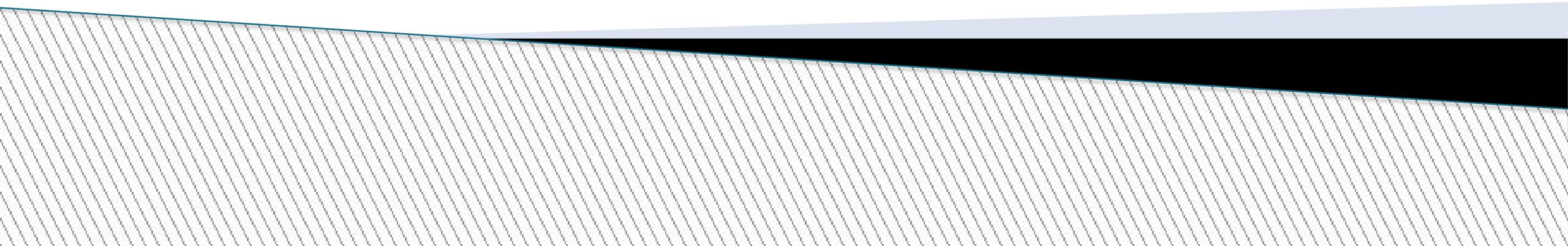
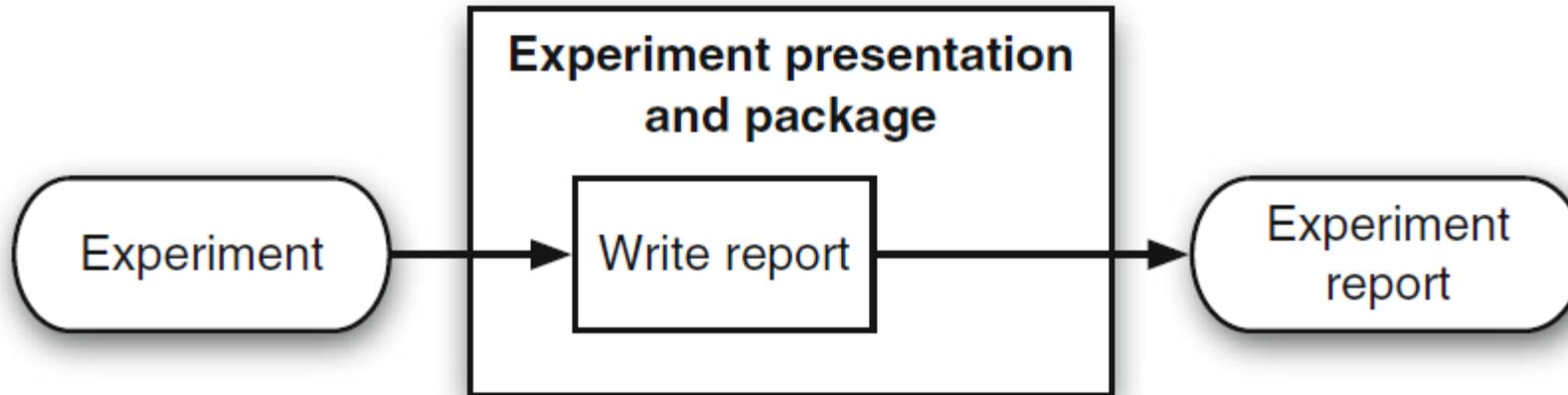


