Author's response to reviews

**Title:** The Status of IT Service Management in Health Care - ITIL in selected European Countries

**Authors:**

- Alexander Hoerbst (alexander.hoerbst@umit.at)
- Werner O Hackl (werner.hackl@umit.at)
- Roland Blomer (roland@blomer.de)
- Elske Ammenwerth (elske.ammenwerth@umit.at)

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**Author's response to reviews:** see over
Dear reviewers,

We would like to kindly thank all of you for your useful remarks on our submission. We tried to integrate them as good as possible and hope that we were able to increase the clarity, quality as well as the structure of our paper. Our answers to the comments are colored in blue and written in italic letters.

General Remark: Major grammatical mistakes were corrected according to the comments of the reviewers. In case the paper is finally accepted a further review by a native speaker will be conducted if desired to further increase the quality of written English.

Review Miguel Mira da Silva:

- **Comment:** It’s not clear how the return rate can affect the results, in particular if there is any bias. For example, are the hospitals that answered bigger than those that not answered? If yes, maybe the reality is even worse since the results obtained only show the better part of the truth.

  - **Reply to reviewer:**
    
    I totally agree with you that the number of hospitals – with regard to the basic population – that do not have ITIL implemented is likely to be higher than the number presented in this paper. On the other side organizations need a certain size in order to allow the reasonable implementation of ITIL although certain parts or ideas may even be implemented in smaller organizations. As this study is an explorative one, we have chosen to select the biggest hospitals where, from a theoretical position, it should be most likely to find ITIL implementations in order to get a first insight.

- **Comment:** Why are the countries/regions so important in this paper? Are the results affected by the "channel" used in the interviews (personally, telephone, online) and/or type of hospital?

  - **Reply to reviewer:**
    
    Countries and regions in this survey do indeed have a central role as we wanted to investigate – apart from the general use/adoption of ITIL – if the different “traditions” and healthcare systems in the respective countries influence the use and adoption of best practices such as ITIL. As we are planning to conduct follow-up studies this is regarded as one of the starting points to generate further hypothesis. We do not assume that the results are generally affected by the channel, as data was collected using a standardized questionnaire. In addition interviewers were trained and a pre-study was conducted in order to validate the questionnaire. We also compared data after collection with regard to collection channel but could not find differences.

- **Comment:** The sentence "two out of 5 ITIL hospitals said that their expectations with regard to the benefits of ITIL were not met" is not supported by data in the Results section.

  - **Changes on the article:**
    
    The respective information was added to the results section.
- Comment: Some minor typos -- such as "95 %" (instead of 95%) and "two-third" instead of two-thirds -- as well as captions separated from their tables/figures.

- Changes on the article:
  - The typos mentioned were corrected and the manuscript was again carefully checked for additional errors and omissions.

- Comment: In the discussion it’s not obvious at all that "one precondition to promote ITIL is further training" since one can argue exactly the opposite. In fact, this is probably a "chicken and egg" problem.

- Reply to reviewer:
  - We agree on your comment, although it was taken from a reference.

- Changes on the article:
  - A respective comment was added to the concerning discussion section, indicating this problem.

- Comment: It’s a pity you did not ask which were the "different priorities" in the question about the major reasons to not introduce ITIL. This answer is fundamental to this research area.

- Reply to reviewer:
  - You are absolutely right that this is a very important question. As the current study was intended to provide first explorative results with regard to the introduction/implementation of ITIL in healthcare in order to be able to allow more specific follow-up studies aiming at the detailed analysis of selected phenomena, we had to stay general in a certain way. We are planning further studies so this will definitely be in our focus.

**Review Marko Jäntti:**

- Comment: On chapter 4 Methods, the research questions are presented. The questions are well formulated but authors should define a general research problem that integrates research questions together, for example, by using the third sentence of Page 5. The main objective of the study is to answer the following research problem: howfar...

- Changes on the article:
  - The methods section was changed and a research problem was added before the research questions.

- Comment: 2.1 Authors have used a survey research method although they do not mention it clearly in the paper. Interviews are mentioned as a data collection method but they are not a research method. Major Compulsory Revision: Authors should tell that they use survey and also provide information about limitations and benefits of the survey research method.

- Changes on the article:
  - The methods section was adapted a subsection Study design was added introducing the use of the survey research method.

