The application of ICF- CY in the context of the integration of chronic ill schoolchildren in mainstream education in Flemish school health care

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Introduction and background

- Since 1980s: increase of prevalence of chronic diseases in children and young adults (van de lee *et al*., 2007)
  - Better treatment
  - Better outcome

- Successful educational career is outmost important
  - Active participation in society through employment
  - Better health and easier access to welfare and health facilities

    (Allensworth *et al*., 2011)

- More at risk to school delay or leaving school unqualified
  - Barriers in mainstream education
  - Need for support to overcome potential barriers

    (Taras & Potts Darema, 2005; Hemmingson & Borell, 2002)

Introduction and background

- 2007: development of a strategy to optimize the participation of children with an chronic condition in education
- Guideline development as outlined by the VWVJ including
  - systematic literature review
  - clinical expert advice
  - focus sessions with parents
  - educational and pupil guidance professionals
  - medical doctors
  - written surveys with children with a specific chronic condition and their parents.

State of the art

- Need for an ecologic and bio-social approach of chronic disease
  - Health, growth and development as the result of a continuous and dynamic interaction of personal features (nature) and external inhibiting or protective factors (nurture)
  - Handicap situation as a result of the interaction between personal restrictions and inhiting factors in the schoolcontext

    (Fougeyrollas, 1995; Devisch *et al*., 2000)

- To enhance participation
  - Focus on functioning and participation
  - Need for a definition that reflects in a better way a bio- social approach of functioning and participation

State of the art

Special health care needs (SHCN)

" a chronic physical, developmental, behavioral, or emotional condition and who also require health and related services of a type or amount beyond that required by children generally."

Wide range of conditions:

- Fysical health conditions: diabetes, epilepsy, asthma ….
- Mental health conditions: ADHD, ASS …..

McPherson M, Arango P, Fox H, et al. A new definition of children with special health care needs. Pediatrics. 1998;102:137-140.

State of the art

SHCN:

- Wide range in severity
- Wide range in needs in different contexts

- (Hemmingson & Borell, 2002; Avramadis *et al*., 2000; Lani 1998; Avramadis & Norwich, 2002; Mukherjee *et al*., 1999; Mukherjee *et al*., 2000) Lollar DJ; Simeonsson RJ. Diagnosis to function: classification of children and youths. Dev Behav Pediatr. 2005; 26:323-330.

- ErhmannLC, Aeschleman SR, Svanum S. Parental reports of community activity patterns: a comparison between young children with disabilities and their nondisabled peers. Res Dev Disabil. 1995;16:331-343

State of the art

Prevalence figures vary

- Flanders health survey 2008: children and young people under 15 years: 9%
- National survey 2004 UNITED STATES: 13% of children and young people have a chronic condition that requires an intervention
- 20% of the children start at school with a development and/or health problems (Australia & USA)

On each school one or more children with a chronic condition are attending

→ Consideration in a school policy

US Department of Health and Human Services, Health Resources and Services Administration. The National Survey of Children with Special health Care Needs Chartbook. Rockville, MD: USDHHS; 2004

Bethell, C., Forrest,C., Stumbo, S, et al. Factors promoting or potentially impeding school success: disparities and state variations for children with special health care needs. Maternal and Child Health Journal, 16, S35-S43.

Conclusions

- Achieve optimal integration by breaking down barriers in the schoolcontext
  - Meeting individual educational and participation needs of children

    (Taras & Potts – Datema, 2005; Hemmingson & Borell, 2002)
  - Supporting schoolstaff and teachers

    (Mukherjee et al., 2002; Lightfoot et al., 2000; Mukherjee et al., 2000)
- Need for assessment of special educational and participation needs and translation to feasible actions in the classroom

  (Hemmingson & Borell, 2002; Avramadis *et al*., 2000; Lani 1998; Avramadis & Norwich, 2002; Mukherjee *et al*., 1999; Mukherjee *et al*., 2000)

Strategy in Flanders

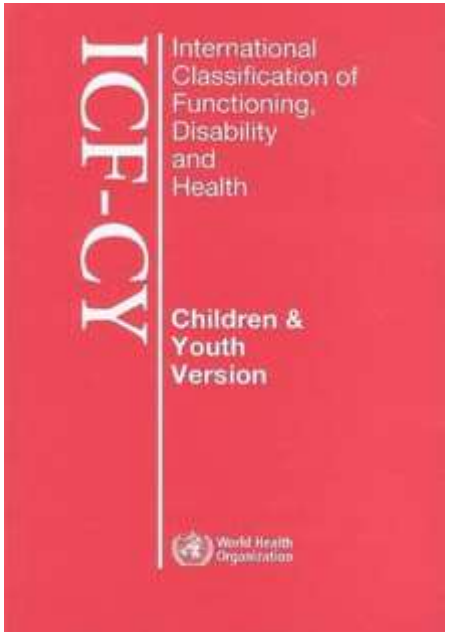
- Development of a conceptual framework for schoolhealth professionals based on the Needs Based Action Model (NBA) (Pameijer) and the Intenational Classification of Functioning (ICF-CY)
  - Assessment of educational and participation needs
  - Enabling translation of a medical diagnosis into educational and participation needs
  - Evaluation of the factors that inhibit or enhance participation
  - Pupils, parents and schoolteam are involved through the diagnostic process
  - Results:
    - hands on information for the teacher in the classroom, parents and children

