Introduction to Learning Disabilities

Week 1 – 10.13.2015

Course 2015-2016

- Week 1 (13): introduction to LD
- Week 2 (19-20): intelligence assessment; IQ and LD
- Week 3 (26-27): reading comprehension
- Week 4 (2-3/XI): Comorbidities and ADHD
- Week 5 (9-10): Writing

Examination

- Open written questions (probably 3 for each module), for Cornoldi module one question will be associated to one of the homework questions

Developmental Disorders of Language, Learning and Cognition

Charles Hulme and Margaret J. Snowling

Developmental Disorders...

- The book provides an overview of research on commonly occurring Developmental Disorders of Language, Learning and Cognition
  - Dyslexia, Reading Comprehension Impairment, SLI, DCD, Maths Disorder, ADHD, Autism
- What if anything do these disorders have in common?
  - They are quite common
  - They have serious consequences for Educational attainment (and for well-being in adulthood)
  - They often co-occur
  - They are the product of genetic and environmental risk factors

Terminology

- 1) Learning disabilities = Specific Learning Disorders (SLD) = Disturbo Specifico di Apprendimento (DSA)
- Includes: dyslexia, dyscalculia
- 2) Mental Retardation = Intellectual Disability

Specific vs general disorder

Characteristics of Learning Disabilities

Commonly reported attributes (Scruggs & Mastropieri, 2002)

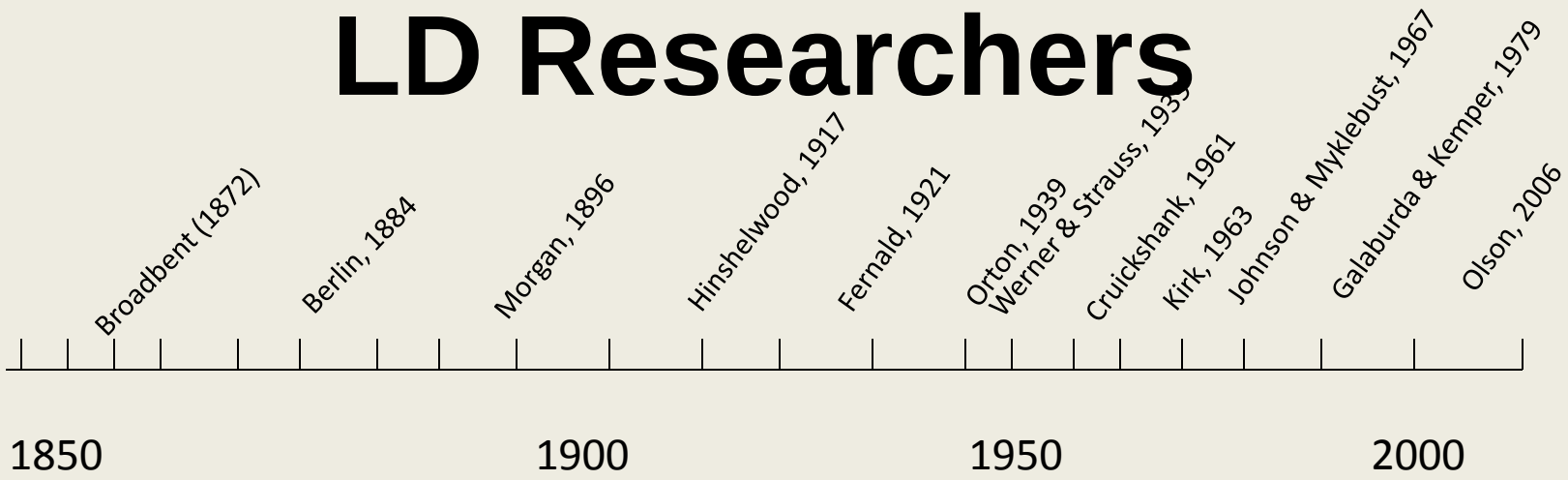
- Unexpected underachievement
  - Learning problems due to low intelligence, sensory impairments, emotional disturbance, economic/ cultural disadvantage are “expected”
- Multifaceted
  - Co-morbidity
  - Different academic skill areas (reading but also math, spelling, writing, or all of these)
  - Deficits in cognitive processes (e.g., attention, memory, working memory, purposive processing)

