

# Educational Diagnostics

## THEORETICAL DEFINITION

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# DIAGNOSTIC AND INTERVENTION SKILLS (VAŠUTOVÁ, J., 2004 ).

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*The teacher:*

- ❑ can **use the resources of pedagogical diagnostics** when teaching for diagnosing the individual needs of the student and the social relationships in the classroom
- ❑ is able to **identify students** with specific learning and behaviour differences and is able to adapt the selection of subject matter and teaching methods for their needs
- ❑ Manages to find ways to teach **gifted students** in the classroom
- ❑ is able to recognize **socially pathology**, bullying, abuse and knows and employs ways to prevent and remedy it.
- ❑ Manages to ensure **discipline** in the classroom and knows how to solve behavioural situations and behavioural problems within the school context

**Individualisation and differentiation in the educational process**



# THE CONCEPT OF PEDAGOGICAL DIAGNOSTICS

- ✗ **from the Greek *diagnósis* = knowledge**
  - ✗ **the student in an educational situation**
  - ✗ **Educational group (school class)**
  - ✗ **the teacher's own educational activities (self-diagnosis)**
- ❑ It is often perceived as a new pedagogical discipline, but its roots go deep into the past.
  - ❑ It is bound to the school environment and is most often associated with the activities of the teacher.
  - ❑ Requires theoretical knowledge, methodological equipment, practical experience, a lot of time and effort not only for the diagnostic work itself, but also for evaluation (the time aspect is often a reason why teachers neglect to undertake quality diagnostic activities).

# DEFINITION OF EDUCATIONAL DIAGNOSTICS

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## A combination of practical teaching and teaching theory

- ❑ Educational diagnostics can be spoken about as a field of pedagogical theory and related methodological practice:
- ❑ finding out, identifying, classifying, characterizing and evaluating the level and projected pedagogical development of a pupil (or group of pupils in relation to the objectives set.)

# DIAGNOSING AND DIAGNOSIS

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## Diagnosing – the activity

- Finding out information
  - Processing the information gained
  - Evaluation
  - Introduction of measures and...
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- ✓ Initial diagnosing
  - ✓ Continuous diagnosing
  - ✓ Final diagnosing

## Diagnosis

- is the result of the process of diagnosing
- is a subsidiary aim on the basis of which the teacher directs his/her activities (Prucha)

# APPROACHES AND CURRENT TRENDS IN EDUCATIONAL DIAGNOSTICS

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## **Psychometric strategy (educometric)**

- ❑ Based on the assumption that to some extent we all have basically the same inclinations which are therefore measurable.
- ❑ This leads to the transfer of information on quantifiable data (transferable units, points), which are evaluated with the help of statistics.
- ❑ The extent of observed phenomena is measured.
- ❑ Usually normative or criterion-based diagnostics

## ***Cased-based clinical strategy*** (cognistic)

- Focused on the individuality of the diagnosed person (e.g. outward behaviour of the pupil in the class with regard to classmates or teachers).
- Empathy and acceptance of the diagnosed person are emphasised, understood as a partner who we want to help.
- Based on qualitative exploration of the phenomena and description of the individual

# TYOLOGY OF PEDAGOGICAL DIAGNOSTICS

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- × **Informal diagnosis** - microdiagnosis (implicit, hidden)
- × **Formal diagnosis** - the diagnostic situation is clearly demarcated at certain stages of teaching. There are notes and records about it and specific methods used (explicit)
- × **Formative diagnosing** - This helps the teacher to shape the pupil. It serves as feedback on the teacher's work. The teacher can take measures based on this.
- × **Summative diagnosing** - the aim is to determine the level reached by the student for a specified period. It summarizes information about the student.
- × **Normative**— the result of an individual is compared with the results of a representative sample of the population in the same test. Comparison among peers.
- × **Criterion-based**— a comparison with external benchmarks, with objectively defined tasks (the pupil manages to use i and y correctly when writing...)
- × **Individualised**— comparing the child only in relation to him/herself, without comparison with peers.
- × **Differential**— used to distinguish problems that may have the same symptoms but different causes






## DESCRIPTIVE-ANALYTICAL

- what is the pupil like, diagnosis of the pupil



## PRESCRIPTIVE-ANALYTIC

- What is the pupil like, diagnosis  
+
  - What am I like as a teacher
- 
- ✗ increasing the effectiveness of teaching
  - ✗ discovering the abilities of the pupil
  - ✗ organizing teaching to fit the pupil's individual needs
  - ✗ mastering the lessons
  - ✗ responsibility of the teacher for the quality of teaching and pupil outcomes

# TWO PLANES OF DIAGNOSING IN THE CLASSROOM

# METHODS OF EDUCATIONAL DIAGNOSIS

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Method: process, way, means of discovering the pupil's personality

The steps that we need to take to arrive at comprehensive knowledge of the pupil (see stages of diagnostic procedure)

- Based on the research methods for pedagogy.
- It is a whole system of methods.
- The methods vary in their intensity of preparation, implementation and evaluation.
- Using them requires certain experience with diagnosis.
  
