

# Differentiation as a vehicle for inclusive education

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# Coherence in foreign language didactics

- Differentiation is an example of creating coherence in foreign language didactics
- It could be referred to as Shulman's (1987) knowledge in teaching:
  - content knowledge (CK) < linguistics
  - pedagogical knowledge (PK) < differentiation
  - pedagogical content knowledge (PCK) < differentiation in foreign language teaching

# Background of differentiation

*differentiation, differentiated instruction, differentiated teaching, curriculum differentiation*

Narrow/limited definitions:

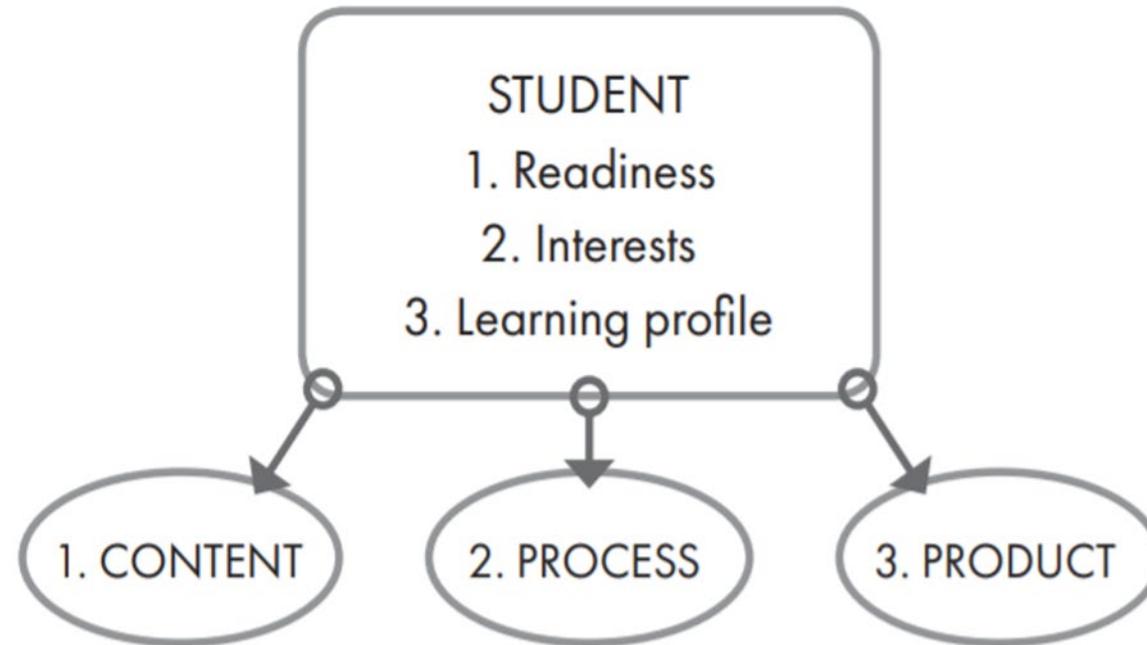
- focusing on ability differences (e.g. Roy et al., 2013; Saloviita, 2018)
- a set of different teaching practices to respond to student diversity (e.g. Benjamin, 2002; Pozas et al., 2020)
- only reactive (e.g. Hall, 2002; Lindner & Schwab, 2020)

Broad definition:

- a pervasive approach that permeates all teaching (e.g. Suprayogi et al., 2016; Tomlinson, 2014; Roiha & Polso, 2021)

# Previous models for differentiation

Tomlinson (2014)



