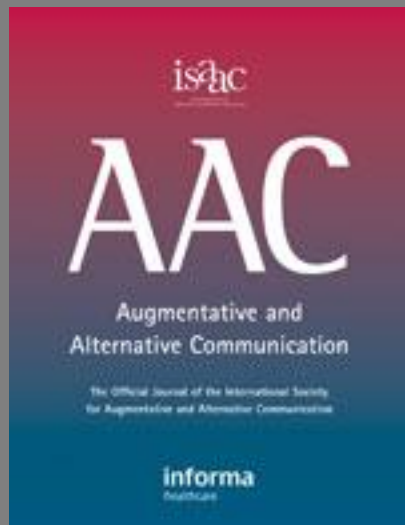


ICF Implementation Approaches for AAC Worldwide

Oregon Health & Science University
Charity Rowland & Melanie Fried-Oken

University of Stirling
Joan Murphy & Sally Boa

Flinders University
Parimala Raghavendra



AAC Volume 28, Number 1 (March 2012)

Special Issue: AAC and ICF: A Good Fit to Emphasize Outcomes

Rowland, C., Fried-Oken, M., Steiner, S.A.M., Lollar, D., Phelps, R., Simeonsson, R. and Granlund, M. *Developing the ICF-CY for AAC Profile and code set for children who rely on AAC.*

Murphy, J. and Boa, S. *Using the WHO-ICF with Talking Mats as a goal setting tool.*

Raghavendra, P., Olsson, C., Sampson, J., McInerney, R. and Connell, T. *School participation and social networks of children with complex communication needs, physical disabilities and typically developing peers.*

Clarke, M. T., Petrides, K. V., Griffiths, T., Lysley, A. and Price, K. *An examination of relations between participation, communication and age in children with complex communication needs.*

Granlund, M., and Pless, M. *Implementation of the International Classification of Functioning, Disability and Health (ICF/ICF-CY) and how this relates to Augmentative and Alternative Communication.*

Simeonsson, R., Bjork-Akesson, E. and Lollar, D. *Communication, disability and the ICF-CY.*

PROBLEM: Knowledge of health condition alone does not predict child's functional communication

- Individuals with CCN may have difficulty communicating related to a variety of different health conditions
- Identifying the health condition alone may not suggest the appropriate intervention
- The individual's functional capacity in different environments + knowledge of the health condition suggests appropriate interventions

A Solution: The ICF and ICF-CY



- ICF: International Classification of Functioning, Disability and Health (Child & Youth version)
- Developed by the World Health Organization (WHO) to complement the ICD (International Classification of Disease)
- Designed to describe the functional status of individuals in a standardized manner

Why use the ICF-CY?

- Provides a systematic coding scheme to describe a child's function and intervention needs.
- Complements ICD diagnostic coding, focusing on function, instead of etiology or diagnosis.
- Establishes a common language for professionals, PWD, family members & the public worldwide that can be used across education, medical and social services.
- Provides a scientific basis for understanding and studying health status and outcomes

An Example: Complex communication needs of one child with Down Syndrome

- Participation: D7504.2--Informal relationships with peers: Moderate difficulty
- Participation D820.3--School education: Severe difficulty
- Body Function B320.4--Articulation: Complete impairment
- Body Structure S3203.3--Tongue: Severe impairment
- Activity D330.3 Speaking--Severe difficulty
- Activity D3501.3 Sustaining a conversation--Severe difficulty
- Environment E420.+2--Friends: Moderate facilitator

The ICF-CY and AAC

The ICF-CY works especially well for AAC learners, because it separates speech functions from communication functions