Schoolhealth in Flanders

- Multidisciplinary pupil guidance centers
  - Youth health care physicians and nurses
  - Schoolpsychologists
  - Social workers
  - In coöperation with schools and parents
- Mission: to enable development, health and schoolcarreer of children
  - Prevention to intervention
    - Eg. vaccination, monitoring of growth and development, early detection of developmental issues, enable smooth schoolcarreer
  - Go between: education, health care and well fare services

ICF-CY

- International Classification of Functioning-Children and Youth Version
- Conceptual framework
- Bio- social model



ICF-CY

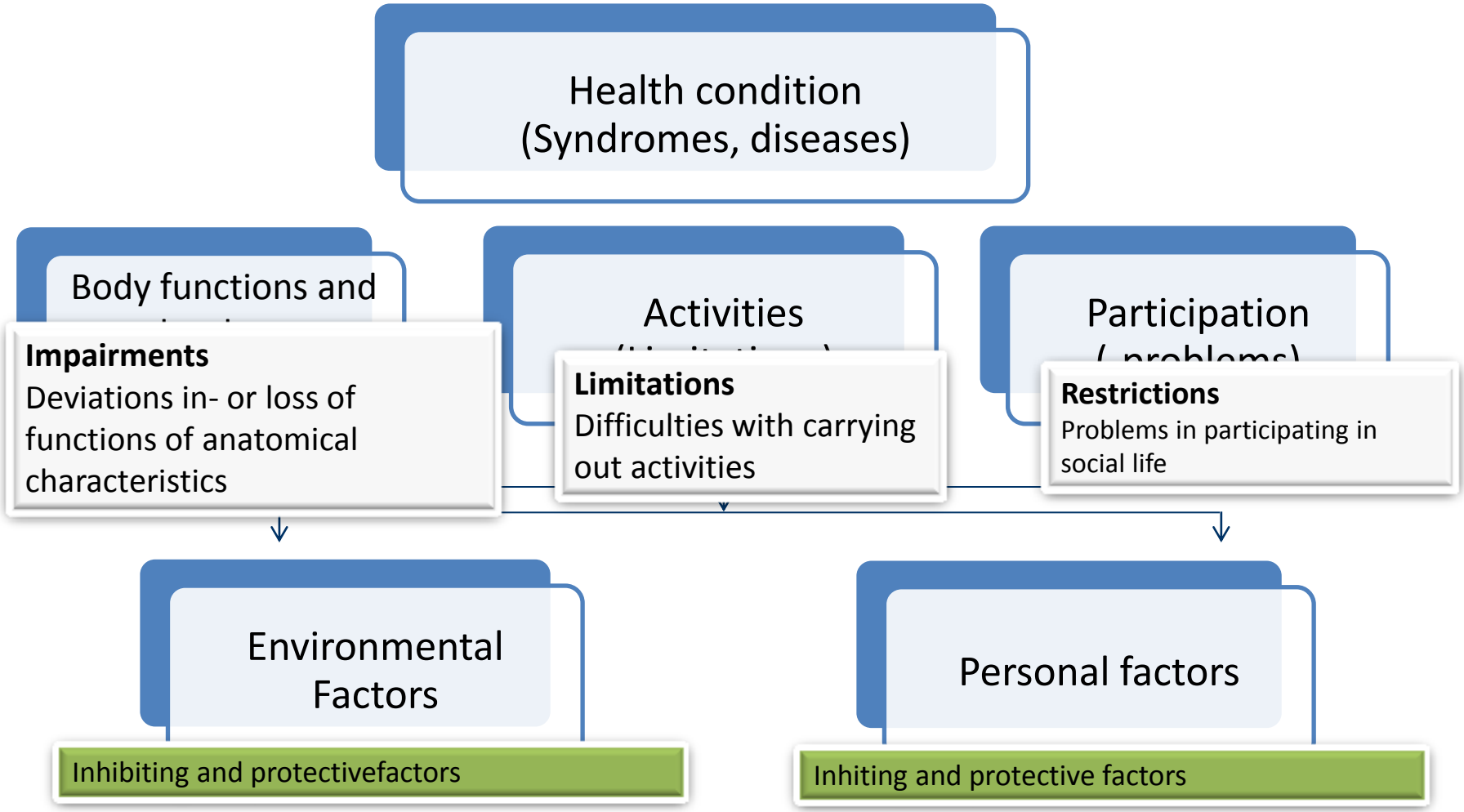
- Common and universal language to describe the health and functioning of *all* children and young people
- It integrates the *medical* and *social* models of disability
- It describes functioning
  - as a complex interaction between a health condition and contextual factors
  - from 3 different perspectives:
    - From the human organism = **body structures and functions**
      eg. anatomy of handbones, to hold attention
    - From human action = **activities**
      eg. writing
    - From participation in social life = **participation**
      eg. playing together