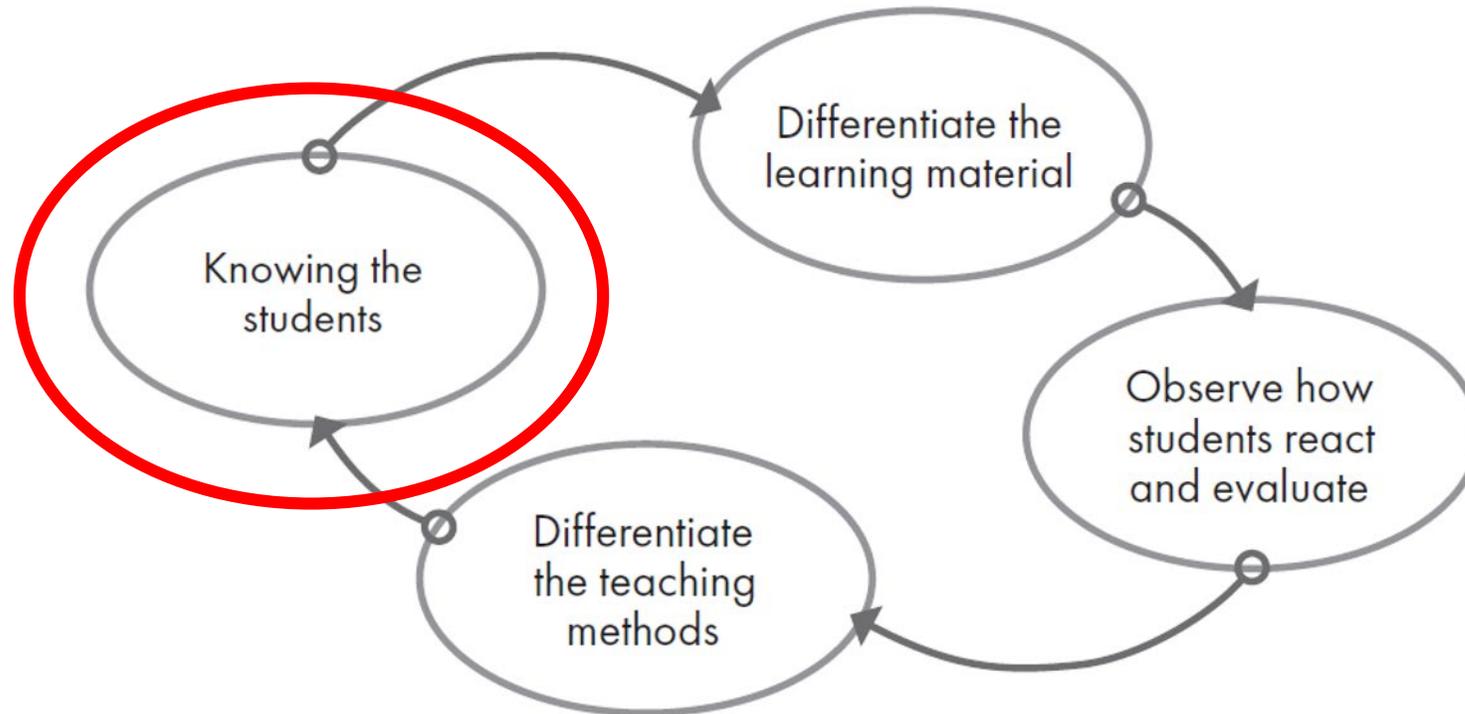
content = what students are expected to learn (e.g. teaching materials)

process = how students' learning is confirmed (e.g. teaching methods)

product = how students demonstrate their learning (e.g. assessment)

# The proactive model of differentiation

Thousand, Villa & Nevin (2007)



# Research results on differentiation

Deunk et al. (2018) meta-analysis (n=21)

- differentiation has a positive effect when implemented extensively
- using ICT in differentiation has a positive effect

Graham et al. (2021)

- differentiated teaching more beneficial to pupils' learning than teaching without differentiation

Puzio et al. (2020)

- differentiation effective in teaching reading skills in primary schools

Smale-Jacobse et al. (2019)

- differentiation positive effects on students' academic performance in secondary school

McCrea Simpkins et al. (2009); Karadag & Yasar (2010); Roy et al. (2015)

- Positive effect on motivation and self-concept



# Differentiation is found challenging

What are the greatest challenges to implement differentiation in your own context?