- Comment: 2.2 Discretionary Revision: Tell why survey methods is best for your study Survey method suits well to the study while it is especially well functioning method for answering questions about what, how much and how many.
Changes on the article:

- The methods section was adapted a subsection Study design was added introducing apart from the survey research method the reason for choosing this method.

Comment: 2.3 Major Compulsory Revision: Authors should pay attention to data analysis and write more about how results were grouped, how content analysis were carried out...

Changes on the article:

- The paragraph regarding data analysis was completely changed and extended. We added a paragraph on the analysis of closed questions as well as open question. We have also provided details about the content analysis and the statistics used for the current study.

Comment: 3.1 Major Compulsory Revision: Authors state that there are few academic studies that deal with ITIL adoption in hospitals. That is true. However, in that case authors should provide some examples of ITIL case studies from other domains. Authors should make a deeper literature analysis on ITIL-related studies. This would help authors to better position their paper to other studies.

Reply to reviewer:

- We have conducted a deeper literature analysis with regard to ITIL and ITIL related case studies.

Changes on the article:

- Further references with regard to similar results from other studies were added to the results section. The discussion section was also expanded by giving further references to ITIL related studies. In addition a whole new paragraph discussing related studies from other domains was added.

Comment: 3.2 Discretionary Revision: Regarding hospital-related ITIL studies, authors could explore and perhaps cite the following papers: - Lessons Learnt from the Improvement of Customer Support Processes: A Case Study on Incident Management; - Defining Requirements for an Incident Management System: A Case Study

Changes on the article:

- One of the studies was added as reference to the article.

Comment: 3.3 Discretionary Revision: Regarding ITSM frameworks, authors list ITIL, Six sigma, ETOM, MOF, COBIT. Additionally, IT Service CMM could be mentioned.

Changes on the article:

- IT Service CMM reference was added to the paper.


Changes on the article:

- A reference to ISO 20000 was added to the text.

Comment: 3.5 Discretionary Revision: Authors could also state the difference between ISO/IEC 20000 Part1 and Part2.

Changes on the article:

- The difference between Part 1 and Part 2 was added to the corresponding paragraph of the text.
Comment: 3.6 Discretionary Revision: I would like to know whether a question form was pilot tested before actual interviews. 75 hospitals participated in the survey, thus survey results are useful for European healthcare IT decision makers to show the direction where healthcare IT is going.

Reply to reviewer:

- The interview guidelines/questionnaire was tested and adapted before actually used for the interviews. See also chapter 4.2.2. Data collection.

Comment: 3.7 Discretionary Revision: Authors state that return rate was 47,5. It would be interesting to know whether authors tried to improve the response rate with some methods or what happened if IT manager was not accessible.

Reply to reviewer:

- If IT managers basically agreed to take part in the interviews or did not answer our first invitation we sent two reminders respectively tried to call them twice (depending on the first type of contact by telephone or email) before we took them from the list of interviewees.

Changes on the article:

- A sentence stating the number and type of reminders was added to the study limitations section.

Comment: 5.2 Minor Essential Revision: Study Limitations Line 4: It was not possibly -> Possible

Changes on the article:

- Changed accordingly.

Comment: 8.1 Discretionary Revision: Title and abstract are well formulated but I would personally leave R (Registered trademark) away from the end of ITIL.

Reply to reviewer:

- As ITIL is a registered trademark we are not sure if the “R” is necessary therefore prefer to leave it that way although we agree with you that the readability is decreased by the “R” and personally prefer to leave it.

Comment: 9.2.1 Chapter 5.3 IT-Service Management -> IT Service Management

Changes on the article:

- Changed accordingly.

Comment: 9.2.2 References Tan W-G, Cater -Stel A, Toleman M. IMPLEMENTING IT SERVICE MANAGEMENT: A CASE STUDY FOCUSING ON CRITICAL SUCCESS FACTORS. -> Cater-Steel

Changes on the article:

- Changed accordingly.

Review Aileen Cater-Steel:

- The data is presented in a misleading way. For example, there were 75 responses, 5 were implementing ITIL – that is 6%. It is reported in Table 8 as 13% as non-response is ignored.

Reply to reviewer:
Thank you for this important comment. We updated all respective tables and included the numbers of non-respondents and updated the calculations accordingly. Concerning table 8 as well as tables 10, 14 and 15 our original text might have been misleading as we have only asked the corresponding questions to representatives stating to be familiar with ITIL (N = 43).