Communication ≠ Speech



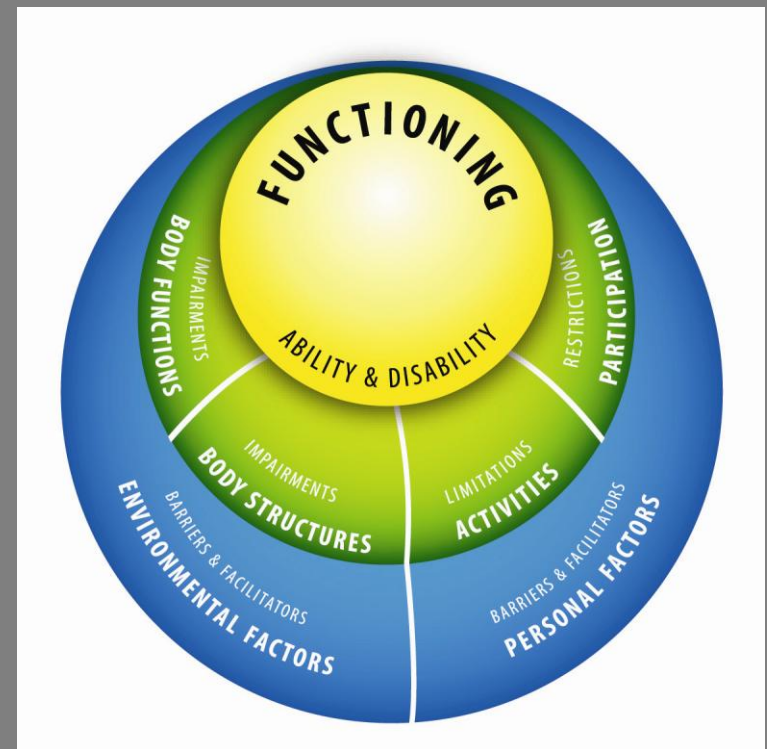
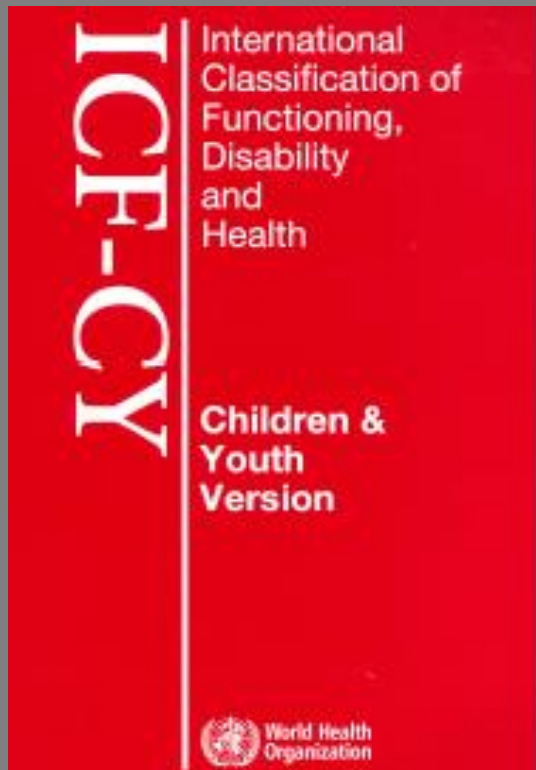


Using the ICF-CY as an Organizational Framework to Improve Communication Goals for AAC Users

- Population: School-aged children (in U.S.) who use AAC or are candidates for AAC
- Goal 1: Develop and evaluate the ICF-CY for AAC Profile to describe communication strengths and needs of children who use AAC
- Goal 2: Use the ICF-CY for AAC Profile to guide communication goal development

C. Rowland, M. Fried-Oken, D. Lollar, SAM Steiner

From WHO document to ICF-CY for AAC Profile



Published manual of codes

On-line interactive
ICF-CY for AAC Profile

Two-part ICF-CY for AAC Profile

- Survey: identify participation restrictions, communication limitations, functional reasons for them, and environmental facilitators and barriers
- Report: prioritize identified items to facilitate IEP goal development process

The ICF-CY for AAC is a Code Set

Four categories:

1. Restrictions in Participation caused by communication limitations
2. Communication Limitations
3. Functional Impairments that limit communication
4. Environmental Factors that serve as barriers or facilitators for communication

Participation Restrictions:

Rate the degree of participation restriction caused by communication limitations in...

- School-related Activities
- Interpersonal Relationships

Communication Limitations:

Rate limitations in...

- Receptive Language and Literacy
- Expressive Language and Literacy
- Functions of Communication
- Rules of Social Interaction in Conversation
- AAC: Receptive Communication
- AAC: Expressive Modes and Strategies
- AAC: Motor Access

Body Functions:

Rate impairments that limit communication...

- Hearing
- Vision
- Touch
- Oral Motor
- Respiratory
- Intellectual
- Gross and Fine Motor

Environmental Barriers

Rate environmental factors that impede or support the student's communication...

- Physical Environment
- Assistive Technology
- People
- Services and Policies

Download the ICF-CY for AAC Code Set:

www.icfcy.org/aac



Using the ICF-CY to Generate Communication Goals For Non-Speaking Children

C. Rowland, M. Fried-Oken, S. Steiner, R. Phelps, C. Gibbons,
M. Granlund, H. Feldman, D. Lollar

ICFAAC@ohsu.edu

Proposed Core Set for Augmentative and Alternative Communication Users

COMMUNICATION LIMITATIONS	
Does the child experience difficulties in terms of RECEPTIVE COMMUNICATION MODES, SYNTAX, and SEMANTICS (understanding communication directed toward him or her)?	
Focusing attention on human touch, face and/or voice	d 1600
Responding to the human voice at a very basic level	d3100
Comprehending the meaning of single spoken words	d 3100a
Comprehending the meaning of 2-3 word/symbol phrases	d 3101
Comprehending the meaning of sentences and sets of sentences accurately	d 3102
Comprehending the meaning of body gestures (facial expressions, posture, hand gestures, movements)	d 3150
Comprehending the meaning of drawings and photographs used to communicate	d 3152
Comprehending the meaning of sign language	b 16702
Comprehending the meaning of other signs and symbols (such as Braille, Blissymbols, 3-dimensional symbols, etc.)	d 3152
Comprehending the meaning of written language	d 325
Comprehending the meaning of a narrative that conveys a cohesive topic	d 3102a
Does the child experience difficulties in EXPRESSIVE COMMUNICATION MODES, SYNTAX, and SEMANTICS (communicating with other people)?	
Using body language, facial expressions and gestures to communicate	d 3550
Using eye gaze to communicate	d 3350a
Using signs and symbols (such as Blissymbols, icons) to communicate	d 3351
Using drawings, pictures or photographs to communicate	d 3552
Using 3-dimensional objects/representations to communicate	d 3352a
Using manual sign language to communicate	d 340
Writing messages to communicate	d 345
Using correct spelling conventions	d 345a
Using Braille to communicate	d 3602a
Using communication devices and technologies	d 360
Using intelligible speech to communicate	d 330
Combining words or symbols into 2-3 word or symbol phrases	
Using correct word or symbol order for communication function	
Using sentences and sets of sentences appropriately	
Combining sentences to convey a cohesive topic	
Using vocabulary appropriate to the situation	

What is the relationship between items prioritized on ICF-CY for AAC and goals on pre-existing IEPs?

- N = 43 SLPs and Special Educators, from 17 states
- Work settings: Elementary (28%), Secondary (23%), Combined (35%), Other (14%)
- Knowledge of AAC: Expert/Great deal (33%), Moderate (58%), Little (7%)
- Mean # communication-related IEP goals and objectives per IEP = 11

Participation Items

Section	Most common score for these items	Mean % of participants who gave High Priority score to these items	% IEP objectives that address these items
School -related Activities	Severe restriction	13%	7%
Interpersonal Interaction/Relationships	Severe restriction	13%	1%

Impairments in Body Functions Items

Section	Most common score for these items	Mean % of participants who gave High Priority score to these items	% IEP objectives that address these items
Body Functions	No impairment	9%	1%

Environment Items

Section	Most common score for these items	Mean % of participants who gave High Priority score to these items	% IEP objectives that address these items
Physical Environment	Facilitator	6%	1%
Assistive Technology	Facilitator	13%	6%
People	Facilitator	11%	0%
Services + Policies	Facilitator	13%	9%

Communication Limitations Items

Section	Most common score for these items	Mean % of participants who gave High Priority score to these items	% IEP objectives that address these items
Receptive Language + Literacy	Severe limitation	11%	23%
Expressive Language + Literacy	Complete limitation	13%	24%
Functions of Communication	Complete limitation	12%	27%
AAC Expressive Modes + Strategies	Mild limitation	16%	39%
Rules of Social Interaction/Conversation	Complete limitation	14%	4%
AAC Receptive Strategies	Mild limitation	12%	4%
AAC Motor Access	No limitation	7%	0%

Summary of Results

- For 10/14 sections on the *ICF-CY for AAC Profile*, participants were more likely to rate items as **High Priority** than to address them in IEP goals/objectives.
- For 4 sections related to Communication Limitations, however, the reverse was true: that is, participants were more likely to address such items in IEP goals/objectives than to rate them as **High Priority** on the *ICF-CY for AAC Profile*.

Possible Explanations

Some sections contain items that are:

- not normally considered at all in terms of intervention (e.g., Participation, Environment)
- not considered amenable to change (e.g., Body Functions)
- rarely addressed in IEPs (e.g., AAC Receptive)
- considered too sensitive to address (e.g., People)
- traditionally addressed and present in pre-packaged goal sets (e.g., Expressive/Receptive Language/Literacy)

Some IEPs did not included supplemental services

Next: Does the ICF-CY for AAC Profile Influence Development of *Subsequent* IEP goals?

- New study underway now: SLPs or Special Educators
- Money incentive
- Participants needed!!

Contact Us at icfaac@ohsu.edu



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The Institute of Education Sciences
U. S. Dept. of Education
Grant #R324A090028
Charity Rowland, PI