# Challenges of differentiation

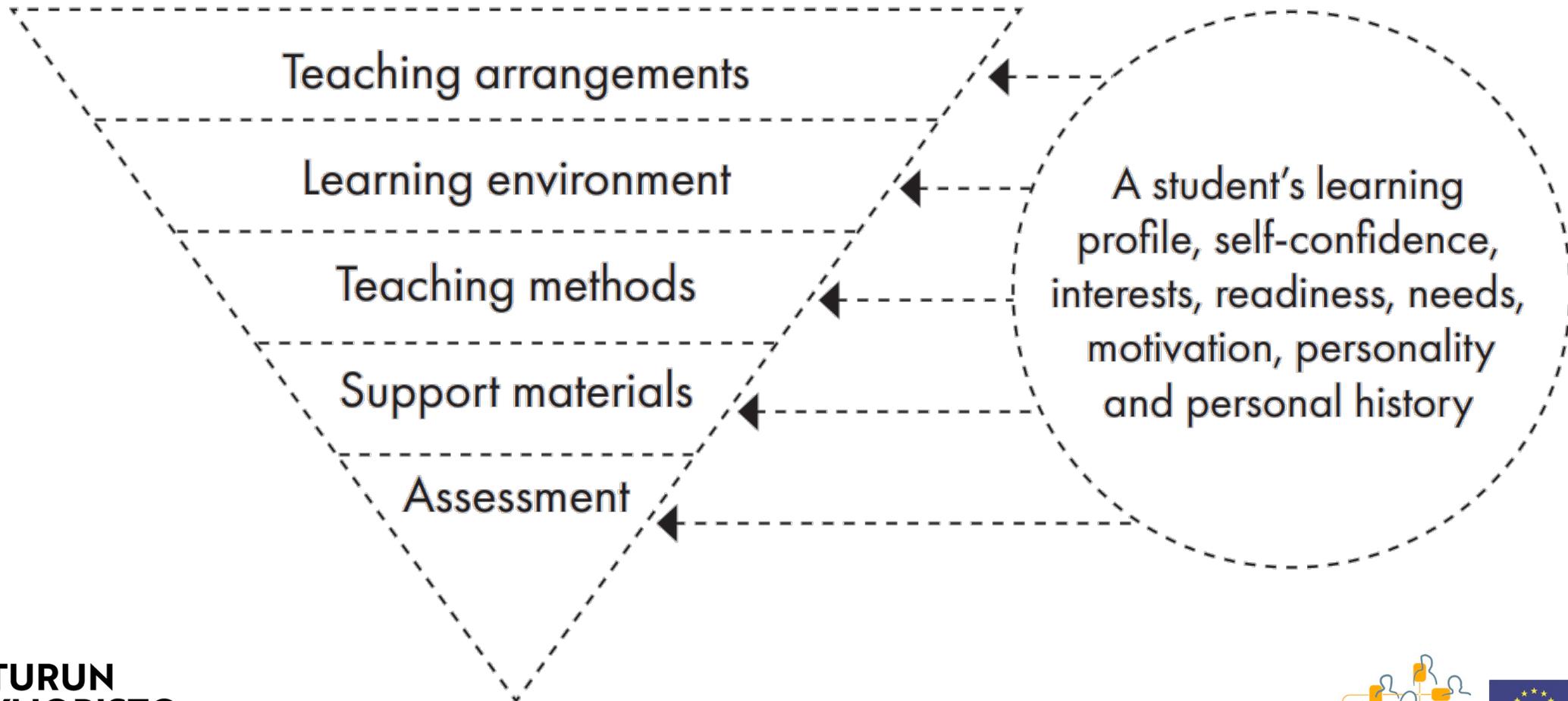
- large class sizes
- time constraints
- impractical physical environment
- materials
- lack of knowledge of effective methods
- lack of resources
- lack of collaborative planning time
- lack of administrative support



(e.g. Gaitas & Martins, 2017; Roiha, 2014; Roiha et al. 2023; Shareefa et al., 2019; Tomlinson & Imbeau, 2010; Wan, 2017)

# 5-Dimensional (5D) model of differentiation

(Roiha & Polso, 2020)



# The Finnish national core curriculum

Finnish National Agency for Education (2014)

*The selection of working methods is guided by **differentiation** of instruction. **Differentiation** is based on the teacher's knowledge of their pupils' personal needs. **It is the pedagogical point of departure for all instruction**. It concerns the extent and depth of learning, the rhythm and progress of the work and the pupils' different ways of learning. **Differentiation** is based on the pupils' needs for and possibilities of planning their own studies, selecting different working methods and progressing at an individual pace. The individual and developmental differences between pupils are also taken into account in the selection of working methods. **Differentiation** supports the pupils' self-esteem and motivation and promotes a peaceful setting for learning. **Differentiation** also pre-empts needs for support.*

The Finnish National Core Curriculum for Basic Education (2014)

# Teaching arrangements

- Flexible grouping
- Co-teaching
- Remedial teaching
- Additional teaching
- Paralleling lessons
- Learning assistant
- Part-time special needs education
- Split lessons
- Temporary shortening the school day
- Genius hour -arrangement