ICF-CY

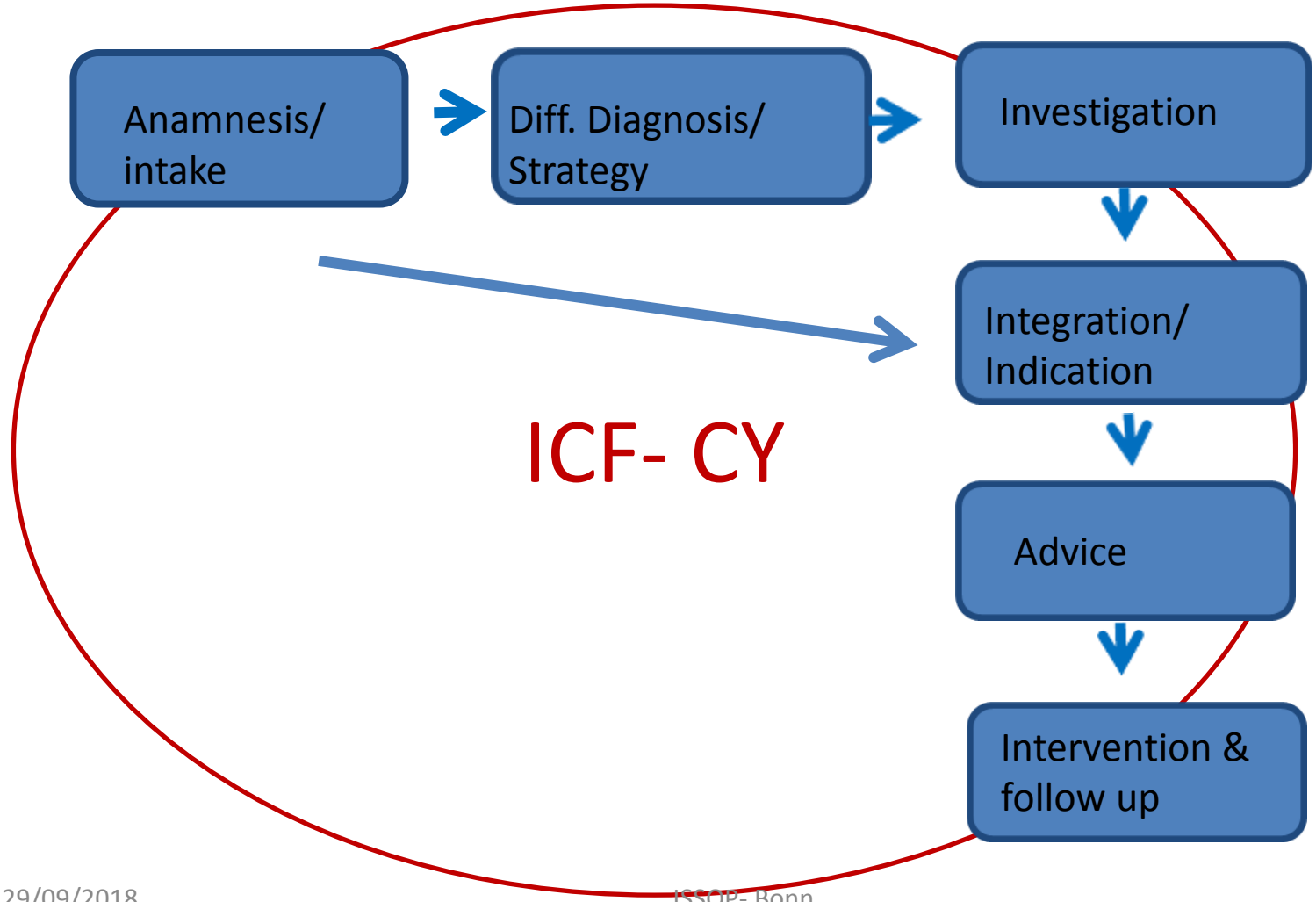
- Takes into account contextual factors
  - Environmental factors
    - Individual level: eg. close family, (in) formal level: eg.school
  - Personal factors:
    - are the particular background of an individual's life and living, and comprise features of the individual that are not part of a health condition or health states

- Neutral language
  - Inhibting and protective factors can be mentioned!