Using the WHO-ICF with Talking Mats[®] as a goal setting tool

Joan Murphy and Sally Boa
Talking Mats Limited, Scotland

www.talkingmats.com

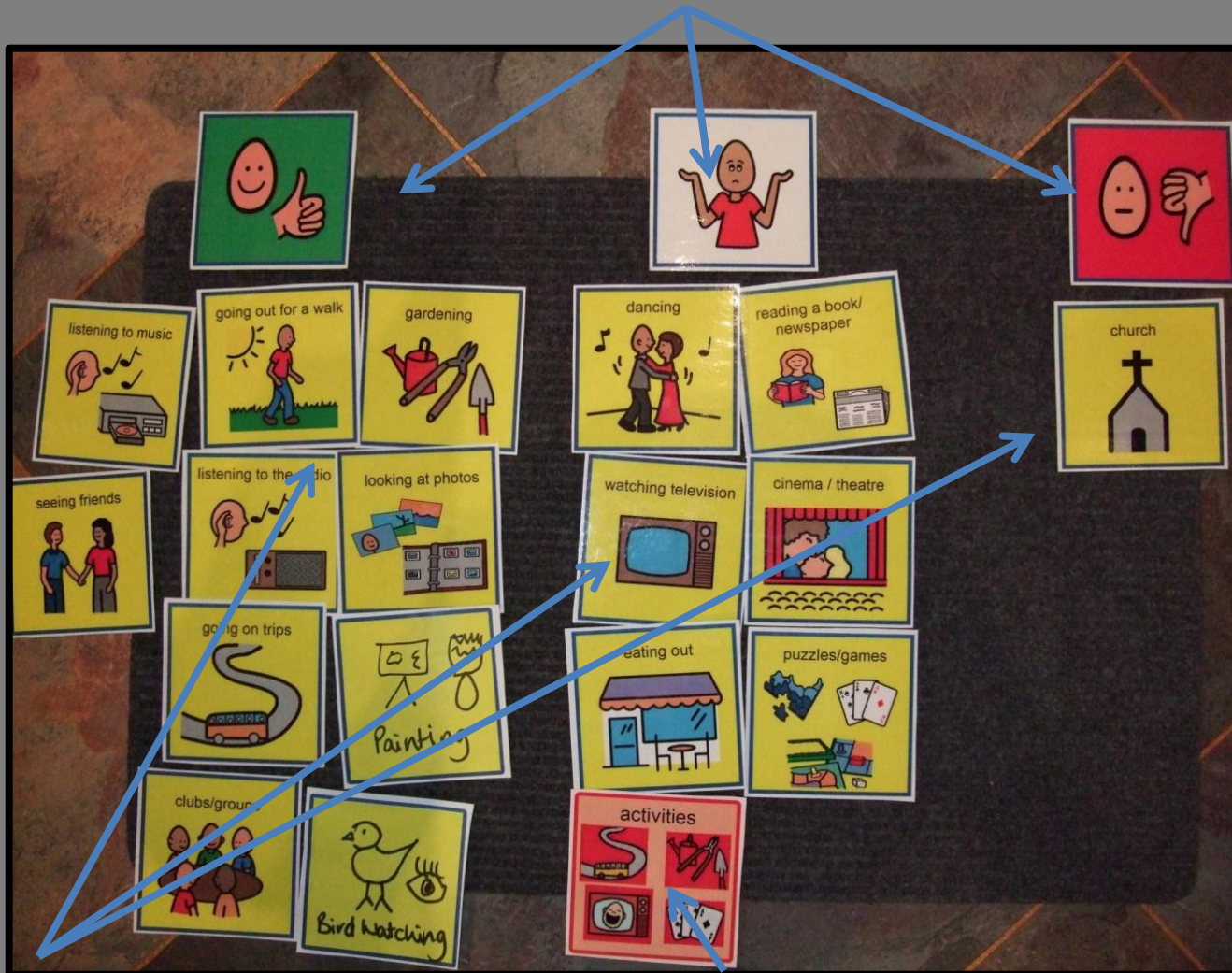
Goal setting background

- Community rehabilitation team
- Adults with long term conditions
- Active participants in the rehab process
 - Identify their own goals
 - Indicate changing priorities
 - Track their progress

Talking Mats Framework

- Research evidence-based communication framework
- Supports people to understand, organise their thoughts and then express their views
- Diverse specialist areas
- Used worldwide

Visual scale



Options
(including blanks)

Topic
(activities)