What are Learning Disabilities?
Commonly reported features

- Associated with intra-individual differences
  - Specific areas of weaknesses or “imbalances”, specific areas of strengths
  - Not always apparent in group summaries or subtype scores
- Within-individual, presumably neurological differences
  - Some information processing components may be difficult to measure, however neuropsychological basis for LD has been supported by fMRI, autopsy, PET scans, genetic studies
- Responsive to appropriate instruction

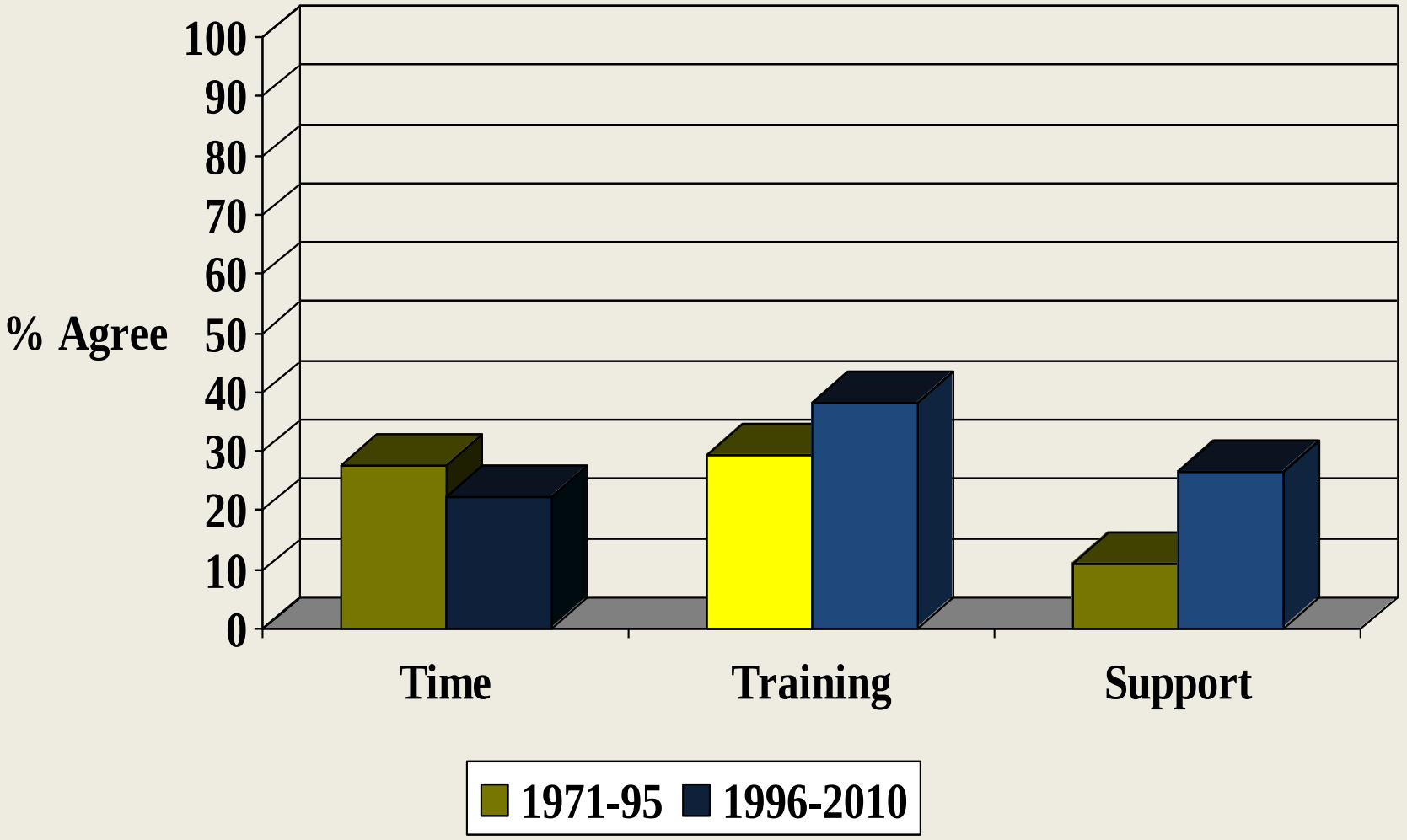
(American Psychiatric Association, 2000; Baroody & Ginsburg, 1991; Cruickshank, 1985; Cooney & Swanson, 1987; Hallahan et al., 2004; Kavale & Forness, 2000; Keogh, 1994; Lerner & Kline, 2004; Swanson, 1997; Wong, 1996)

