

Methodology of pedagogical research and evaluation: **5. Formulation of scientific problem and function of hypothesis**

Methodological Concept for Effectively Supporting Key Competencies Using the Foreign Language ATCZ62 - CLIL as a

strategy at the College



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Objective of the research: Discovering and determining relationships and patterns between objects and phenomena that form part of a given discipline

- Definition and exact formulation of the problem:
- The problem is a question, a question that asks, "What is the relationship between two

or more



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Research problem:

- ✓ Questioning (question) - has stimulating potential;
- ✓ Reveals new facts and then creates new hypotheses;
- ✓ The researcher is trying to get closer to the surveyed person, About penetration into the situation.
The main goal is to understand the person (as he sees things and assesses the action):
Setting the goal what the researcher wants to achieve,
- ✓ Terminological precision, specification of the terms with which the author works,
- ✓ Clarify the scope and content of your own research space.

Types of problems

3 types of problems:

a) Descriptive - answer to the question What is it?

- Diagnostic and evaluation problems can also be a problem

- Research methods: observation, scaling, questionnaire

b) Relative (relationship) - There is a relationship between the phenomena under investigation and how close this relationship is

c) Causal - identifies causal relationships / identifies the cause that led to a certain consequence /.

It is important to know scientific hypotheses = they can be formulated only for relational and causal research problems.

The main research challenge and the partial problems are the research objectives and objectives.

The goal can develop and change in the research process.

The nature of the research goal remains until the problem is resolved.

Research: research problem

research objective

the result of the research.



Formulation of the hypothesis

Hypothesis - a scientific assumption (requires many readings of literature, personal experience);

- It is a prediction of the relationship between two factors, conducts research.
- *Hypothesis* is a prerequisite in which, on the basis of a number of facts, a conclusion is reached about the existence of an object, its context or the cause of the phenomenon, and this conclusion can not be considered to be entirely conclusive.
- In quantitative research, the hypothesis is determined in advance at the beginning of the research, determining its direction.
- *Hypothesis formulation* = basic property = expresses relations between variables (differences, consequences); Suggests how the hypothesis will be confirmed or refuted.

Golden rules of the hypothesis

- *Hypothesis is a statement = notification sentence.*
- *Hypothesis expresses the relationship between 2 variables!*
- *The hypothesis must be tested, the variables measured!*

Hypothesis in terms of cognitive value:

- Working hypothesis = initial hypothesis,
- Real (scientific) hypothesis.

Creating hypotheses

- The contradiction between theory and facts that can not be explained in theory (pedagogical theories),
- The hypothesis has the nature of