- During the process of diagnosing, not only one method should be relied on (triangulation), but the methods of pedagogical diagnosis must be appropriately combined.

# DIAGNOSTIC METHODS

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## Oral examinations

- ✗ formative
- ✗ summative

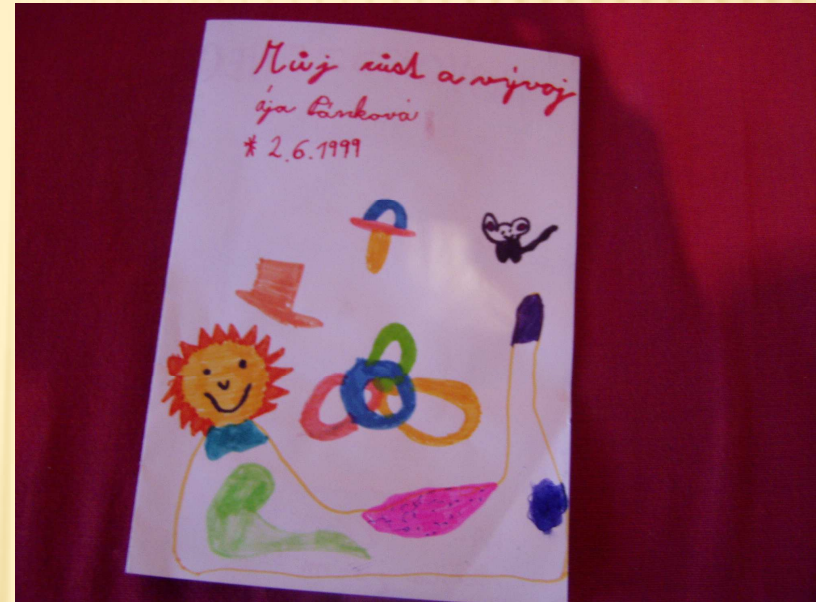
## Written examinations

formative x summative

individual x group

short-term x long-term work (projects, book reports,)

Finding out the results – levels of skills achieved and outcomes from individual fields of education (knowledge, skills, attitudes ...)



# DIAGNOSTIC METHODS - ANALYSIS OF THE PRODUCTS OF PUPIL ACTIVITY

used to obtain information about:  
people's hidden mental states, attitudes, values of an individual skills and knowledge

short-term x long-term results of work

- articles, written work, drawings), notes, letters  
....
- portfolio - a set of a pupil's work over a certain period