LD Researchers



From Hallahan, 2003, *Handbook of Learning Disabilities*

Do Teachers Have Enough…?

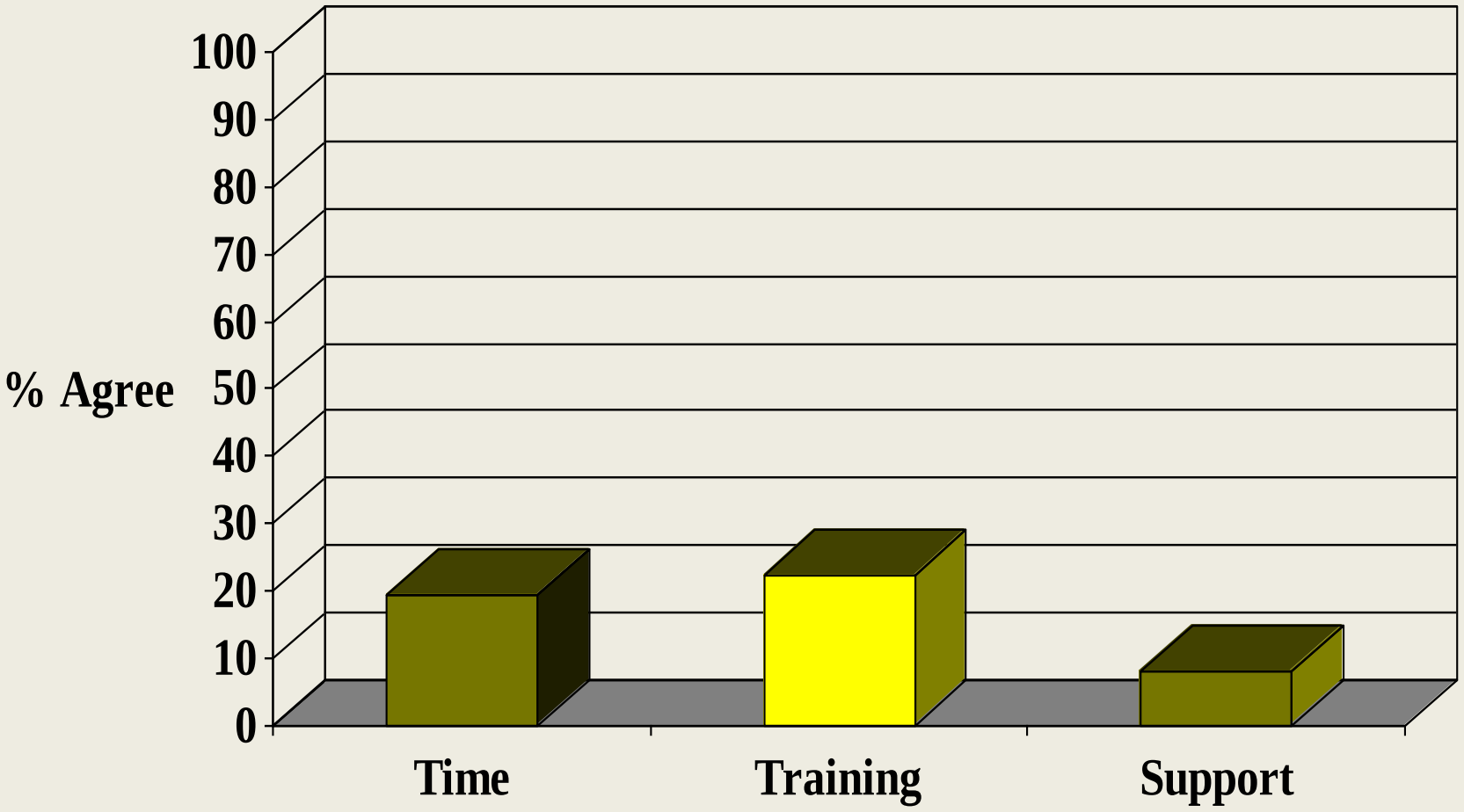


Changes in the Italian Legislation