ICF – CY: interactional framework

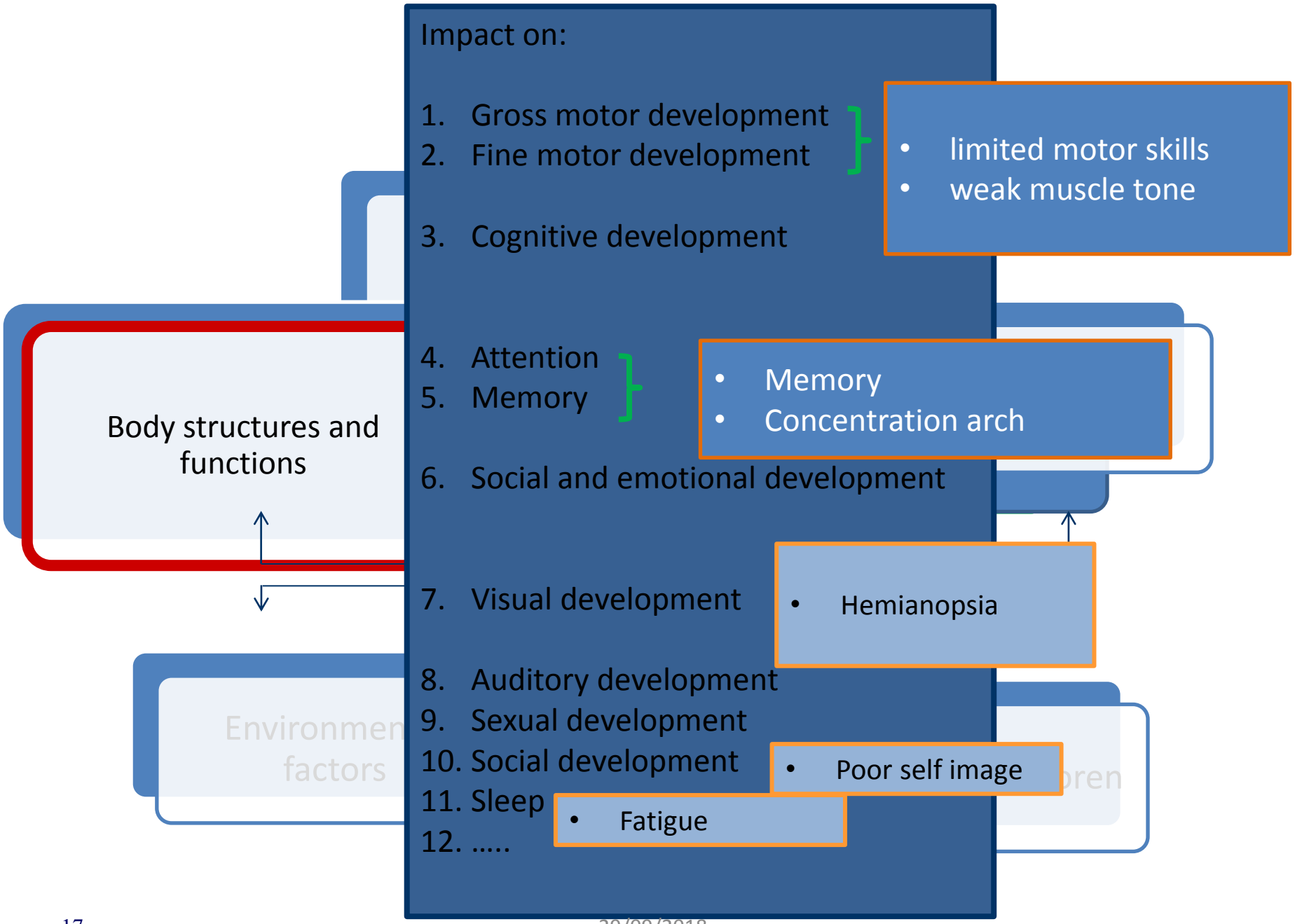


Use of ICF- CY in diagnostic cycle

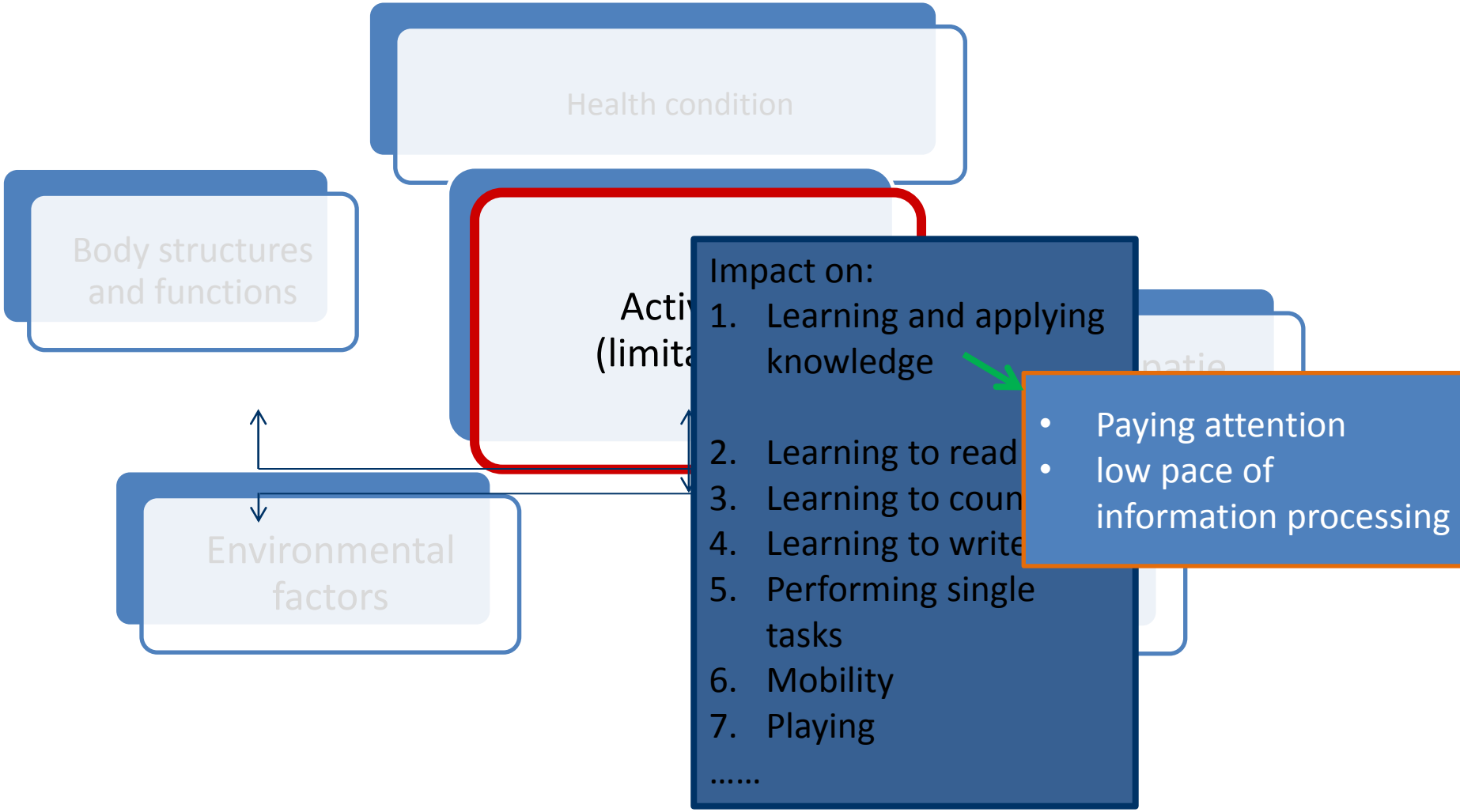


Case Jonas (11y)

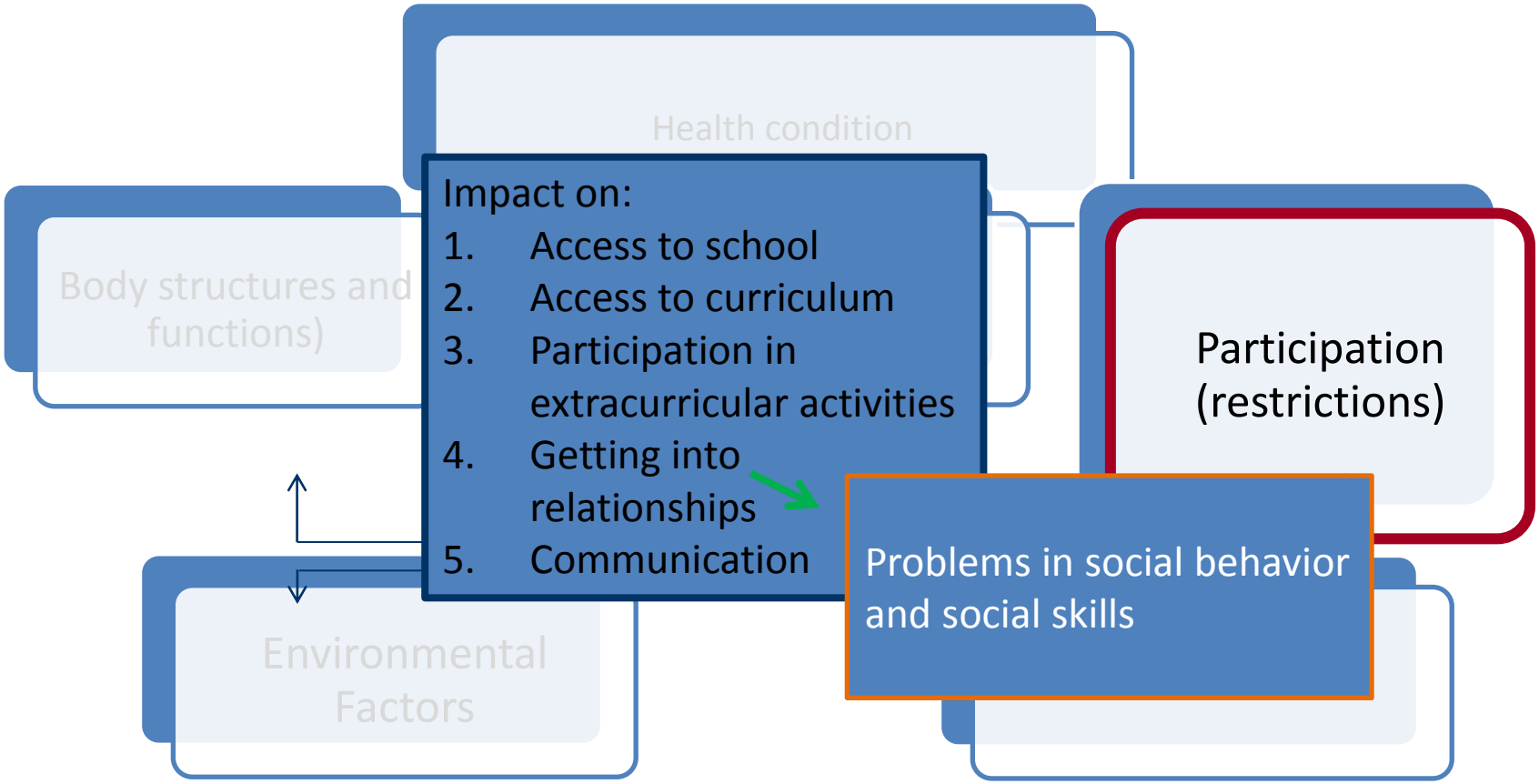
- Smooth schoolcarrier
- Bicycle accident: acquired brain injury
  - Limited vision, hemianopsia
  - Motor problems: disturbed muscle tension on a body part
  - Fatigue
  - Concentration problems: short concentration arch
  - Low pace of information processing
  - Memory problems
  - Problems with self-image and self-confidence
  - Problems in social behavior and social skills