Apresentação e Empacotamento

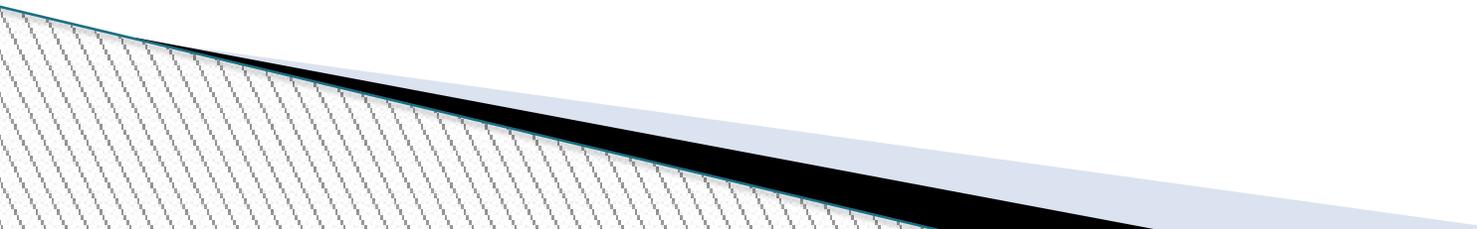
Capítulo 11



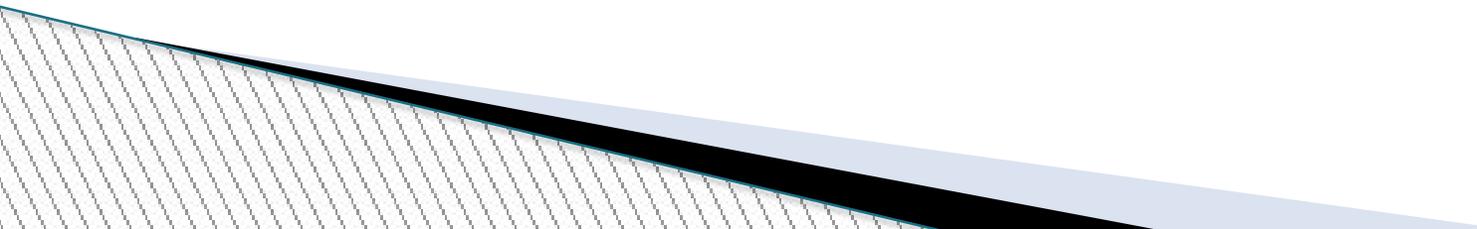
Apresentação e Empacotamento



Os resultados do experimento podem ser apresentados a diferentes audiências

- ▶ Artigo para uma conferência ou periódico
 - ▶ Relatório para tomadores de decisão
 - ▶ Um pacote para replicar o experimento
 - ▶ Material educacional
 - ▶ O material pode ser armazenado numa base de experimentos: Data in brief – Elsevier
- 

Estrutura de um Artigo acadêmico

- ▶ **Resumo estruturado**
 - Background ou Context
 - Objectives or Aims
 - Method
 - Results
 - Conclusions
 - ▶ **Motivation**
 - ▶ **Related work**
- 

Structured Abstract: an example

Context: Throughout an organization, people have different responsibilities and work tasks, hence, it is probable that different roles have different priorities when it comes to what should be improved within a company. This has been found in previous studies in marketing, but is this true for software improvement as well?

Objective: This paper evaluates how different roles in a software development organization view different issues in software process improvement and if such differences could be used in order to provide more tailor-made process improvements within an organization and uses this as a working hypothesis.

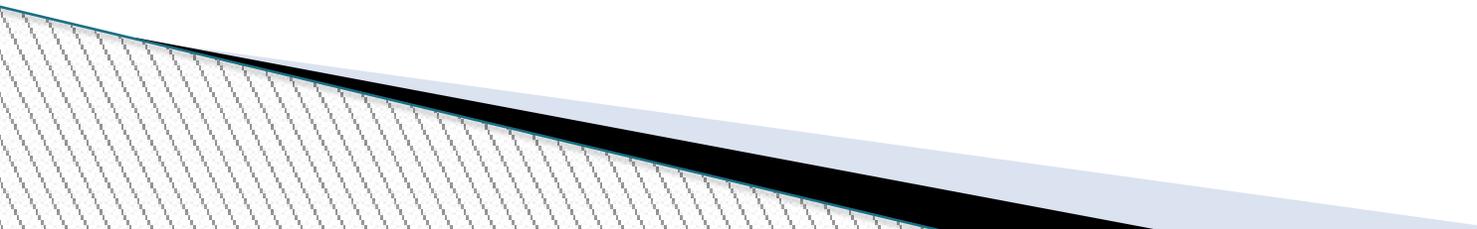
Method: A quantitative questionnaire containing five different weighted questions related to software process improvement was developed. Eighty-four employees from all levels of a Swedish telecommunication company were then approached, of which 63 responded.

Results: The different roles disagreed in three of the questions while they agreed in two of the questions. The disagreement was related to issues about importance of improvement, urgency of problems, and threat against successful process management, while the questions where the roles agreed focused on communication of the processes (documentation and teaching).

Conclusion: It is concluded that it is important to be aware and take into account the different needs of different roles. This will make it possible to provide improvements tailored to specific roles which will probably help to overcome resistance to process improvements. It is also important to look into other areas and companies (for example, marketing) where it could be beneficial when conducting process improvements.