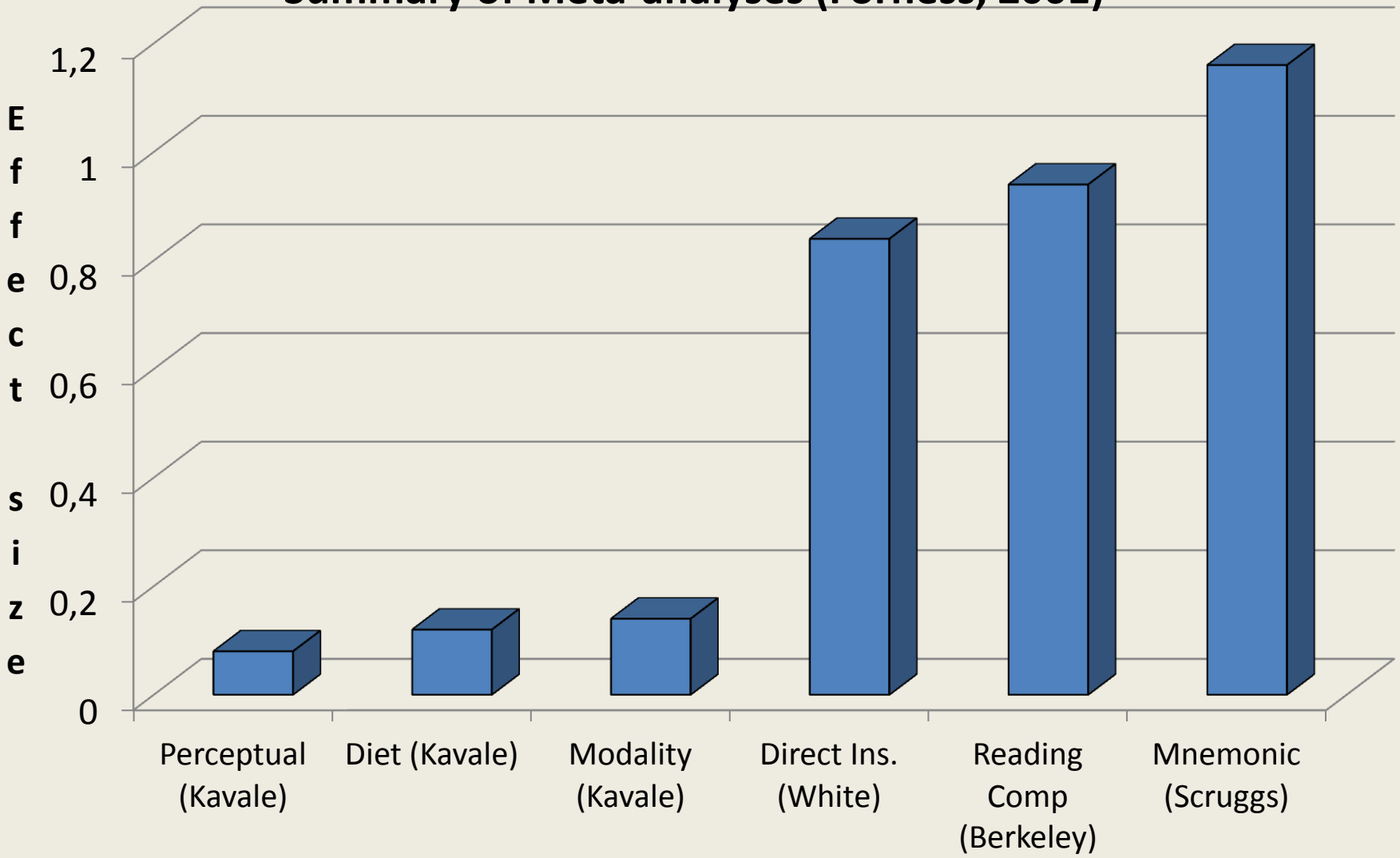
- October, 10, 2010: the Italian parliament voted a law in favour of LD; however Reading Comprehension and Visuospatial difficulties were not included