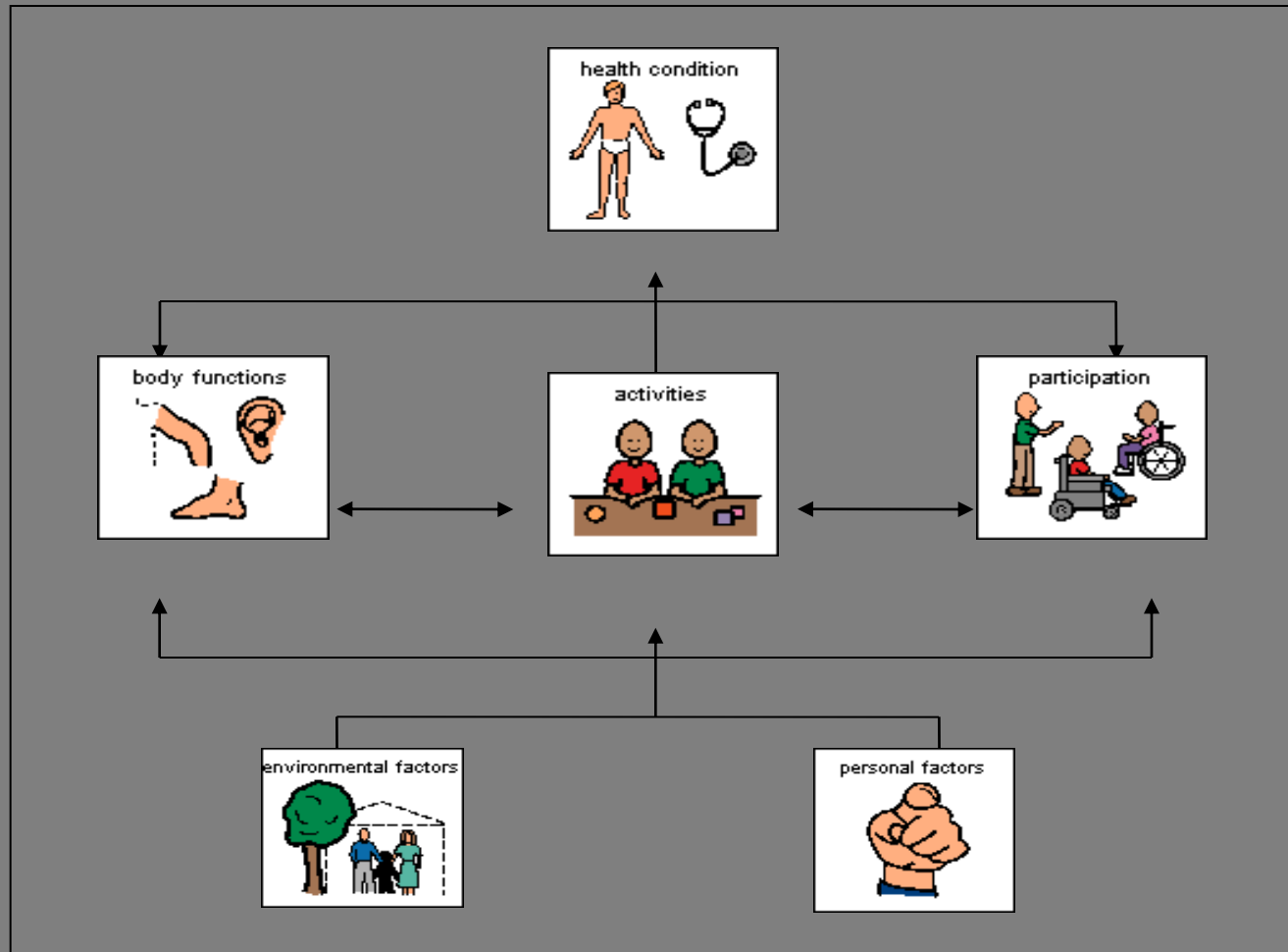
WHO-ICF

- Variety of topics
- Time for organisation
- Structured hierarchy

International Classification of Functioning, Disability
and Health (ICF)

