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2. Self Management

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- 1) Time and task management
- 2) Goal management
- 3) Project management
- 4) Exam management

Aspects of Scientific Working

Goal
management

Project
management

Self-
Discipline

Exam
management

Self
management

Task
management

Ability to
Think

Creativity

How to improve my
scientific delivery?

Ability to
Argument, Write,
Talk, and Dispute

2.1. Time and Task Management

Task Management with ALPEN-Method (TLBDC)

- A** *Aufgaben* (Analyze and list **T**asks)
- L** *Length* of tasks
- P** *Pufferzeiten* (**B**uffer) planing
- E** *Entscheidungen* (**D**ecisions) about priorities
(e.g., with *Eisenhower portfolio*)
- N** *Nachkontrolle* (**C**heck)

Day	Aufgabe/ Task	Length	Puffer/ Buffer	Entscheidungen / Decisions	Nachkontrolle/ Check
June 15	buy a book	1h	-	buy or buy second hand	easy

Eisenhower Portfolio Diagram for Organizing Tasks, Separating Important and Urgent Tasks

	Not urgent	Urgent
Important	<p><u>Activities</u> Long term projects, exams, personal development, Leisure, Networking</p> <p><u>Suggestions</u> Consequent planning und preparation</p>	<p><u>Activities</u> Projects hitting the deadline, Crisis, Emergencies</p> <p><u>Suggestions</u> Thorough and timely processing</p>
Not important	<p><u>Activities</u> Trivial things, complaisances</p> <p><u>Suggestions</u> Stand back, say no, discard</p>	<p><u>Activities</u> Disturbances: telefone, visitors, daily business</p> <p><u>Suggestions</u> Rapid processing</p>

Use these 4 categories to classify your tasks

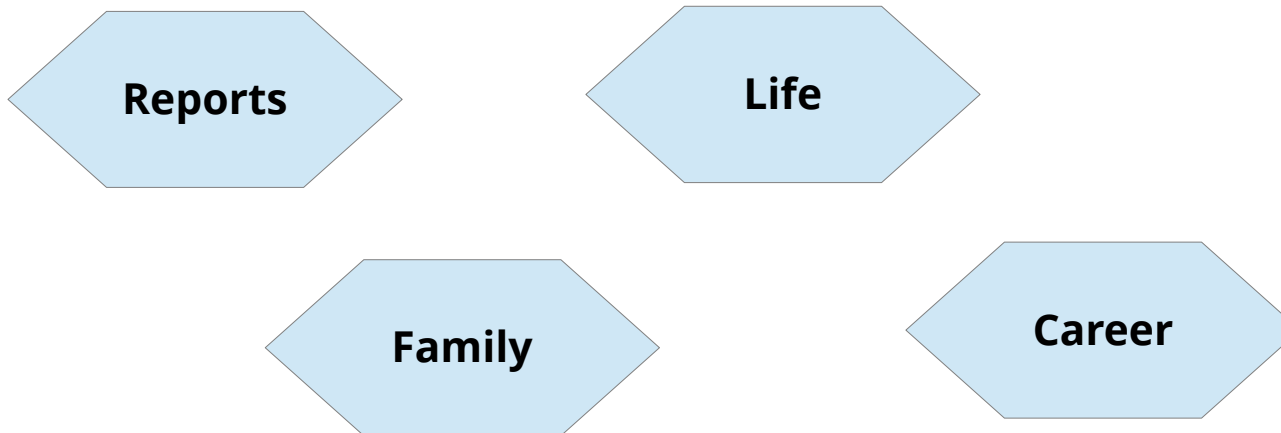
2.2. Goal Management

Goal Analysis

Goals for yourself or any kind of project you do must be set pretty clear.