Impact on:
1. Gross motor development
2. Fine motor development
3. Cognitive development
4. Attention
5. Memory
6. Social and emotional development
7. Visual development
8. Auditory development
9. Sexual development
10. Social development
11. Sleep
12. .....
• limited motor skills
• weak muscle tone
• Memory
• Concentration arch
• Hemianopsia
• Poor self image
• Fatigue
Body structures and functions
Environmen
factors
oren

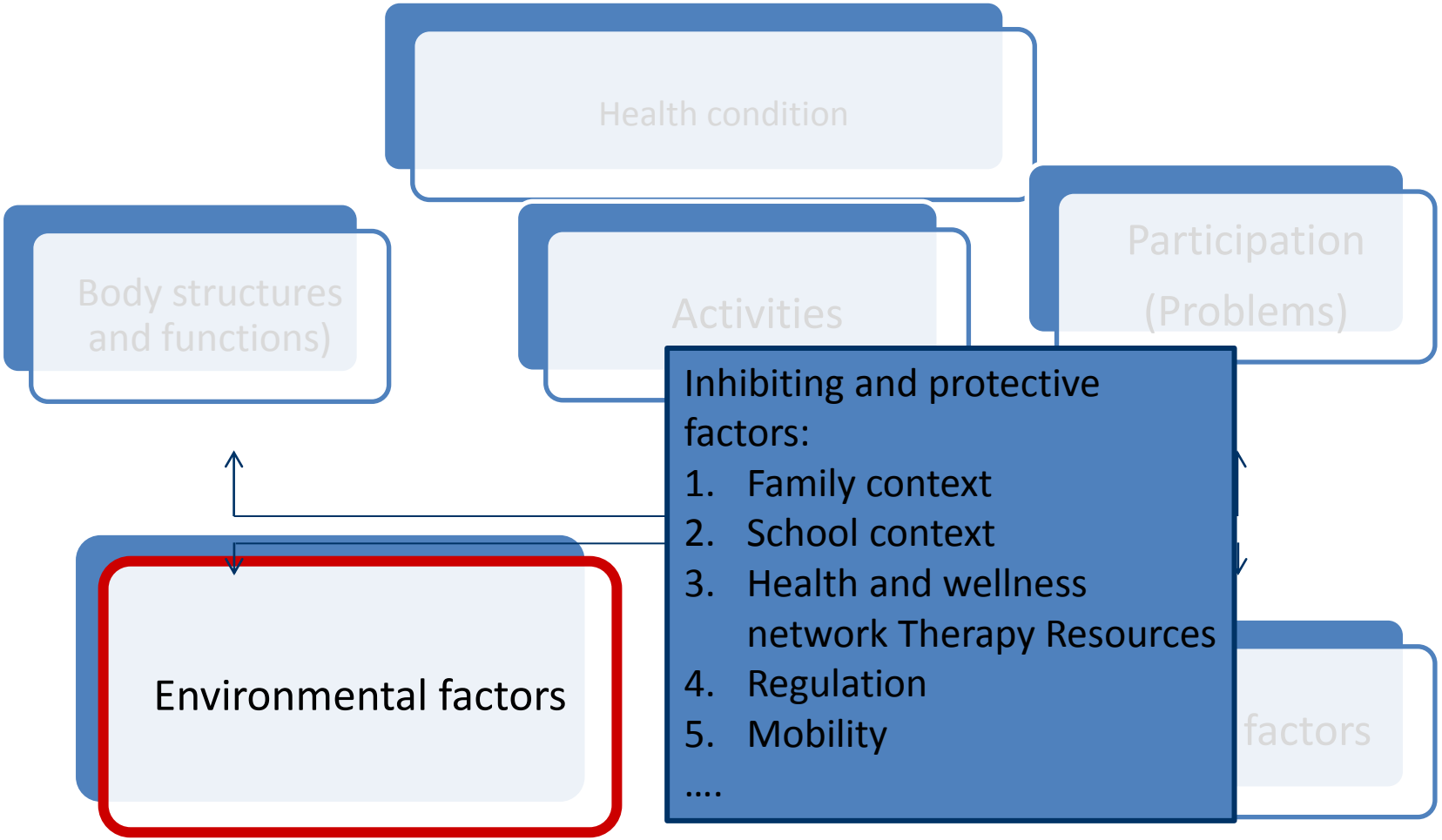
Case Jonas


Health condition
Body structures and functions
Acti
(limita
Environmental factors
Impact on:
1. Learning and applying knowledge
2. Learning to read
3. Learning to coun
4. Learning to write
5. Performing single tasks
6. Mobility
7. Playing
……
• Paying attention
• low pace of information processing