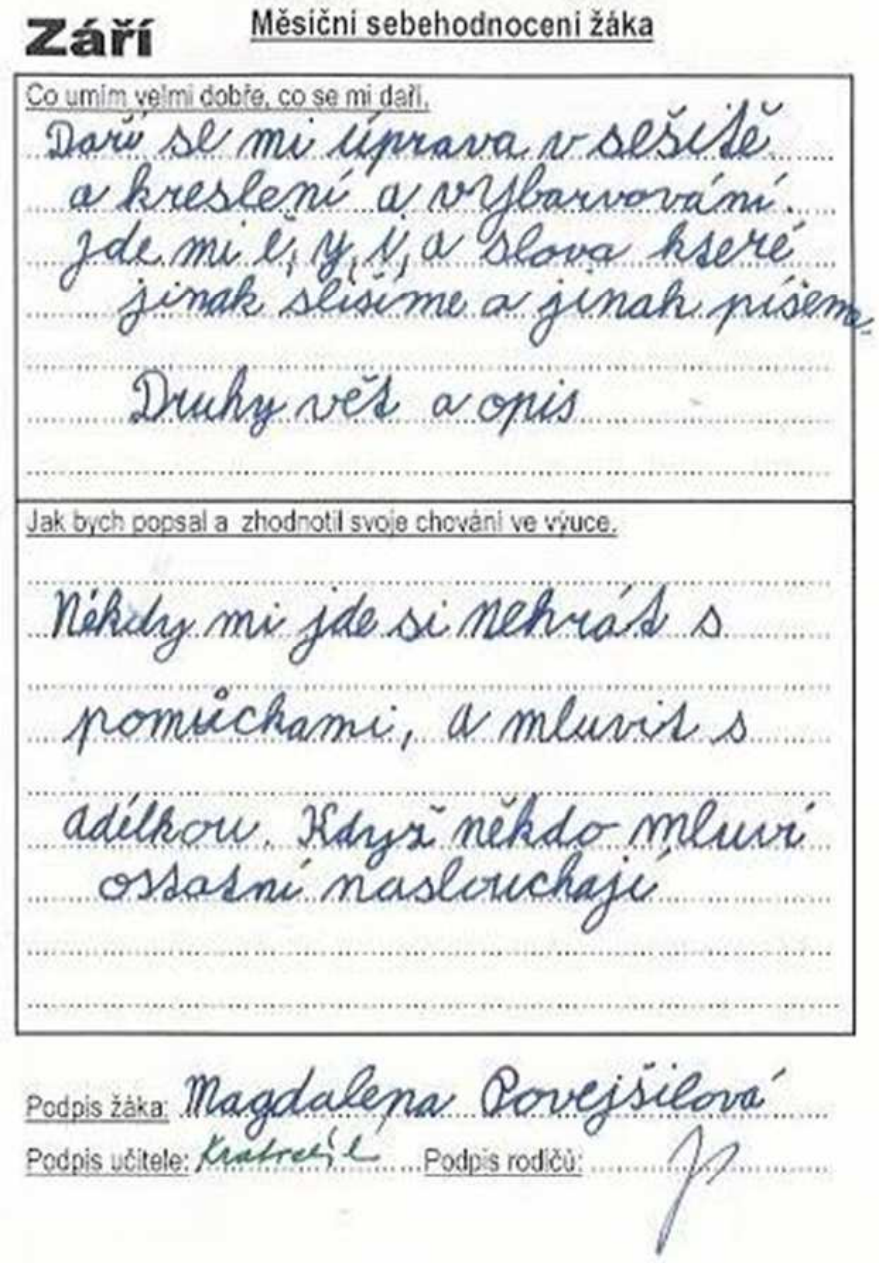


What information can be obtained from analysing these products?



# Texts – analysis

- ✘ In school exercise books: dictations, individual work, rewriting, copying
- ✘ Free writing - creative writing
- ✘ Project texts
- ✘ Own notes, letters to friends, messages



# OBSERVATION

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1) Length of observation

**Short-term**

**Long-term**

2) Who are we observing

**Introspection**- inspecting ourselves

**Extrospection** –observing others

3) Participation in observation

**Direct**

**Indirect**– from recordings

4) Aim of the observations

**Individual**

**Group**

5) Intervention in the observation

**Natural** (free)

**Induced** (guided)

6) Preparation for the observation

**Structured**– we determine the types of phenomena, categories, and observational tool - system.

**Unstructured**– observation of spontaneous activity in a given situation without preparing an observation system.

# THE PROCESS OF OBSERVING

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- ✘ determine the **purpose** and **object** of observation (why, what, who)
- ✘ determine the **conditions** and **duration** of observation (where, when)
- ✘ choose the **method** of recording observations (how)
- ✘ **observation**, recording of results
- ✘ **analysis** of the records
- ✘ **interpretation** of results, formulation of diagnosis
- ✘ educative measures, prognosis
- ✘ self-reflective diagnostic activity (how to do it better)



## WHAT WE CAN OBSERVE

- ❑ What we can **see** and **hear** of the pupil's behaviour
- ❑ We can measure, describe and record it
- ❑ We watch the **activity** and behaviour of the pupil
- ❑ We evaluate everything

## OBSERVATION TECHNIQUES

- ❑ pedagogical journal
- ❑ observation sheets
- ❑ observation systems
- ❑ protocol
- ❑ records about the student
  
- ❑ We use - rating (observational scales)