Estrutura de um Artigo acadêmico

▶ Experimental design

- resultado do planejamento
 - Descrever as hipóteses
 - Apresentar o design e variáveis medidas e a instrumentação
 - Descrever como o dado será coletado e analisado
 - Objetivos: permitir que outras pessoas entendam o design para ficar claro que os resultados obtidos são confiáveis e permitir a replicação.
- 

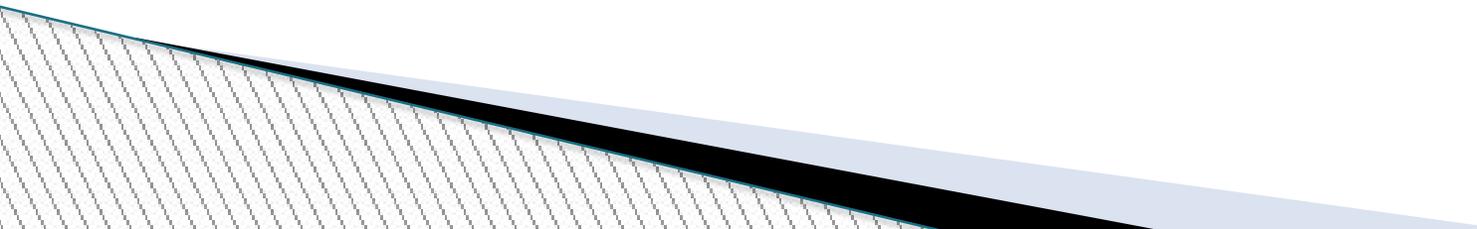
Estrutura de um Artigo acadêmico

▶ Execução

- Primeiro descrever como a operação é preparada. Descrever aspectos que facilitem a replicação.
- Descrever a execução (como ela ocorreu) e como os dados foram coletados.
- É importante explicitar se houve treinamento.
- É muito importante descrever os procedimentos de validação dos dados e se houve algum desvio do planejamento.
- O objetivo geral é convencer o leitor que os dados são válidos e comentar eventuais problemas.

Estrutura de um Relatório (artigo)(Cont.)

▶ Análise dos dados

- Apresentação da análise dos dados com apresentação dos cálculos e suposições
 - Informações sobre o tamanho da amostra
 - Fornecer razões para as decisões tomadas para evitar mal-entendidos . Ex: descrever fatores que podem ter impacto nos resultados (*outliers*)
- 

Estrutura de um Relatório (artigo)(Cont.)

▶ Interpretação

- Interpretar os resultados
- Rejeição ou não das hipóteses
- Indicar como os resultados podem ser usados

▶ Conclusões e trabalhos futuros

- Resumir os resultados encontrados, problemas, desvios etc
- Relacionar com trabalhos publicados, enfatizando semelhanças e diferenças

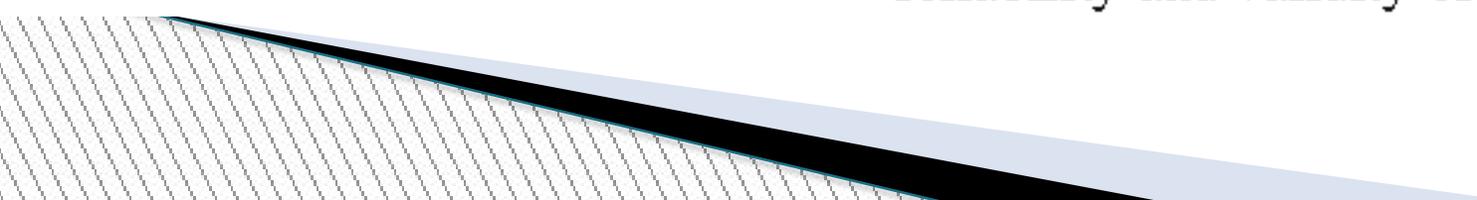
Estrutura Geral de relatórios de experimentos

Table 11.1 Proposed reporting structure for experiment reports, by Jedlitschka and Pfahl [86]

Sections/subsections	Contents
Title, authorship	
Structured abstract	Summarizes the paper under headings of background or context, objectives or aims, method, results, and conclusions
Motivation	Sets the scope of the work and encourages readers to read the rest of the paper
Problem statement	Reports what the problem is; where it occurs, and who observes it
Research objectives	Defines the experiment using the formalized style used in GQM
Context	Reports environmental factors such as settings and locations
Related work	How current study relates to other research