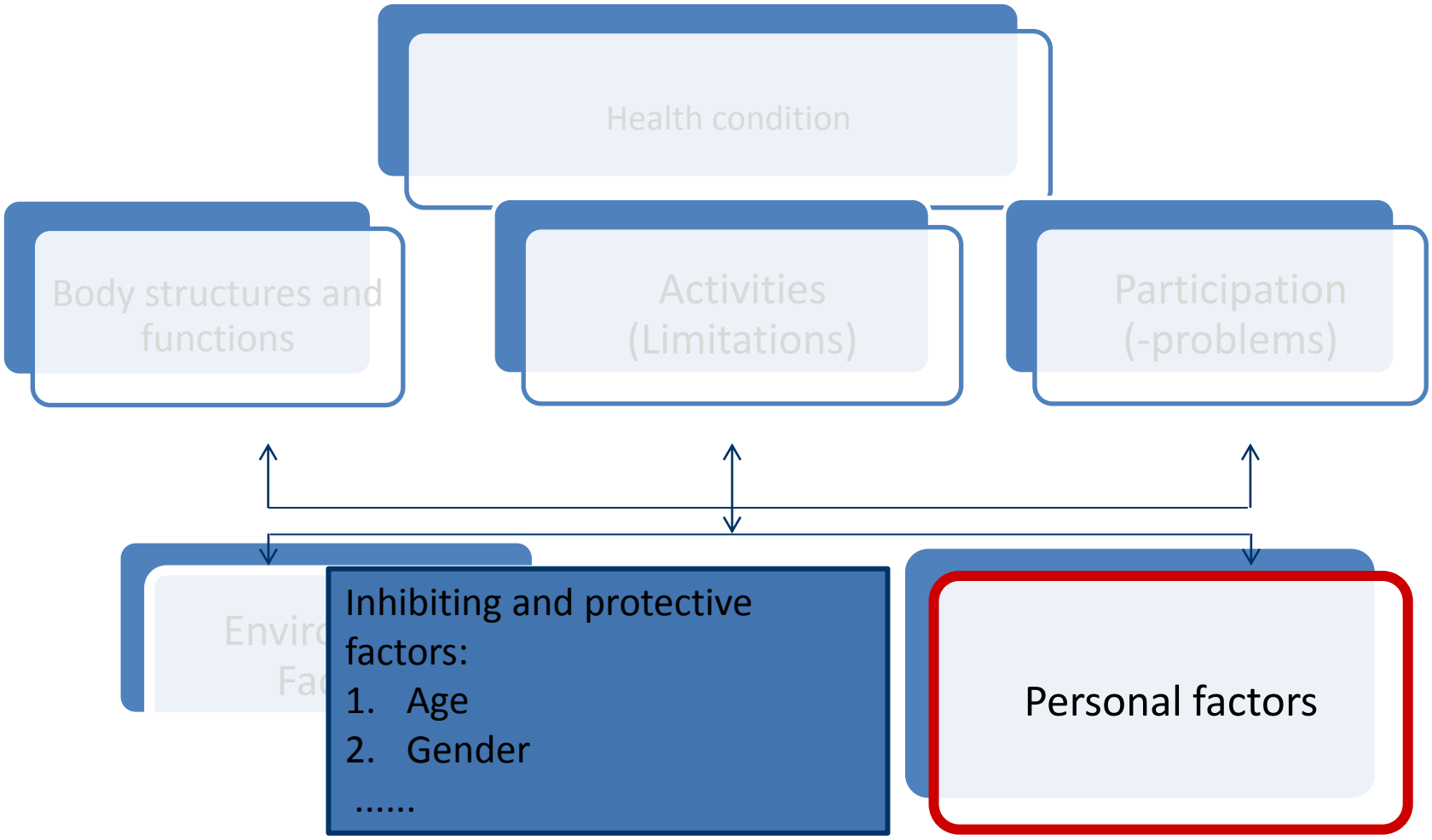
Case Jonas


Health condition
Body structures and functions)
Impact on:
1. Access to school
2. Access to curriculum
3. Participation in extracurricular activities
4. Getting into relationships
5. Communication
Participation (restrictions)
Problems in social behavior and social skills
Environmental Factors

Case Jonas


Health condition
Body structures and functions)
Activities
Participation (Problems)
Inhibiting and protective factors:
1. Family context
2. School context
3. Health and wellness network Therapy Resources
4. Regulation
5. Mobility
….
Environmental factors
factors

Case Jonas


Health condition
Body structures and functions
Activities (Limitations)
Participation (-problems)
Inhibiting and protective factors:
1. Age
2. Gender
.....
Personal factors

Body structures and functions	Activities and participation	Educational and participation needs
How does it show?		
• Memory • Attention • Hemianopsia • Motor problems • Disturbed muscle tension one body half • Low self esteem • Fatigue	**Activities:** • Paying attention • low pace of information processing **Participation** • Problems in social and social skills	Jonas needs: • Instruction needed that…. • Requests or tasks that
Environmental factors	**Personal factors**	
	• Male • Accident • 11 year	

Body structures and functions	Activities and participation
(140- b189) Specific mental functions b140 Attention functions b1400 Sustaining at b144 memory funct b1442 Processing a memory **(b110- b139) Globa** b126 Temperament functions b130 Energy and dr b1300 Energy level B134 Sleep functio **(b210- b229) Seein** b210 Seeing functio b2101 Visual field f **(b730- b749) Musc** b730 Muscle powe b735 Muscle tone f b7352 Tone of mus	**Applying knowledge (d160- d179)** d160 Focusing attention

b 140 Attention functions
Specific mental functions of focusing on an external stimulus or internal experience for the required period of time.
Inclusions: functions of sustaining attention, shifting attention, dividing attention, sharing attention; concentration; distractibility
Exclusions: consciousness functions (b110); energy and drive functions (b130); sleep functions (b134); memory functions (b144); psychomotor functions (b147); perceptual functions (b156)

b 1400 Sustaining attention
Mental functions that produce concentration for the period of time required.

b 1401 Shifting attention
Mental functions that permit refocusing concentration from one stimulus to another.

