The Influence of Using Collapsed Sub-processes and Groups on the Understandability of Business Process Models

Oktay Turetken, Ahmet Dikici, Irene Vanderfeesten, Tessa Rompen, Onur Demirors

Business & Information Systems Engineering (2019)

Appendix (available online via http://link.springer.com)

Survey Material

The complete set of process models and the questionnaire used for the experiment are available online at http://goo.gl/MwFqMG.

PART 0A: Process Modelling Intensity and Experience

QA1. How often do you encounter process models?

(Never; Less than once a month; More than once a month; Daily)

QA2. When did you first work with process models in practice?

(Less than a month ago; Less than a year ago; Less than three years ago; More than three years ago; Never encountered a process model)

PART 0B: Perceived Level of Knowledge on Process Modelling and BPMN 2.0

QB1. How would you rate your level of knowledge on process modelling?

QB2. How would you rate your level of knowledge on BPMN 2.0?

(Not knowledgeable about; Somewhat knowledgeable about; Knowledgeable about; Very knowledgeable about)

PART 0C: Domain Familiarity

QC1. How familiar would you consider yourself with the concept of Corrective Action & Preventive Action (CAPA) and related processes (which relate to handling large-scale problems/issues of a manufacturing company regarding its products)?

(Not at all familiar; Slightly familiar; Somewhat familiar; Moderately familiar; Extremely familiar)

PART 1: Business Process Modeling Competency Test: Available at https://goo.gl/Kf96xH

PART 2: Understandability Questions – Process-A

Q1. If the rationale for not performing containment actions is reported in the CAPA Request Form for a case, then how many times the Define containment actions activity must have been executed for the same case?

- Zero or more times
- Zero times and not more than that
- At most once
- At least once

Q2. Who will know that the CAPA Request is accepted after a positive opinion of the CAPA Review Board?

- Only CAPA Manager
- Only CAPA Owner
- Only Requester
- Both CAPA Manager and the Requester

Q3. If the planned actions for the CAPA are executed, who will receive the Execution Summary Report?

- Only CAPA Manager
- Only CAPA Review Board
- Either CAPA Manager or CAPA Review Board
- Both CAPA Manager and CAPA Review Board

Q4. How does the CAPA Owner receive the CAPA Review Board's 're-investigate' message?

- Through the Investigation Manager
- Through the CAPA Manager
- Directly from the CAPA Review Board
- CAPA Owner does not receive such a message

Q5. Which messages are exchanged between the CAPA Requester and the CAPA Owner?

- CAPA Request
- CAPA Final Report (& Manager's Summary)
- All of above
- None of above

Q6. After measuring the effectiveness of actions for a case, under what condition the CAPA Owner should NOT send the CAPA Effectiveness Assessment Report for evaluation?

- When waiting time of N time unit is still not over.
- Only when there is no sufficient evidence collected (about the effectiveness or ineffectiveness of the actions).
- When there is no sufficient evidence collected (about the effectiveness or ineffectiveness of the actions) and the time period allocated for the effectiveness check is not over.
- Only when the time period allocated for the effectiveness check is not over.

Q7. Who execute(s) the final activity in the CAPA process for an accepted CAPA case?

- Both Requester and CAPA Owner
- Requester
- CAPA Owner
- CAPA Manager

Q8. If the CAPA Review Board receives an Investigation Report, which was rejected by the board in the first time, how many times should this report have been pre-checked by the Investigation Manager?

- Exactly Zero times
- Exactly Once
- Exactly Two times
- Two or more times

Q9. If the CAPA Owner is performing a root-cause investigation for a case, which of the following activities of the CAPA Manager must have been performed only once for the same case?

- Sending 'CAPA Request Rejected' message
- Sending 'Rework on CAPA Request' message
- Sending CAPA Request Approved message
- None of above

PART 3: Perceived Understandability for Process A (Repeated also as PART 5 for Process B)

(For all items: Strongly disagree; Moderately disagree; Somewhat disagree; Neutral; Somewhat agree; Moderately agree; Strongly agree)

Perceived Usefulness for Understandability (PUU)

- Business process models represented in this way would be difficult for users to understand.
- I think this presentation approach provides an effective solution to the problem of representing business process models.
- Using this type of process models would make it more difficult to communicate business processes to end-users.
- Overall, I found the business process model in this experiment to be useful.

Perceived Ease of Understanding (PEU)

- Learning to use this way of modelling business processes would be easy for me.
- I found the way the process is represented as unclear and difficult to understand.
- It would be easy for me to become skillful at using this way of modelling business processes.
- Overall, I found this way of modelling business processes difficult to use.

PART 4: Understandability Questions – Process-B

Q1. If the Requestor/SRRT receives a request for missing information, how many times must the CHU administrator have sent a request for missing information?

- Zero or more times
- Zero times and not more than that
- At most once
- At least once

Q2. What happens to the submitted service order when it does not meet the definition of a complaint?

- The CHU Administrator sends a request for missing information
- After documentation and informing the appropriate business entity, the process ends
- The complaint process terminates without further actions
- Hazardous situations have to be considered before the case can be closed

Q3. Who will be notified if the complaint concerns a product which is not manufactured, nor distributed or serviced by MR with a serious death or injury?

- Only the Requestor/SRRT of the complaint receives a message
- The Requestor/SRRT and the CHU Review Team
- The Requestor/SRRT of the complaint, the OEM manufacturer, and the FDA
- The FDA, and the OEM manufacturer

Q4. How does the CHU Specialist receive the complaint record after the investigation team finishes the investigation?

- Directly from the CHU Review Team
- Through the CHU Administrator
- Directly from the Investigation Team
- The CHU Specialist does not receive the complaint record

Q5. Who is responsible for performing “task corrections” during the investigation of the complaint?

- Main Investigator/Investigation Team
- CHU Specialist
- CHU Review Team
- None of the above

Q6. After the CHU specialist has completed the OEM investigation, what actions have to be completed before the complaint can be assigned to the investigator?

- Only the Risk Assessment has to be approved before the assignment to an investigator can take place
- Only the control of risks, and the risk/benefit analysis have to be completed before the assignment to an investigator can take place
- Only the Risk Assessment and the Adverse Event Reporting have to be approved before the assignment to an investigator can take place
- Only the review against Risk Management File (RMF) has to be completed before the assignment to an investigator can take place

Q7. Which of the following messages is exchanged between the Main Investigator/Investigation Team and the CHU Administrator?

- The Risk Assessment
- The Complaint feedback
- Missing requirements request
- None of the above

Q8. Who will know that the Adverse Event Reporting is approved by the CHU Review Team??

- The CHU Specialist
- Main Investigator/ Investigation Team
- Both CHU Specialist and the Main Investigator/ Investigation Team
- None of the above

Q9. If the Risk Assessment conducted by the CHU Specialist has been approved by the CHU Review Team, how often has the CHU specialist performed a Risk/Benefit Analysis?

- Zero or more times
- Zero times and not more than that
- At most once
- At least once