# Flexible grouping

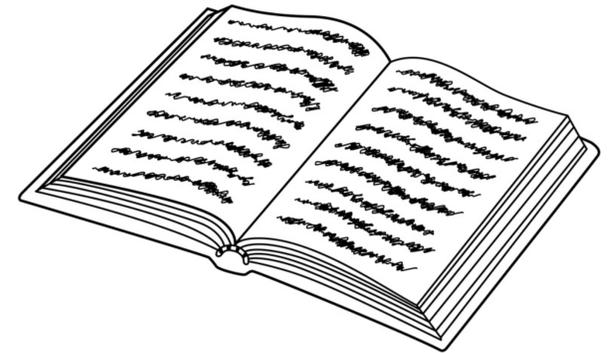
- pupils are grouped temporarily based on different criteria: *ability, learning styles, social relations, interests*
- can be implemented within or across classes (and grade levels)



# Research on flexible grouping

Positive impact on learning for pupils in primary schools:

- Dubé et al. (2013): in reading comprehension
- Castle et al. (2005): in reading and writing
- Jecks (2011): in reading skills
  
- Differentiating according to different learning styles may also support classroom management (Rytivaara, 2011)



# Examples of flexible grouping

## Flexible grouping within class

- Pupils are divided into 3 groups based on different criteria (ability, interests, etc.)
- Each group works on a given activity for ca. 15 minutes at a time
  - 1 group works under teacher's guidance on e.g. grammar
  - 1 group reads a text in the target language and does exercises on it
  - 1 group works on online exercises in the target language

# Examples of flexible grouping

Flexible grouping across classes (oral communication)

- One hour a week for the arrangement
- Pupils are divided into groups flexibly, on the basis of their ability but also at times based on their interests
- Two teachers support and guide the groups
- Teacher can support both low- and high-achievers
- Affective factors will be acknowledged

# Co-teaching

1. Supportive teaching
2. Parallel teaching
3. Complementary teaching
4. Team teaching

Thousand, Villa & Nevin (2006)

On Co-Teaching, see also [University of Zagreb's OER](#)  
on [ConnEcTEd project website](#)



# Co-teaching

## 1. Supportive teaching

The other teacher has main responsibility about giving instructions to the class, while the other teacher works among the students to give individual and targeted support.

**For example**, in foreign language class, one teacher can teach something from the front of the class, while the other teacher instructs the same thing in more detail to those who need support.

# Co-teaching

## 2. Parallel teaching

**Both teachers** are simultaneously instructing a part of the class in different areas of the classroom.

The teachers can be responsible for their group for the whole lesson, or the groups can switch stations halfway through the lesson. In the latter case, the teachers would teach the same thing to both groups.

# Co-teaching

## 3. Complementary teaching

**One of the teachers** has main responsibility for teaching the whole class, while the other teacher simultaneously fills in the gaps and makes the teaching more diversified. This model differs from supportive teaching in that the complementary teacher is also addressing the whole class, instead of a few specific students.

**For example**, one teacher can teach something in front of the class, while the other writes down notes on the board for the whole class. Alternatively, the role of the complementary teacher can be to specify or to clarify the instruction of the other teacher.

# Co-teaching

## 4. Team teaching

Teachers plan, execute, and assess teaching together. Teachers are both **equally responsible** for the course of the lesson and the learning of the students.

**For example**, teachers can instruct the whole class one after the other, while the other assumes a more supportive role. In this mode, teachers can smoothly use their specialisation.

**For example**, in a foreign language class, the teacher who has better command of the language can teach grammar, while the other teacher, more specialised in music, can teach an educational song to the group to support the learned topic. The roles of the teachers are equal in team teaching, and the students see both teachers as one another's equivalent.

# Paralleling lessons

Situating lessons in the same place in the schedule for two or more teachers > enables co-teacher, special needs resources

## Parallel lessons

- Paralleling lessons makes executing flexible teaching arrangements and methods possible.
- Paralleling also allows for teaching half a group.
- Assigning multiple teachers for one group.
- Paralleling lessons brings the special education needs resource to be used more equally by all students. It saves the resource and makes both co-teaching and small groups possible.
- It is important to also parallel the time spent together planning.