World Health Organization 2001

Interactions between the components of ICF in graphic symbol format



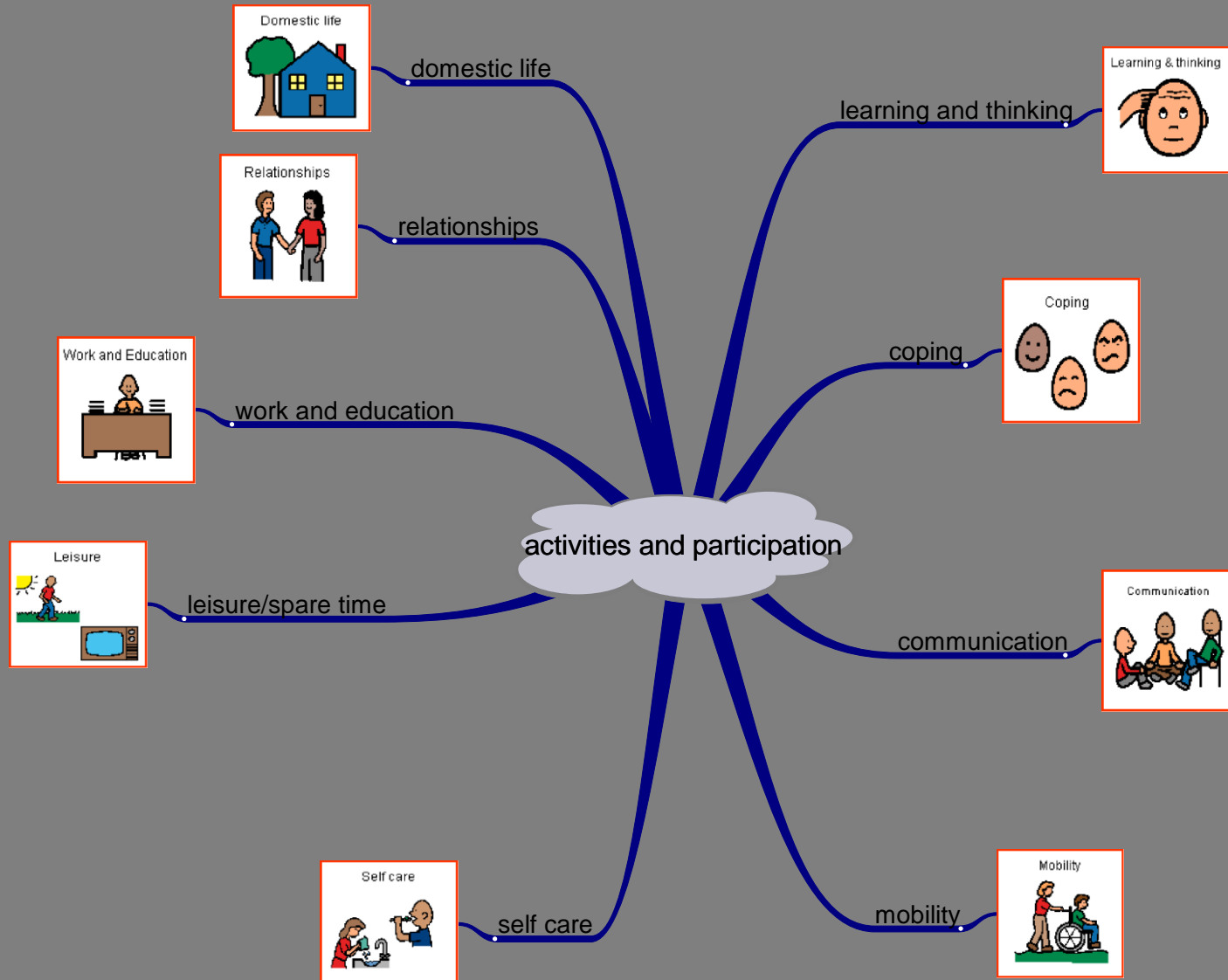
WHO-ICF framework

(<http://www.who.int/classifications/icf/en/>)

Activities and Participation

- 1 Learning & Applying Knowledge
- 2 General Tasks and Demands
- 3 Communication
- 4 Movement
- 5 Self Care
- 6 Domestic Life Areas
- 7 Interpersonal Interactions
- 8 Major Life Areas
- 9 Community, Social & Civic Life

'Activities & Participation' domains adapted and converted into symbols



Examples of Options in Activities and Participation

communication



e.g. understanding



writing



communication with group



mobility



e.g. walking



using transport



lifting



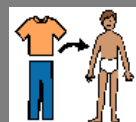
self care



e.g. washing



dressing



exercise



Ian using Talking Mats with WHO-ICF

Conclusion

Using the WHO-ICF together with Talking Mats allows people with communication difficulties to be actively involved in **identifying, setting and reviewing** their own goals

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Contact

Joan Murphy

joan@talkingmats.com

www.talkingmats.com



Flinders
UNIVERSITY

inspiring achievement

Social networks and self-determination of children with complex communication needs, physical disabilities and typical peers

Pammi Raghavendra, Ph.D.
Disability & Community Inclusion
Flinders University
Adelaide
Australia