# DIAGNOSTIC METHODS - INTERVIEWS

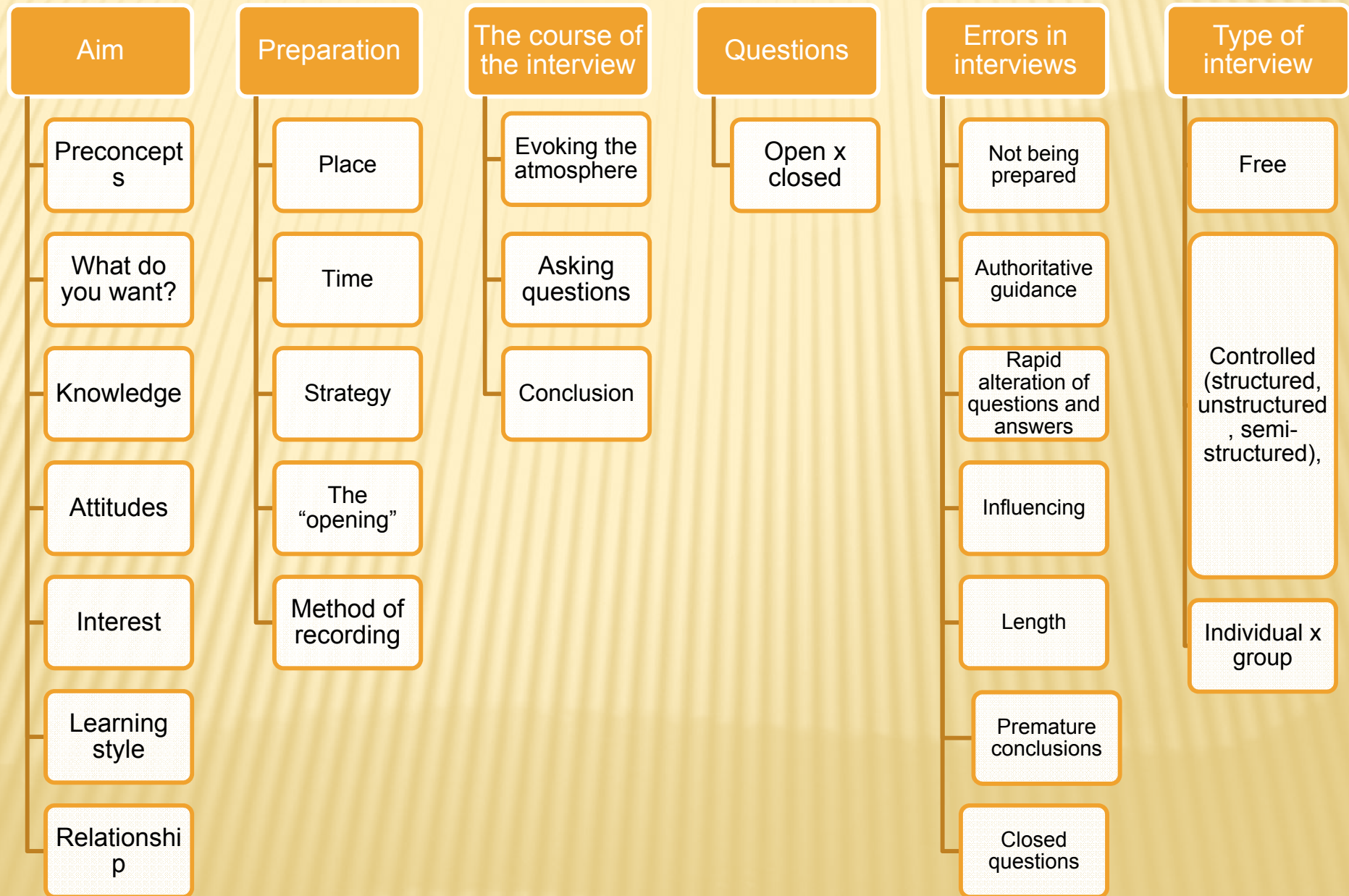
- ❑ One of the most widely used diagnostic methods → at school there are many opportunities and a lot of space to conduct an interview with a student
- ❑ Provides information on the basis of immediate verbal contact with the researched person (student, parent)

***The most effective method has been shown to be a conversation where the pupil does not realize that the teacher is gathering information in a deliberate way.***

***You will need: to create a pleasant atmosphere without the feeling that anyone will be criticized or judged for what they say (parent and child)***

- ❑ The interview usually leads systematically from basic questions to questions that lead to deeper understanding and diagnosis of the problem
- ❑ It has clear steps and a goal which we want to reach.
- ❑ The questions are clear and understandable for a pupil of this age

# INTERVIEW



# LITERATURE

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