# Genius hour

- 1 lesson per week dedicated to this arrangement
- pupils work on topics of their interest either alone or in pairs/groups
- topics are broad and require inquiring and problem-solving
- pupils plan their work and make goals for themselves (long-term and short-term)
- Examples of Genius hour topics:
  - learning about black holes
  - learning about climate change
  - learning how to code
  - learning to speak Spanish
  - learning Braille writing
  - making a movie
  - creating one's own dance



# Learning environment

## Physical

- flexible > desks and furniture can be moved as needed
- organized and systematic > named places for all items
- different working spaces > silent work, group work
- seating arrangements
- different classes equipped differently  
> one has ICT emphasis, one group work etc.
- differentiate visual materials and reduce extra stimuli

## Psycho-social

- the atmosphere in the classroom > grouping, pair and group work
- varying groups
- free moments and transitions



# Teaching methods

## The principles of differentiated teaching

- teaching study skills
- giving instructions
- allowing individual progress
- differentiating homework (amount, type, same homework for a longer period of time, no homework, pupils get to choose their own homework)
- structure in teaching (clear structure, organisation and permanence)
- differentiating learning materials (different use, individual material, different grade level material)

# Differentiated teaching methods

- independent work  
(individual progress & support material)
- contractual project work  
(certain goals and content for the unit and pupils get to choose in which order they complete them and on which topics to focus)
- station work
- project work



# Tips to differentiate listening comprehension

## Tips to differentiate listening comprehension

- Pre-empt and verbalise exercises and actions.
- Let the student familiarise themselves with the text or topic pre-emptively, using remedial education or homework.
- Vary your speech. Use repetition and paraphrasing.
- Support speech with pictures, gestures and expressions.
- Describe or translate important words.
- Let the student listen to the exercise recording many times, and break the exercises down into many smaller parts.
- Offer vocabulary lists to the student for support.
- Offer the student a written version of the spoken text.
- Use different exercise types.

# Tips to differentiate speech

## Tips to differentiate speech

- Use flexible grouping.
- Give positive feedback for all effort.
- Give an opportunity to have short conversations or to give single word answers.
- Allow for answers in the common language of instruction (or mother tongue when applicable) in conversation exercises.
- Offer vocabulary lists and pre-written model sentences to support speaking exercises.
- Use group and pair discussions, talking to oneself, and mumbling.
- Use pre-written model conversations in conversation exercises.
- Allow for conversations with the teacher and recording speech.
- Teach to use a mirror to practice speech.

Roiha & Polso (2020)

# Tips to differentiate reading comprehension

## Tips to differentiate reading comprehension

- Familiarise the student with the text prior to the lesson, for instance in remedial education or as homework.
- Offer individualised texts to the students.
- Utilise the students' own texts.
- Use simplified texts.
- Replace hard words with easier synonyms.
- Shorten the sentences in the text.
- Edit the format of the text so that you use clear paragraphs, sub-titles and supportive pictures.
- Teach the students reading strategies.

# Tips to differentiate writing

## Tips to differentiate writing

- Use differentiated exercises, such as projects.
- Accept answering with single words instead of answering in full sentences.
- Utilise the student's own areas of interest.
- Give positive feedback for all effort.
- Do not pick on single spelling errors.
- Allow the students to use their first language based on their individual goals.
- Utilise learning materials and writing exercises from lower grade levels.
- Use a computer to support correct spelling.