Use ZOPP or B-POPP to define

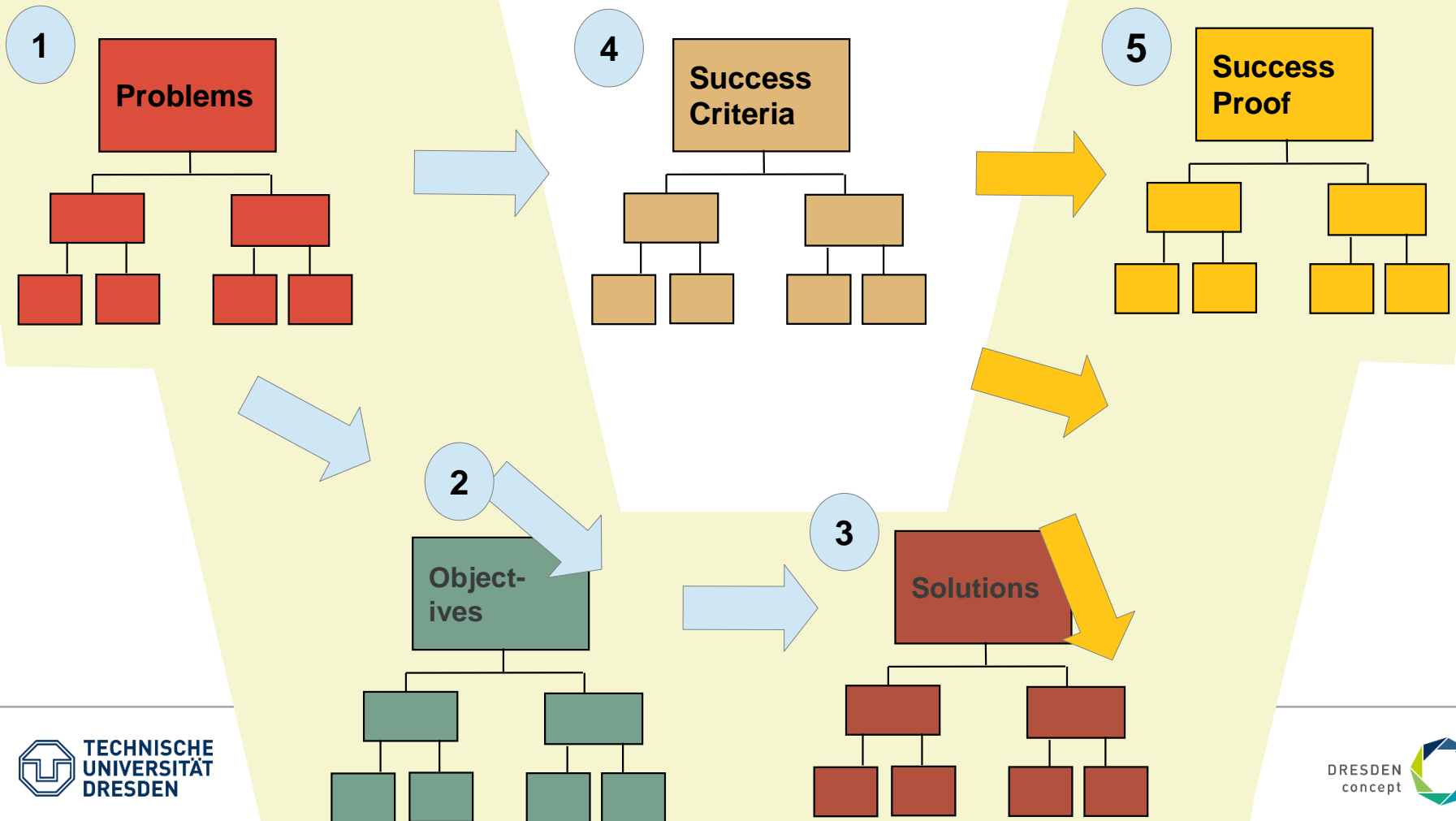
- a set of problems you solve
- a set of goals
- a set of success criteria



Problem and Goal Analysis POPP/ZOPP for the Goals of your Life and Study

POPP (ZOPP) is a *hierarchical* goal-oriented problem-solving method with success proof:

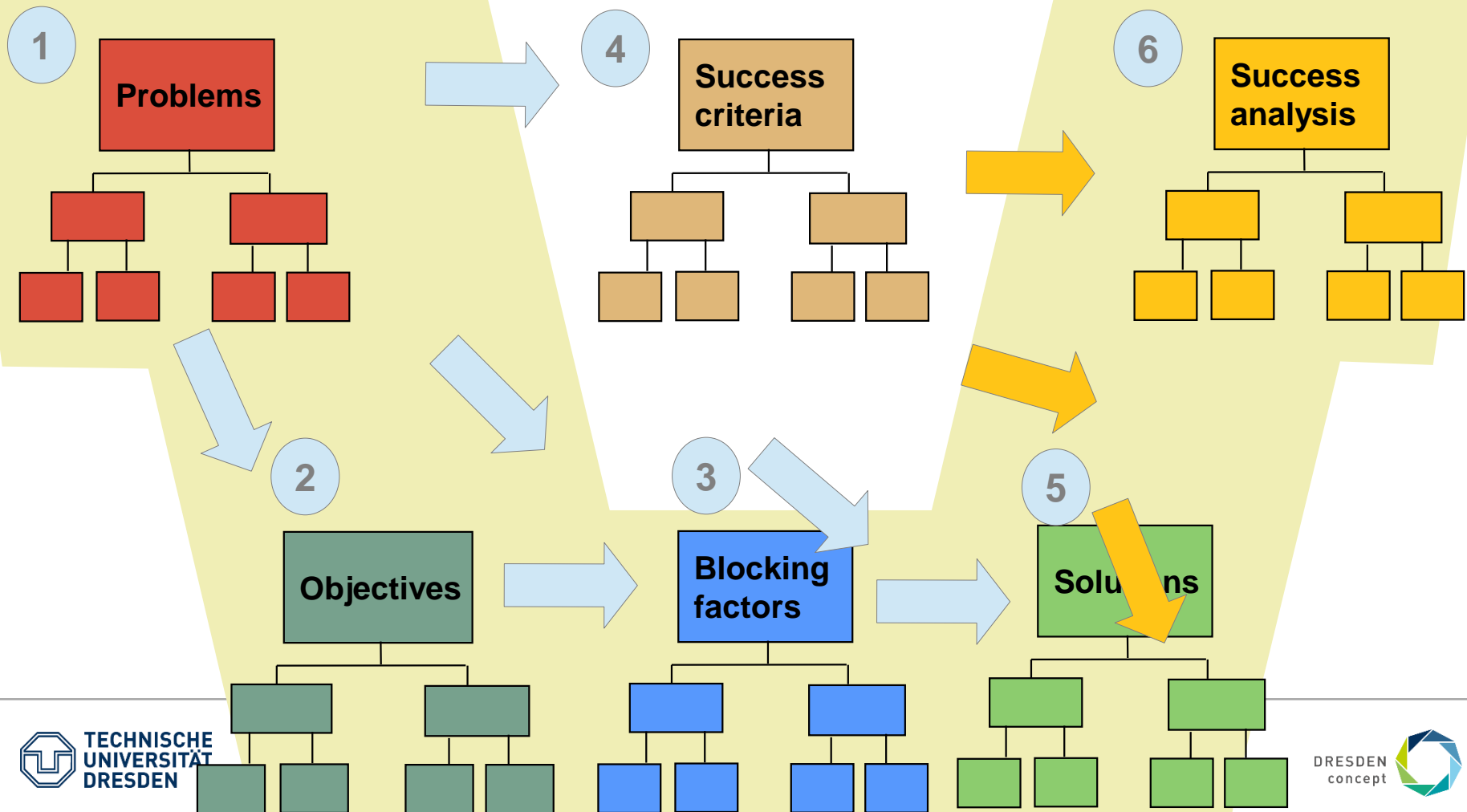
- With a set of success criteria, it is checked whether the solution solves the problem



Problem and Goal Analysis B-POPP

Blocking Factors are Important

B-POPP is a ZOPP-like problem and efficiency analysis that checks *blocking factors* preventing that objectives are reached.



For Your Research

For all kinds of research

- Bachelor, Master, PhD thesis
- Research paper
- Essay

Do a ZOPP or a B-POPP and refine it over all the duration of the research

Reasons:

- Goal analysis helps to think
- Hierarchical goal analysis helps to focus on the more important issues
- If you do not solve a real problem, your research is not relevant
- If your decomposition of the problem is good, you may say something about the *solution's coverage of the problem*:
 - Did I forget to solve a subproblem or are all problems solved? How complete is the solution?
- Usually a good ZOPP gives you an introduction for free: just write a paragraph or a section on each of the steps
- In particular, the *research contributions (research results)* become very clear.