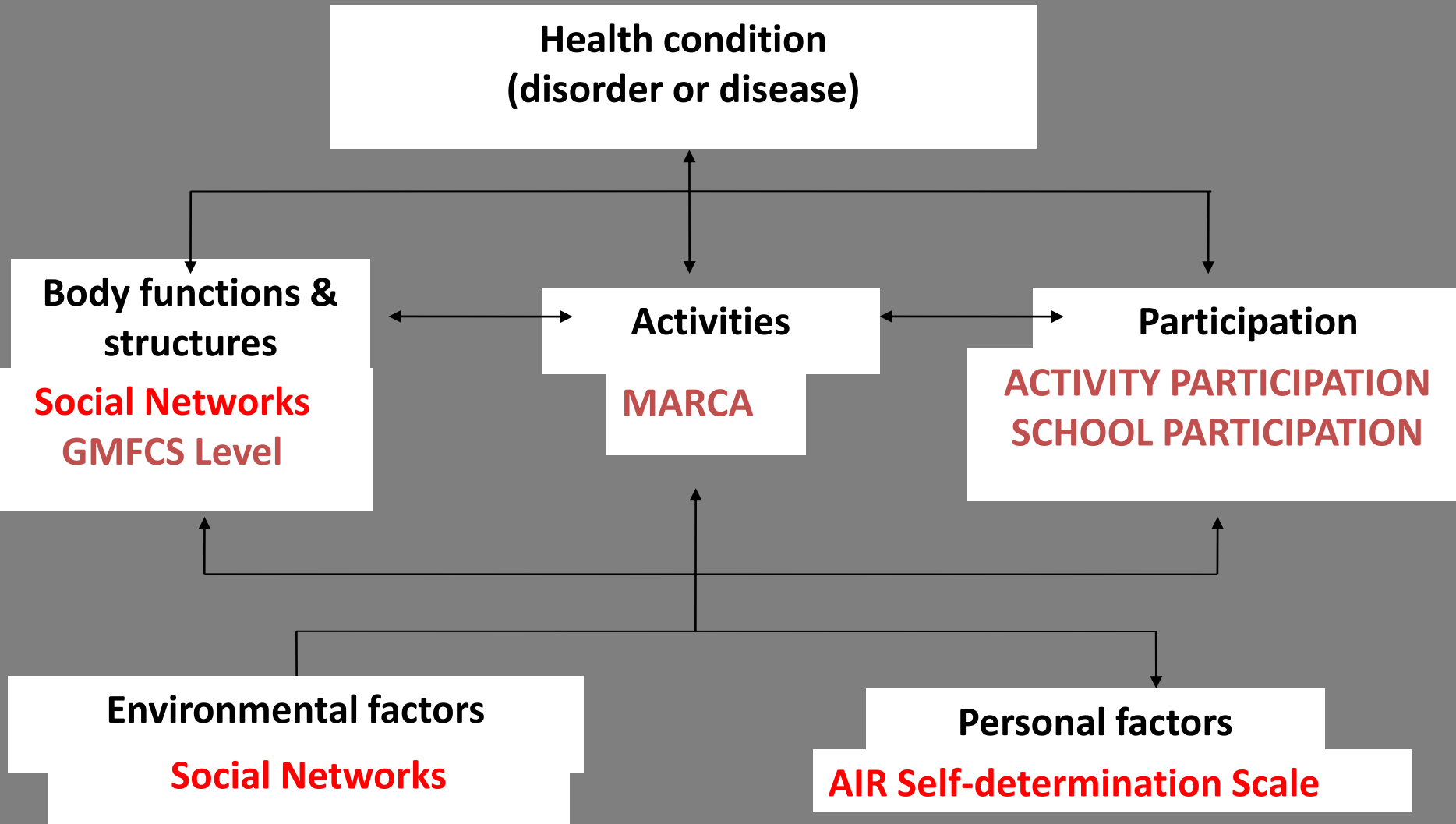
Cathy Olsson² , Rachael McInerney³, Tim Connell², Alison Lane⁴
Department for Communities & Social Inclusion- Disability Services SA² , Novita
Children's Services³ ,
The Ohio State University⁴

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Aims

1. To develop a **comprehensive, multi-dimensional description of the participation** of children with physical disabilities and complex communication needs.
2. To examine the **association of key functional abilities** with aspects of participation:
 - Communication and physical ability
 - Time use
 - Social networks (parent and school staff)
 - School participation
 - Participation in activities
 - Level of self-determination

The ICF (WHO, 2001)



Self-determination

- Important personal factor for overall health and wellbeing
- A self-determined person:
 - Knows and can express their own needs, interest and abilities
 - Set appropriate goals and expectations for themselves
 - Make choices and act on their goals

(Wolman et al.,1994).

Importance of self-determination

- Opportunities to make choices reductions in problem behaviour
(Shogren et al., 2004, cited in McNaughton et al., 2010)
- More self-determined students with disabilities lived independently, employed and earned higher wages
(Wehmeyer et al., 1997; 2003, cited in McNaughton et al., 2010)
- Young adults who use AAC with highest levels of self-determination also scored highest on quality of life
(Lund & Light, 2006)

Participants

GROUP	NO	MEAN AGE (SD)	GENDER	DIAGNOSIS	GMFCS	CFCS	TYPE OF SCHOOL
I Physical disability & CCN	14	12;5 years, (1.74)	8 males 6 females	CP = 12 Quadriplegia = 1 Syndrome = 1	Level I = 1 Level II = 2 Level III = 3 Level IV = 5 Level V = 3	Level I = 0 Level II = 1 Level III = 4 Level IV = 8 Level V = 1	Mainstream = 7 Special School = 3 Special Class = 4
II Physical disability	11	12;7 years (1.55)	7 males 4 females	CP = 10 Spina Bifida = 1	Level I = 1 Level II = 3 Level III = 3 Level IV = 4 Level V = 0	Level I = 11 Level II = 0 Level III = 0 Level IV = 0 Level V = 0	Mainstream = 9 Special School = 1 Special Class = 1
III No disability	14	12;5 Years (1.74)	8 males 6 females	No disability	N/A	N/A	Mainstream = 14