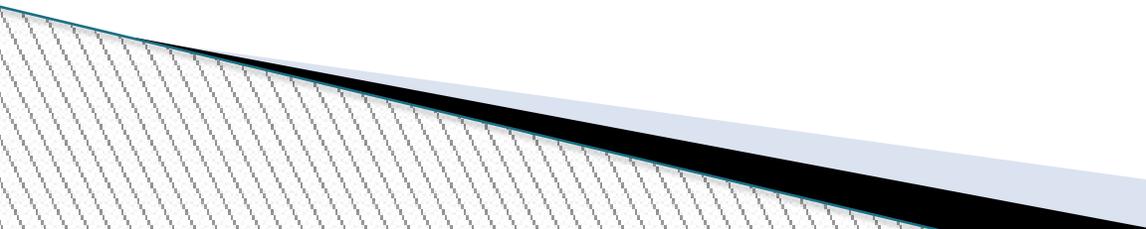
Estrutura de relatórios de experimentos (Cont.)

Experimental design	Describes the outcome of the experimental planning stage
Goals, hypotheses and variables	Presents the refined research objectives
Design	Define the type of experimental design
Subjects	Defines the methods used for subject sampling and group allocation
Objects	Defines what experimental objects were used
Instrumentation	Defines any guidelines and measurement instruments used
Data collection procedure	Defines the experimental schedule, timing and data collection procedures
Analysis procedure	Specifies the mathematical analysis model to be used
Evaluation of validity	Describes the validity of materials, procedures to ensure participants keep to the experimental method, and methods to ensure the reliability and validity of data collection methods and tools



Estrutura de relatórios de experimentos (Cont.)

Execution	Describes how the experimental plan was implemented
Sample	Description of the sample characteristics
Preparation	How the experimental groups were formed and trained
Data collection performed	How data collection took place and any deviations from plan
Validity procedure	How the validity process was followed and any deviation from plan
Analysis	Summarizes the collected data and describes how it was analyzed
Descriptive statistics	Presentation of the data using descriptive statistics
Data set reduction	Describes any reduction of the data set e.g. removal of outliers
Hypothesis testing	Describes how the data was evaluated and how the analysis model was validated



Estrutura de relatórios de experimentos (Cont.)

Interpretation

Evaluation of results
and implications

Limitations of study

Inferences

Lesson learnt

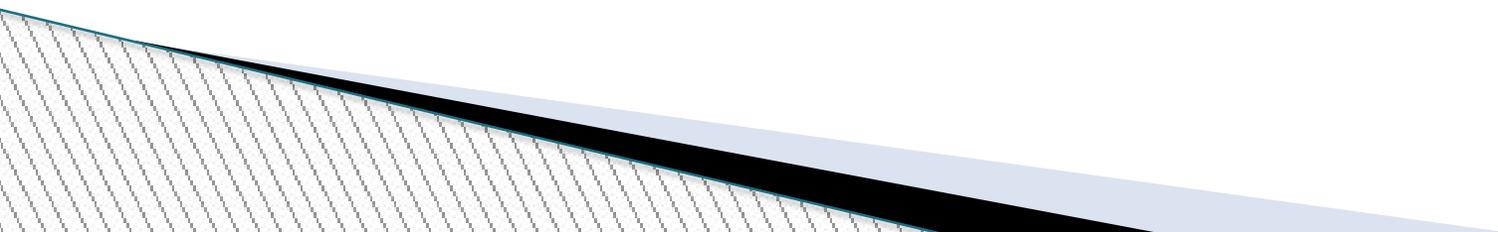
Interprets the findings from the Analysis section

Explains the results

Discusses threats to validity

How the results generalize given the findings and limitations

Descriptions of what went well and what did not during the course of
the experiment



Estrutura de relatórios de experimentos (Cont.)

Conclusions and
future work

Presents a summary of the study

Relation to existing
evidence

Describes the contribution of the study in the context of earlier
experiments

Impact

Identifies the most important findings

Limitations

Identifies main limitations of approach i.e. circumstances when the
expected benefits will not be delivered

Future work

Suggestions for other experiments to further investigate

Acknowledgements

Identifies any contributors who do not fulfill authorship criteria

References

Lists all cited literature

Appendices

Includes raw data and/or detailed analyses which might help others to
use the results

Lab package for the Experiment on Perspective-based Reading (University of Maryland)

http://www.cs.umd.edu/projects/SoftEng/ESEG/manual/pbr_package/manual.html