2.3. Project Management

Dependency Graph of Activities

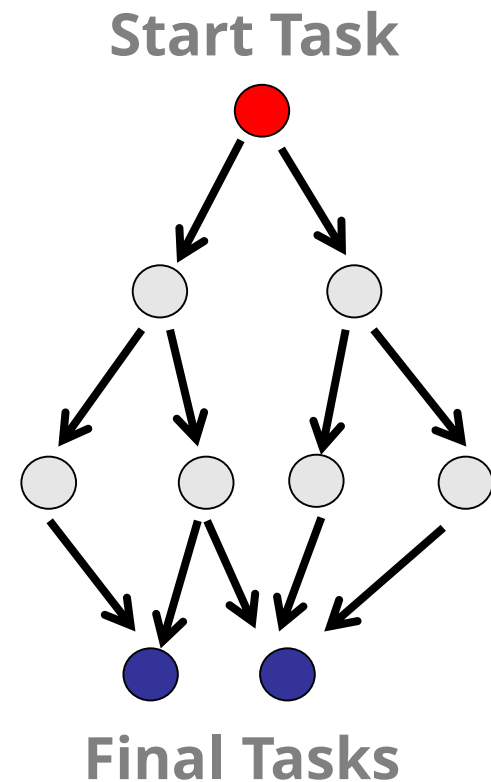
Activities have attributes and dependencies:

- begin, end date
- consumption of resources

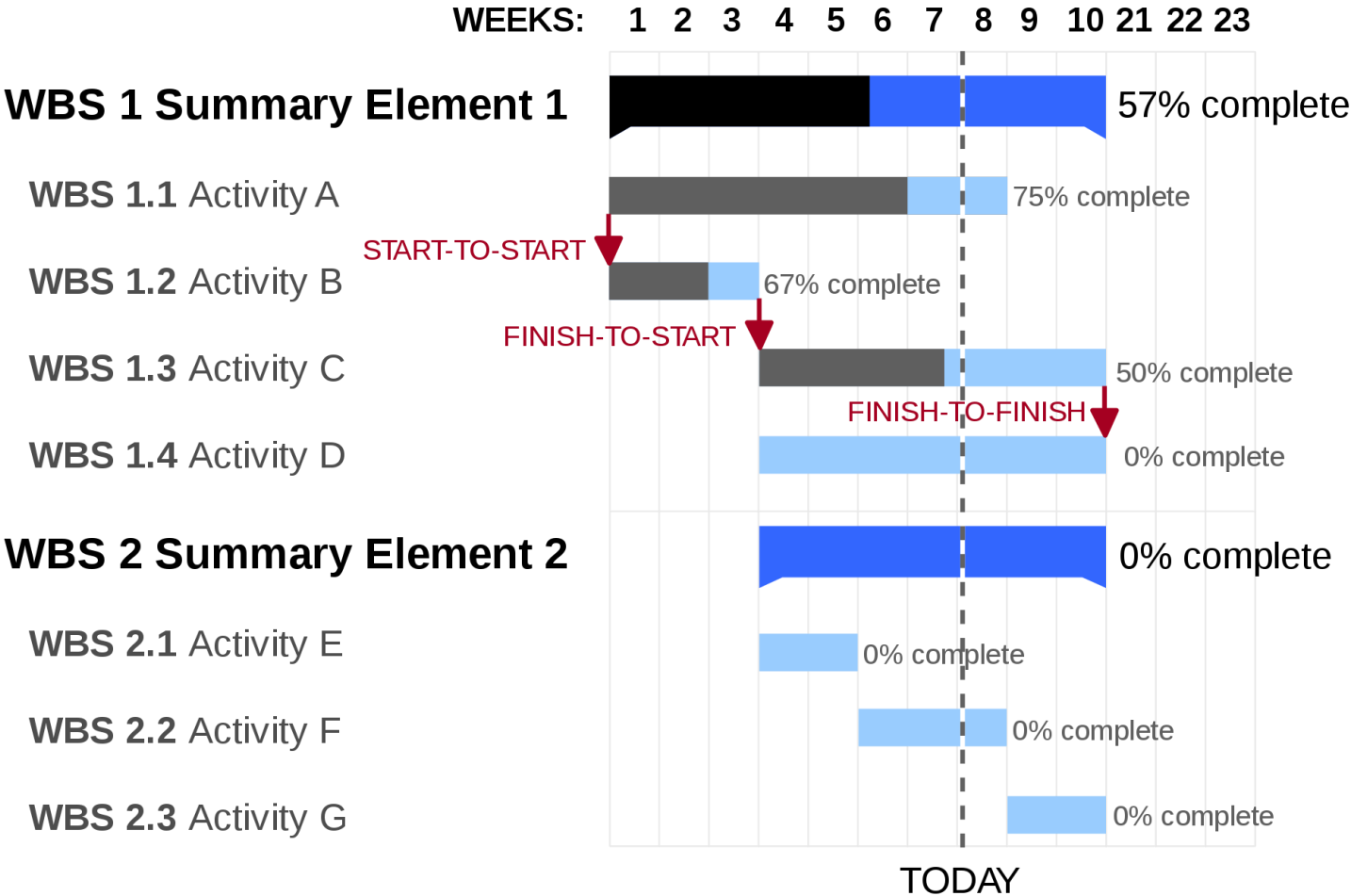
Start with an activity list

Add dependencies:

- dependencies should be acyclic



GANTT Chart



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2.4. Exam Management

Do's for Oral Exams

For an exam about a course with n SWS, reserve n weeks to learn.

Try to learn continuously along the lectures.

Produce concept maps, clusters, or mindmaps of the whole course

Find at least one friend as a **learn mate**; invite people for coffee

- Exercise a dialogue with the friend: "You are a project leader in a company. Your friend is a newbie in your team and asks stupid questions. Answer them, explain him as good as you can."
- After a while, change roles ("pair training")
- There are five types of questions in an oral exam:
- **Survey questions:** Tell about a subject as good as you can, with precise definitions, clear sentences, quickly.
- **Detail questions:** If you don't know the answer, don't be desperate because they won't fail you, but degrade your mark somehow.
- **Application questions:** Try to apply your knowledge to an example.
- **Transfer questions:** They check if you can transfer a part of the course to an unknown problem or example.
- **Cross-lecture questions:** They check whether you can see cross-connections between the courses of a complex exam.

The latter two are difficult and if they go well, it looks like a very good exam.

Blooms Taxonomy of Learning Levels

Bloom defined 6 levels of knowledge:

Apprenticeship (Lehrlingsschaft)

- **Kenntnisse / Wissen:** Kenntnisse konkreter Einzelheiten wie Begriffe, Definitionen, Fakten, Daten, Regeln, Gesetzmäßigkeiten, Theorien, Merkmalen, Kriterien, Abläufen; Lernende können Wissen abrufen und wiedergeben.
- **Verstehen:** Lernende können Sachverhalt mit eigenen Worten erklären oder zusammenfassen; können Beispiele anführen, Zusammenhänge verstehen; können Aufgabenstellungen interpretieren.

Journeyman level (Gesellschaft)

- **Apply/Anwenden: Transfer** des Wissens, problemlösend; Lernende können das Gelernte in neuen Situationen anwenden und unaufgefordert Abstraktionen verwenden oder abstrahieren.
- **Analysis/Analyse:** Lernende können ein Problem in einzelne Teile zerlegen und so die Struktur des Problems verstehen; sie können Widersprüche aufdecken, Zusammenhänge erkennen und Folgerungen ableiten, und zwischen Fakten und Interpretationen unterscheiden.
- **Syntesis/Synthese:** Lernende können aus mehreren Elementen eine neue Struktur aufbauen oder eine neue Bedeutung erschaffen, können neue Lösungswege vorschlagen, neue Schemata entwerfen oder begründete Hypothesen entwerfen.

Master level (Meisterschaft)

- **Beurteilung:** Lernende können den Wert von Ideen und Materialien beurteilen und können damit Alternativen gegeneinander abwägen, auswählen, Entschlüsse fassen und begründen, und bewusst Wissen zu anderen transferieren, z. B. durch Arbeitspläne.

The End

Some slides are courtesy to Dr. Birgit Demuth