This is also relevant for tables 7 and 9 but in these cases multiple answers were possible so the actual number of answers is higher.

- Changes on the article:

  - Corresponding paragraphs changed and clarification with regard to the specific sample for these questions added. All affected tables were again checked and updated accordingly. Table captions were also updated.

- Comment: The headings in tables 2-10 are incorrect. The maximum in each column is highlighted, not each row.

- Reply to reviewer:

  - Thank you for this valuable comment. Somehow this error must have propagated through the whole paper.

- Changes on the article:

  - All table headings were changed accordingly.

- Comment: Section 6.6 Study Limitations states the study is intended to act as a pilot study. This is not mentioned earlier and 75 hospitals is a large number for a pilot. One is left wondering about the details of the main study?

- Reply to reviewer:

  - We agree with you that it has not been mentioned earlier in the text that this is intended as a pilot study which should have been done. We also want to point out that we completely agree with you that for a pilot study this would be a large number of hospitals but the actual study is not exactly intended as a pilot study in a conventional sense. The main purpose of the study is to provide data in order to allow more detailed and hypothesis-based studies with regard to ITIL. Therefore the term pilot study may have been misleading and we should have better used explorative study.

- Changes on the article:

  - The limitations section was changed; the term “pilot study” was deleted. Instead the methods – study design section was extended by providing details about the purpose of the study.

- Comment: Details of the data collection instrument are brief. It is not clear what options were presented to the respondents – “a given set of possible answers”. For example, in section 5.4, table 7, 7 respondents selected ‘other benefits’ – what were these benefits? Were only three reasons provided? On what basis were these reasons selected? From prior research?

- Changes on the article:

  - The paragraph regarding data analysis was completely changed and extended. We added a paragraph on the analysis of closed questions as well as open question. We have also provided details about the content analysis and the statistics provided for the current study.

  - We have added more information to the results section stating answers given for the “other” category of the respective questions.
- **Comment:** There is no theoretical foundation and very little prior academic research on ITIL or ITSM is reviewed.

- **Reply to reviewer:**
  - We have now conducted a deeper literature analysis with regard to ITIL and ITIL related case studies.

- **Changes on the article:**
  - References from other studies were added to the results section contrasting the results of the current study. We have also added more references to the discussion section again contrasting our results. In addition we have added a whole new paragraph on related studies from other domains in order to better position the results from our study.

- **Comment:** The data is outdated – collected early 2008. Only 5 of 75 had implemented any ITIL processes. A further 8 intended to implement ITIL in the next 2 years. So they would have by now.

- **Reply to reviewer:**
  - We do agree that data collection was finished by the end of 2008 but do have to say that the publication of the results by the end of 2010 is due to various reasons based on the specific organizational attributes/conditions of this study. As we have involved hospitals from different countries and have indeed questioned them about internal matters it was extremely difficult to align the results collected with all the hospitals in terms of the permission to publish and especially compare them. The majority of hospitals did only take part in the study under the condition to be able to decide on the publication of their results based on the final data analysis.
  - From a results perspective we do not spot a serious problem with our data although we agree that certain numbers may have slightly changed over time. Our study is not intended to provide representative numbers in terms of an exact number of hospitals having ITIL implemented but intended to provide the reader with a first insight on the adoption of ITIL in the healthcare sector which is so far not existing (even up to now) in the regions we examined. It is of special importance to us, that readers are provided with evidence based information about the reasons for (not) implementing/adopting/accepting ITIL respectively ITSM in the healthcare sector in order to allow the generation of hypothesis and further detailed research on this subject.

- **Comment:** In section 1.2, it is important to state that organisations can be certified to ISO/IEC 20000.

- **Reply to reviewer:**
  - As this was intended to be one of the core messages with regard to the paragraph on ISO/IEC 20000, we have clarified and extended the paragraph with regard to your comment.

- **Changes on the article:**
  - Paragraph on ISO/IEC 20000 was extended and clarified.

- **Comment:** Needs some language corrections. The English expression is awkward and needs to be edited e.g. managers ‘say to be’ – should be ‘claim to be’. ‘Respondents that felt’ – should be ‘respondents who felt’. ‘How far are the...’ – ‘should be how advanced are the...', the next group ‘form’ – should be ‘from’, very few ‘implementation’ – should be ‘implementations’

- **Changes on the article:**
  - Text was changed accordingly respectively publication was checked again for errors and omissions.