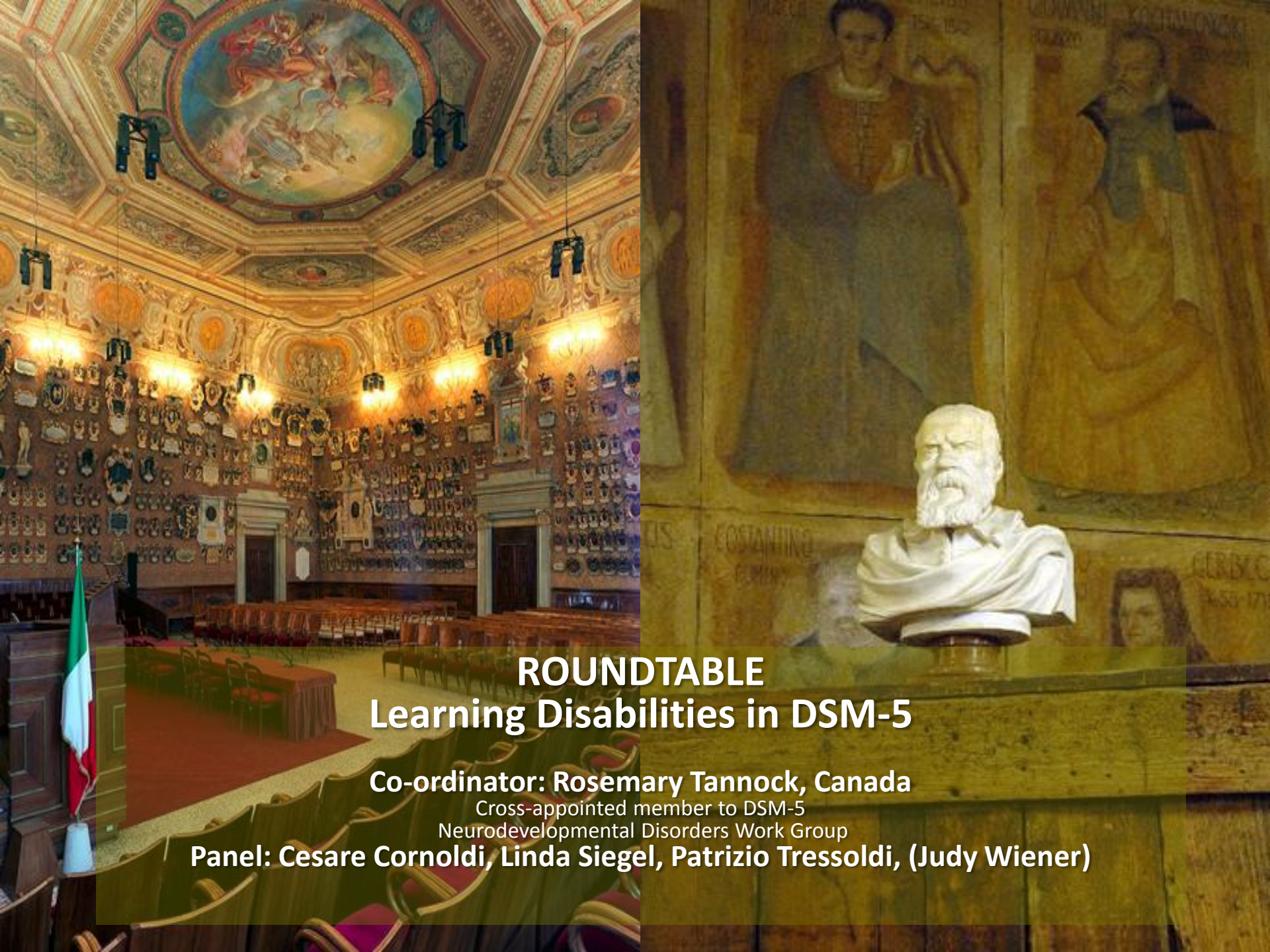
- December 2012: the Public Instruction Ministero took into consideration also these problems

