

Apprenticeship Learning (AL)

Data gathering



Apprenticeship Learning (AL)

Apprenticeship learning, a special form of participant observation,

- enables process engineers to **view business processes through the eyes of the workers** by being trained like an apprentice;
- helps to **bridge the communication gap** between workers and the (mostly external) professional process engineers;
- **enables the process engineers to experience firsthand strengths and frequent exceptions** of the processes to be designed.



Apprenticeship Learning



Apprenticeship Learning Method description

- The method is conducted at the employee's desk.
- The process-engineer and employee exchange their roles. The process-engineer tries to personally perform the tasks of the employee. The employee supports and trains the process-engineer.
- For both (the employee and the process engineer) it is a new view at the work: The employee has to think about what he/she usually does in an intuitive way. The process engineer performs the tasks which he/she has only seen before.
- In this process, „tacit knowledge“, hidden in the activities, is being revealed. The process characteristics sink deeply into the memory of the process engineer while he/she performs it.

Apprenticeship Learning Application

- > The first step is to perform the chosen activity (part of the process) and to simultaneously document the proceedings (with the help of another project team member or audio or video technology)
- > Afterwards, the information and impressions gathered are structured, and transferred to the picture card model (if possible, with the employees and management).
- > It is very important that the process engineer personally conducts each work-step. Otherwise important details may be neglected. Special situations can be covered by using simulation or the thinking-aloud method.

Professional Application

- > Beware of the fact that employees fear that others might take their work place.
Therefore a phrase like “May we exchange our roles for a short moment.” will help in explaining what you want to do.
- > Apply the pure AL approach wherever possible. The Thinking-Aloud approach is good, but not as good as the pure AL.

Methods used from analysis to design and continuous improvement

Participatory Interaction Analysis Picture Card Design Method

- > Systems Integration.
- > Outsourcing.
- > Infrastructure.
- > Server Technology.
- > Consulting.

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Participatory Interaction Analysis ^(PIA)

> Recording the activities and interactions of employees in their natural work surroundings

- Can be analyzed as often as desirable
- Can be analyzed from different focus points
- Allows for detailed analysis
- Increases the acceptance of the analysis results by involving the employees affected by the BPM project
- Increases the capability and willingness to change

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Participatory Interaction Analysis (PIA)

Participatory Interaction Analysis (in short: PIA) uses video technology for the multidisciplinary analysis of relevant characteristics of current process.

Goals:

- To reduce process complexity through in-depth and/or overall views
- To increase awareness of current process strength/improvement potential
- To serve as catalyst in teams with multidisciplinary terminologies
- To provide multidimensional support for reflection

Special version of PIA: *Personal Video Analysis (PVA)*

To support regular personal reflection so that workers can trigger process improvement *themselves*



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Participatory Interaction Analysis (PIA)

PIA makes it possible to:

- **Master the complexity and dynamics in the current state of the BP**
- **Include the employee in the analysis to collect realistic data and to analyze in detail**
- **Foster the thinking process of the employees**
- **Increase the willingness to change (and therefore becomes a catalyst in the design of optimal BP)**
- **Support continuous improvement (PVA)**

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Participatory Interaction Analysis (PIA)

Other advantages:

- Retains complexity and dynamics of the real situation: no pre-selection and/or assessment by the analyst
- Eliminate problem of conscious or unconscious filtering: by the consultant: ensure authenticity
- Provides a permanently available database: analyze as often as desired, different viewpoints, with experts from different departments (avoid one-side experiences and opinions)
- Slow motion, still photo etc: analyze interaction, movements,... in great detail

Participatory Interaction Analysis (PIA)

Steps:

1. Preparation
2. Video recording
3. Preliminary analysis
4. Preparation of content logs
5. PIA session

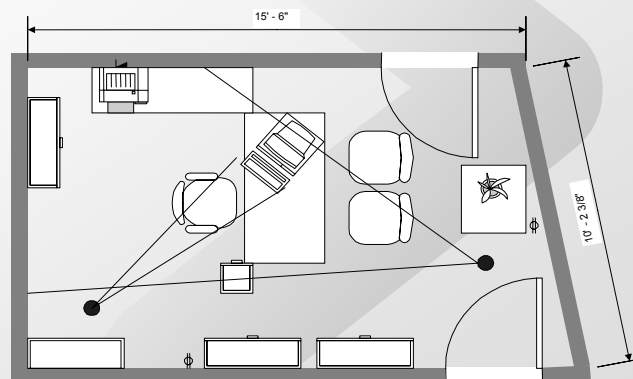
Participatory Interaction Analysis (PIA)

Preparation

- > Get an overview of the current state of the BP (other methods)
- > Rough overview of assignments in the BP
- > Aids and documents used
- > Details of the localities (light and noise sources, electric outlets, paths employees take during the execution of their tasks, places of communication,.....)
- > Ensure optimal camera position: minimal camera effect, several cameras to record from different angles
- > Creation of relationship of trust (written confirmation of rights)
- > Room sketches

Participatory Interaction Analysis (PIA)

Sketch for positioning of cameras



Office Layout

Participatory Interaction Analysis (PIA)

Video recording:

- > Different cameras for several views
- > More extended views of work area (communications, where one goes, where one comes from,...)
- > Record the actual time (selective use of different views)
- > Sound quality

Participatory Interaction Analysis (PIA)

Preliminary analysis:

- > BPM consultant and employees directly affected (protected atmosphere)
- > Remove possible insecurities or fears
- > Realise focus is not on people but on the execution of their work in the BP
- > Enhances the understanding of the BPM consultant: stop video, question employees, ask for more detail,.....: necessary for the next steps

Participatory Interaction Analysis (PIA)

Content logs

- > Define hot spots to be analyzed in detail
- > Document in form of content logs (gives an overview of the recordings to be analyzed)
 - Time-tape-description of activities

Participatory Interaction Analysis (PIA)

PIA session:

- > Interdisciplinary work sessions: BPM consultants, ICT consultants, employees directly affected, employees of tasks that occur just before and/or after (contribution to the understanding of the BP)
- > Hot spots are presented
 - 1st showing:
 - Comments-questions: tape is stopped: employees discuss and answer
 - Statements by BPM consultant: purely observatory and not interpretive !!

Participatory Interaction Analysis (PIA)

- 2nd showing:
 - Constructive questions
 - Solution-oriented approach (no focus on problems, no blaming): emphasis on observed strengths
 - Positive atmosphere : encourage employees to find solutions themselves, together
 - Work-out strengths
 - Detect probable improvement possibilities

Professional Application

- > Build trust with good preparation and a contract guaranteeing rights to the employees
- > Do not misuse trust in any way
- > Try to convince employees of the power of personal video analysis
- > Observe first, describe what you see next and only after having reached mutual agreement on what there is to be seen conclude
- > Analysis Sessions with employees and multidisciplinary (different views!)

Personal Video Analysis (PVA)

The PPP method Personal Video Analysis (PIA) is a special method for regular, personal reflection of one's own work performance in order to bring about continuous improvement. This method:

- enables a multiple reflection of the whole complexity of tasks and work place;
- enables employees to initiate change processes themselves;
- supports thinking in processes;
- avoids destructive change initiatives based on the pointing out of one's mistakes/weaknesses by other people.