# Support materials

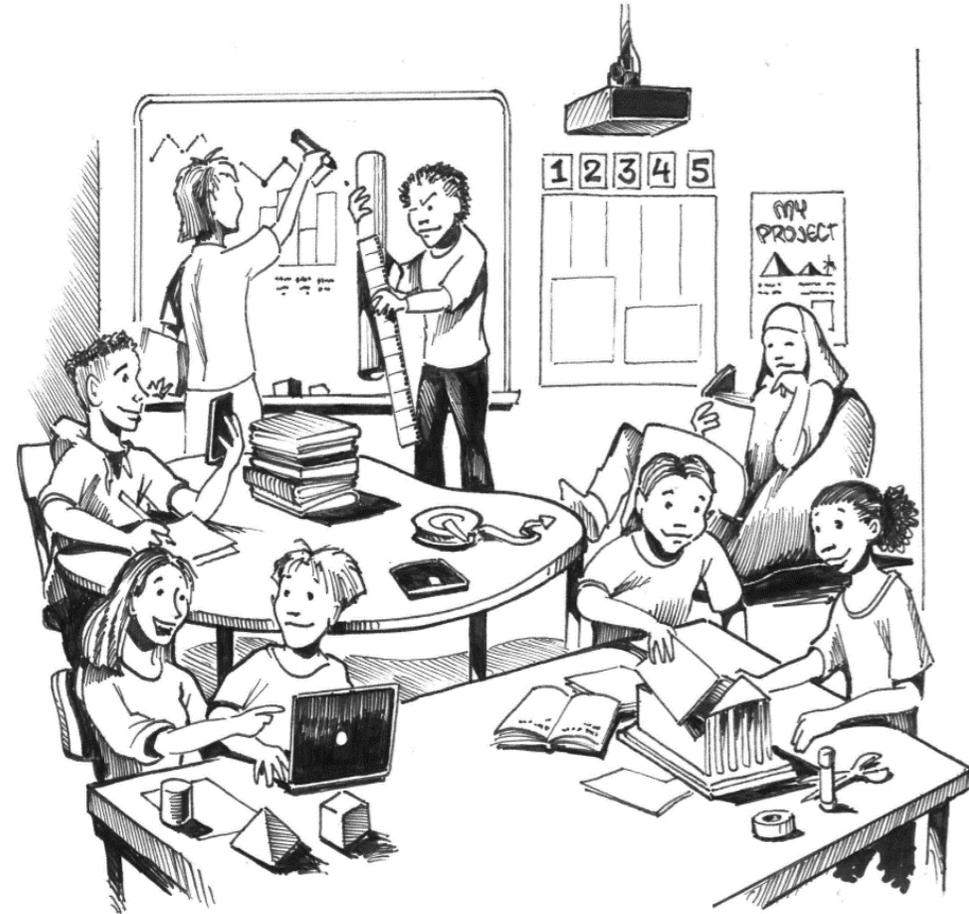
A plethora of different support material in the classroom

Making use of ICT

- audiobooks
- increasing font size, increasing spaces between words
- underlining, highlighting
- printing on coloured paper
- online exercises
- translation programmes
- making notes with a computer or tablet
- recording speech
- writing with Word

# Tools to concentrate

- noise-cancelling headphones, earplugs, listening to music
- wearing a hood and cap
- partitions
- seating cushions, gym balls
- objects to fiddle with: blu tack, stress ball, bean bag chair
- allowing the pupils to draw
- structuring work: hourglass, Time Timer clock, egg timer



# Assessment

When the purpose of assessment is to see what the student knows and how the student learns before the content is taught, this is called pre-assessment. Sometimes this is also referred to as diagnostic assessment. The purpose of pre-assessment is to figure out what the student knows and can do, in order to tailor teaching according to their needs. For example, with a new class, or a new student joining a pre-existing class, the teacher should carefully become familiar with their background and potential transcripts. In addition, for example in mathematics or language and literature, one can hold a baseline test to find out what the student's initial skills are. This directs instruction and its differentiation. Pre-assessment can also be used as an aid to differentiation, for example when planning teaching groups. Pre-assessment also helps the student to connect what they already know with what they are about to learn.

- pre-assessment
- formative assessment
- summative assessment

When the knowledge of a student is assessed in the end of a period of study, we talk about summative assessment. Summative assessment should make visible what the student has learned, and it must consist of learning objectives, content and teaching methods. Even summative assessment does not have to be written. Summative assessment can also be made in a group or individually.

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### **Ideas for differentiated assessment**

- Testing with differentiated arrangements
- Self and peer assessment
- Portfolio
- Assessment discussions and meetings
- A learning journal, either written or in vlog form
- Presentations and projects
- Homework as means for assessment
- Clearly illustrated, verbalised and commonly set goals
- The individual fulfilment of goals, either by quality or quantity

## Differentiating the test situation – 101

- Differentiate preparation for a test by limiting the content covered or giving the student the test questions or instructions for how to revise for the test.
- Only test when necessary.
- Draft individualised tests with specific learning goals if needed.
- Let students come up with test questions by themselves.
- Give extra time for completing the test.
- Have the test during breaks, remedial education, or as a take-home test.
- Give the opportunity to answer questions verbally.
- Let low-achievers complete the test in pairs or small groups.
- Return the test individually, if necessary.



