualitative information in the paper. At the time of writing / publishing of this paper the critical research stance in IS was available. Applying this stance would have brought more view on cultural aspects as from the start of the study/project. Focus on the transition would have helped the research to find the key elements during the project for the final adoption. Based on the principles as presented by Myers & Klein (2011), the research and case study would have had increased value when the authors had included a value proposition. Applying the principle of revealing and challenging prevailing beliefs and social practices (Myers & Klein, 2011) would have made available the present cultural and ethical values with its impact.
---	---

Reference list

- Agarwal, R. Prasad, J., Tanniru, M. & Lynch, J. (2000). *Risks of Rapid Application Development*. Communications of the ACM. p 177-188.
- Berger, B. & Beynon-Davies, P. (2009). *Rapid application development in large-scale, complex projects*. Information Systems Journal. 19 pp 549-570.
- Howard, A. (2002). *Rapid Application Development: Rough and Dirty or Value-for-Money Engineering?* Communications of the ACM. Vol. 45. (10) pp27-29.
- Markets.bussinesinsider.com (2017). *Survey finds 74 percent of IT professionals see low-code solutions as key to rapid application development*.
<https://markets.businessinsider.com>. PR Newswire Association LLC. Accessed 25th of September 2019.
- Meyers, M. & Klein, H. (2011). *A set of principles for conducting critical research in information systems*. MIS Quarterly Vol. 35 (1) pp. 17-36.
- Researchhandmarkets.com (2019). *Rapid Application Development (Low-code and No-code) Market – Global Forecast to 2023*. www.researchhandmarkets.com accessed 25th of September 2019.