Italy *(N* = 523)



What are Effective Interventions for LD?
Summary of Meta-analyses (Forness, 2001)





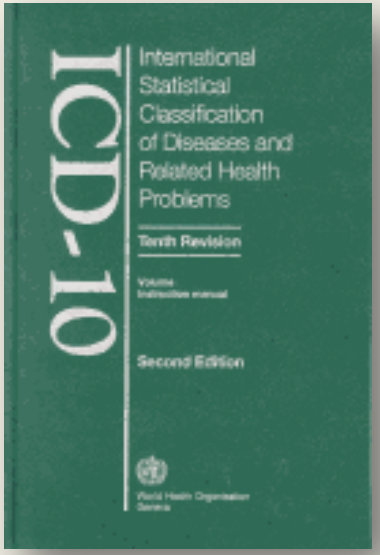
ROUNDTABLE
Learning Disabilities in DSM-5

Co-ordinator: Rosemary Tannock, Canada
Cross-appointed member to DSM-5
Neurodevelopmental Disorders Work Group
Panel: Cesare Cornoldi, Linda Siegel, Patrizio Tressoldi, (Judy Wiener)

Homework

- Differences in the definition between Italian law and DSM-5
- If you are from a different country add information on your country

DSM abandons the romans!



DSM Process: a balancing act

Scientific evidence

Clinical Utility & Experience

Diagnostic criteria are behavioral descriptors:
potential etiological factors are summarized in the text

General Problems with DSM-IV

- DSM – based on clusters of signs & symptoms
- Poor validity – a system devised for reliability
- Heterogeneity of DSM disorders (polythetic criteria sets)
- Excessive comorbidity
- Reification of disorders
- Too many ‘disorders’ !

DSM-5 Commmittee on Neurodevelopmental Disorders

- Susan Swedo, M.D. , pediatrician and chair
- Gillian Baird, M.D., developmental pediatrician
- Edwin Cook Jr, M.D., child psychiatrist
- Francesca Happe, Ph.D., developmental psychologist
- James Harris, M.D., child psychiatrist
- Water Kaufmann, M.D., neurologist
- Bryan King, M.D., child psychiatrist
- Catherine Lord, Ph.D., clinical psychologist
- Joseph Piven, M.D., child psychiatrist
- Sally Rogers, Ph.,D., developmental and clinical psychologist
- Sarah Spence, M.D., child neurologist
- Rosemary Tannock, Ph.D., physiotherapist/psychologist/special educator
- Amy Wetherby, Ph.D., speech-language pathologist
- Harry Wright, M.D., child psychiatrist

