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Summary:

This study focuses on the success of process mining, an increasingly popular practice used to discover, monitor and improve real-world processes by extracting knowledge from the event logs of information systems. It proposes a model adapted to the characteristics of process mining projects, which identifies, links and measures success factors: Priori Model.

Then, despite numerous publications on process mining algorithms, there is little information on success factors. The study developed an a priori model of success, including three measures of success (model quality, project efficiency and process impact) and five success factors (structured approach to process mining, quality of data and event logs quality of data and event logs, management support, process miner expertise and personal and personal skills), adapting the existing success model with factors specific to process mining. Validation of the model was carried out through a case study involving four process mining projects and using Bandara's methodology. The results underline the importance of the process miner's expertise and suggest specific measures of success. Despite certain limitations related to sample size, the study offers valuable insights for understanding and measuring process mining success.

The first stage of the A Priori method consists in identifying the elements needed to build the model. a literature review in the fields of information systems, business process modelling and data business process modelling and data mining, as well as an analysis of 15 academic publications academic publications describing real-world applications of process mining. Using Grounded Theory procedures, measures of success and potential factors were identified. These data were imported into the NVivo tool for open and axial coding. By integrating these elements with the process modelling success framework, a hypothetical a priori model of process mining success was built.

The second stage of the research methodology involved a multiple-case study aimed at generating empirical insights to evaluate and re-specify the a priori model. The study of was adopted to overcome the lack of generalizability of single case studies and thus to cover different categories, based on information system types and process complexity of processes. Four process mining projects were selected for the case study, with the following main objectives

1. Understand the plate scanner testing process.
2. Analyse the purchase-to-pay process via SAP implementation.
3. Study the cancer radiotherapy treatment process.
4. Gain a deeper insight into their treatment process.

Each case was defined as a single process mining project, and two interviews were conducted were conducted for each case with people involved in the process mining and the project managers.

The final stage of the research involved using the results of the case studies to validate and, if necessary, adjust the initial model. validate and, if necessary, adjust the initial model. In line with Bandara's methodology, the case study case study data were analysed to determine whether all the important concepts (Top management support, project management, resource availability, model expertise, model aids, model quality, process impacts, project efficiency) are included in the Priori model. Inter-case analysis was carried out by comparing, for each concept across the different case sites, the number of general quotes, important quotes and "unimportant" quotes. importance" quotes. Interview data were used to count the number of quotes for each concept. each concept. This information was summarized in an inter-case comparison matrix created in Nvivo using a matrix coding query.

To test for redundancy and relationships between concepts, a matrix intersection search was carried out, identifying text passages coded under several concepts. The Nvivo tool was used to check these specific cases. The results of these procedures were combined to re-specify the a priori model based on the case study data, following a logic like Bandara's. And in the event of redundancy or irrelevance, the model is adjusted more accurately reflect the critical and relevant elements identified during the case studies.

In conclusion, the study fills a gap in understanding the success of process mining a fast-growing practice for extracting knowledge from event logs in information systems. Although there are numerous publications focus on process mining algorithms, very few address the factors and measures of success. The aim of this study is to remedy this shortcoming. And the study highlights the crucial importance of the process miner's expertise as a key success factor and offers insights into the similarities and differences between process modellings. In addition, it suggests exploring how established practices in process modelling can enhance the success of process mining projects.

Supported by a software application? (If yes, provide more details)

No, the paper is not supported by a software.