b 1402 Dividing attention
Mental functions that permit focusing on two or more stimuli at the same time.

b 1403 Sharing attention
Mental functions that permit focusing on the same stimulus by two or more people, such as a child and a caregiver both focusing on a toy.

Body structures and functions	Activities	Participation
How does it show?		
• Memory ? • Attention? • Hemianopsia? • Motor problems ? • Disturbed muscle tension one body half ? • Low self esteem? • Fatigue?	• Seeing? • Reading? • Writing? • Use of hand? • use of memory? • Understanding tasks? • Walking, playing, moving…?	• Working together? • Making friends? • Accepting authority? • Participating in the playground?

Environmental factors	Personal factors
• Use of resources? • Attitude of teachers, and peers? • Tuning of revalidation therapy and schoolactivities?	• Male • 11y • Accident (-) • Motivation? • Coping strategy?

Body structures and functions	Activities	Participation
How does it show?		
Memory: • short assignments • Short instruction moments • Repeat instruction Hemianopsia • Adapted glasses Motor problems Disturbed muscle tension one body half • Physiotherapy Low self esteem • Psychotherapy Fatigue • Regular breaks • No homework	Reading • Learning Jonas to move the head from left to right when reading • Use a brightly colored ruler to align the left and right sides of the pages Writing • Replace writing assignments when possible by oral assignments • Use of laptop use of memory and performing tasks • Use of road map when performing complex tasks • Repeat instruction individually	• Buddy to help Jonas when working in groups • Giving success experiences by giving assignments Jonas is good at

Body structures and functions	Activities	Participation
How does it show?		
Environmental factors	**Personal factors**	
• Provide resources • Motivating teacher • Supporting parents and peers • Tuning therapy and schoolactivities?	• Male • 11y • Accident (-) • Strong motivated boy • Is good at working with a computer	

Experiences in Flanders

- Since 2014 ICF- CY is implemented in Flanders In the law for inclusion of children with SEN in mainstream education
  - The assessment of special educational and participation needs
  - Indication of reasonable acommodations
- First experiences
  - Implementation is a slow process
  - Results in better hands on information for all concerned
  - Results in better IEP
  - Further research is needed

Thank you for your attention!