DSM-5 Workgroup on Neurodevelopmental Disorders: Subcommittees & Advisors

Learning Disorders

Susan Swedo
Rosemary Tannock
Amy Wetherby

Advisors

Bruce Pennington (USA)
Sally Shaywitz (USA)
Bennett Shaywitz (USA)
Joseph Sergeant (Netherlands)
Ruth Shalev (Israel)
Michael Von Aster (Germany)

315.00 Learning Disorders in DSM-IV-TR

(formerly Academic Skills Disorder)

- 315.0 Reading Disorder
- 315.1 Mathematics Disorder
- 315.2 Written Expression Disorder
- 315.3 Learning disorder NOS

When criteria are met for more than one Learning Disorder, all should be diagnosed

DSM-IV-TR Learning Disorders

What needs fixing?

1. No diagnostic criteria for Learning Disorders per se… just for each of the specified types of LD
2. Questionable whether the three types of LD are:
   - **Mutually exclusive -** distinct from one another
   - **Exhaustive** - capture the range of Learning Disorders
   - **Developmentally sensitive** - capture the developmental changes in manifestation of the disorder
3. Primary diagnostic criterion is psychometric
   - based on *'IQ-achievement Discrepancy',* which lacks validation
   - [inconsistent with USA Code of Federal Regulations § 300.8 (c)(10) [2004 IDEA Part B Final Regulations]

Summary of recommended changes for DSM-5 LD

- *Four* diagnostic criteria:
  - Persistent clinical (behavioral) symptoms of learning problems, with onset during years of formal schooling
  - Psychometric criterion for low academic achievement that permits age *or* IQ based discrepancy
  - Exclusion - Learning problems not better explained by intellectual delay, neurological or sensory problems etc
  - Impairment - taking accommodations into account
- Impairment in 'psychological processes' is not included as a diagnostic criterion, but their assessment is recommended in the text

Final criteria

- Diagnostic Criteria
- A. Difficulties learning and using academic skills, as indicated by the presence of at least
- one of the following symptoms that have persisted for at least 6 months, despite the
- provision of interventions that target those difficulties:
- 1. Inaccurate or slow and effortful word reading (e.g., reads single words aloud incorrectly
- or slowly and hesitantly, frequently guesses words, has difficulty sounding
- out words).
- 2. Difficulty understanding the meaning of what is read (e.g., may read text accurately
- but not understand the sequence, relationships, inferences, or deeper meanings of
- what is read).
- 3. Difficulties with spelling (e.g., may add, omit, or substitute vowels or consonants).
- 4. Difficulties with written expression (e.g., makes multiple grammatical or punctuation
- errors within sentences; employs poor paragraph organization; written expression
- of ideas lacks clarity).
- 5. Difficulties mastering number sense, number facts, or calculation (e.g., has poor
- understanding of numbers, their magnitude, and relationships; counts on fingers to
- add single-digit numbers instead of recalling the math fact as peers do; gets lost in
- the midst of arithmetic computation and may switch procedures).
- 6. Difficulties with mathematical reasoning (e.g., has severe difficulty applying mathematical
- concepts, facts, or procedures to solve quantitative problems).

Final

- B. The affected academic skills are substantially and quantifiably below those expected
- for the individual's chronological age, and cause significant interference with academic
- or occupational performance, or with activities of daily living, as confirmed by individually
- administered standardized achievement measures and comprehensive clinical
- assessment. For individuals age 17 years and older, a documented history of impairing
- learning difficulties may be substituted for the standardized assessment

- C. The learning difficulties begin during school-age years but may not become fully manifest until the demands for those affected academic skills exceed the individual's limited capacities (e.g., as in timed tests, reading or writing lengthy complex reports for atight deadline, excessively heavy academic loads).

- D. The learning difficulties are not better accounted for by intellectual disabilities, uncorrected visual or auditory acuity, other mental or neurological disorders, psychosocial adversity, lack of proficiency in the language of academic instruction, or inadequate educational instruction.