# How to recognize the need for differentiation?

Differentiation always stems from the pupils and their individual needs > knowledge of one's pupils is essential

- discussions with the pupil and their guardians
- discussions with colleagues (classteacher, subject teacher, special needs teacher)
- consultations with former teachers (with the permission of the guardians)
- engaging with the pedagogical documents of the pupils
- old exams, self-assessments and tests
- consulting the school psychologist anonymously
- feel free to try out different ways! (trial and error)

# Exercises

Next, two cases are presented.

Please read them through and think about differentiation:

How would you support the learning of Sam and Catherine?



# Initial scenario

## SAM

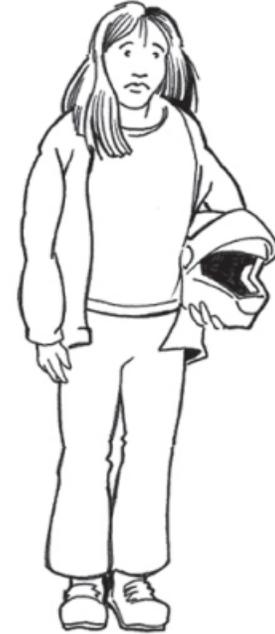
Sam is a boy in grade 1 who studies in a class of 23 students. Starting school has been difficult for Sam. During the autumn semester, he has exhibited great difficulties in attention and hyperactivity and focusing on schoolwork is difficult. Sam is very restless and finds it hard to sit down quietly on his seat. During the lesson, Sam might crawl around the room and under the desks. Listening to instructions is challenging for Sam. He needs constant instructions to take out his books and equipment. It is also hard for Sam to wait for his turn and to let others work in peace. He impulsively shouts out answers and talks with his classmates during teaching. Sam cannot follow teaching and take part in learning in the same way the rest of the class can. His homework is often left undone. Sam exhibits some negativity towards school and he often says he is tired.



# Initial scenario

## CATHERINE

Catherine is a grade 9 student who is very gifted at school. She is socially intelligent and she has many friends. There are 26 students in her class. Catherine gets bored easily because she completes the given tasks quickly and school does not provide her with sufficient challenges to keep her occupied. Very often Catherine brings a book to school, which she reads after completing her work, while others are still working. During class, Catherine also draws or daydreams. She finds school boring. Schoolwork does not motivate her anymore and she does not see the point in doing her homework. Because of this, lately, some of her homework has been left incomplete.



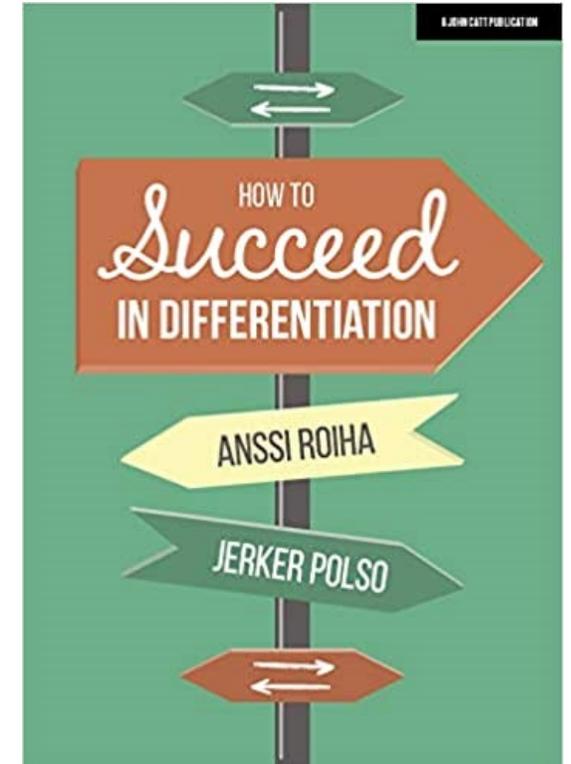
# How to get started with differentiation – concluding words

- Start small > from one dimension and gradually build up from there
- Start with a colleague
- Differentiation needs resources > policymakers
- Administrative support is vital > differentiation as part of mission statements and curricula
- Share ideas and good practices at school
- Involve the guardians in differentiation
- Differentiation is a whole school approach!
- Differentiation is a mindset and a way of looking at things!



# Further reading on the 5D model

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