AIR Self-determination

Wolman, Campeau, DuBois, Mithaug & Stolarski (1994)

- Easy to use questionnaire
- School age students: 5-21 years
- Capacity: knowledge, abilities, perceptions
- Opportunities: school and home
- Thinking, Doing and Adjusting - 2 items
- Total 30 items

AIR Self-determination

Wolman, Campeau, DuBois, Mithaug & Stolarski (1994)

- Educator form
- Student form – ability to read and comprehension skills
- Parent form
- Research form
- Headings and questions slightly different for students

AIR Self-determination

Wolman, Campeau, DuBois, Mithaug & Stolarski (1994)

I know what I need, what I like, and what I'm good at:

1=Never,

2=almost never,

3=sometimes,

4=almost always,

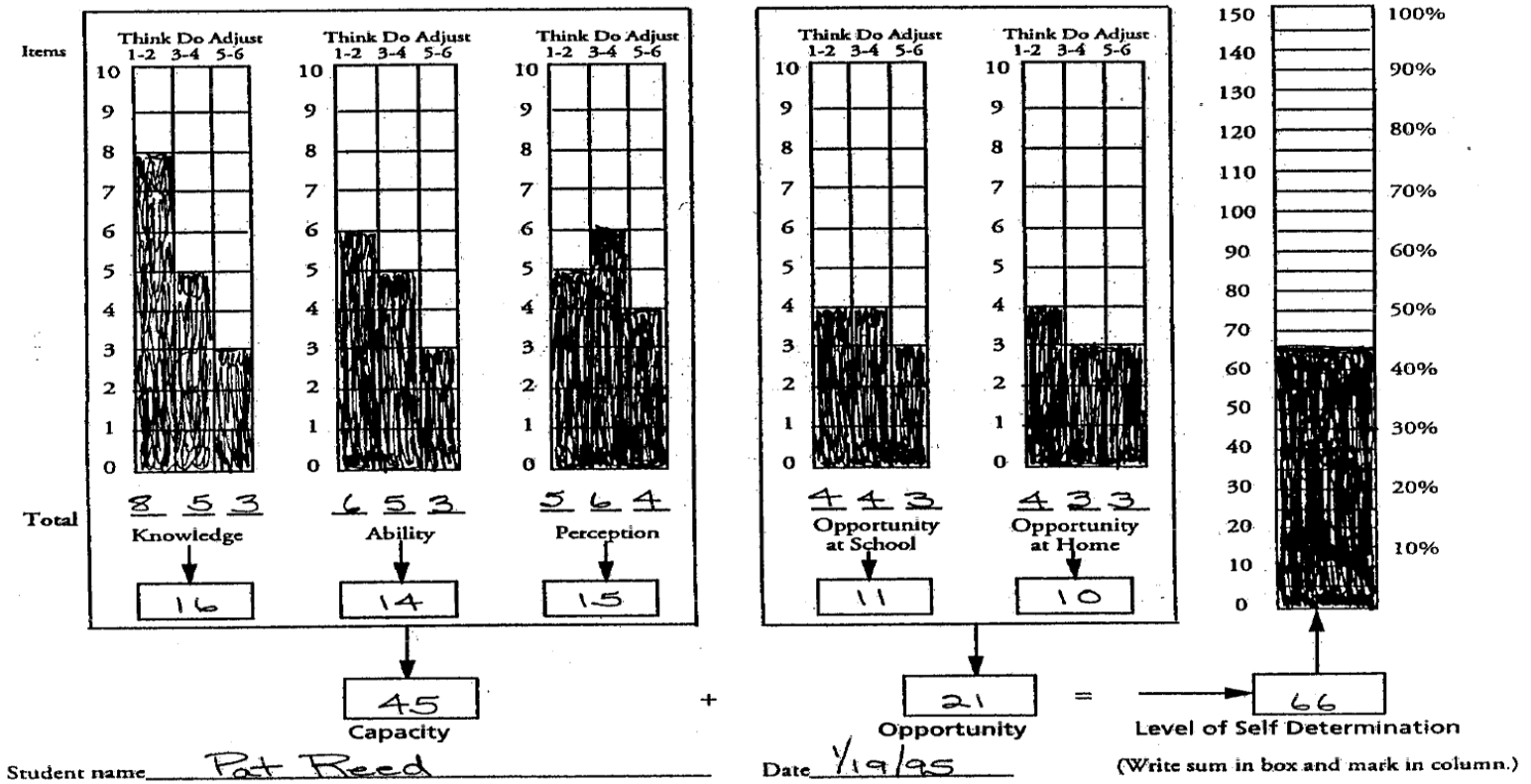
5=always

People at school listen to me when I talk about what I want, what I need, or what I am good at

AIR Self-determination

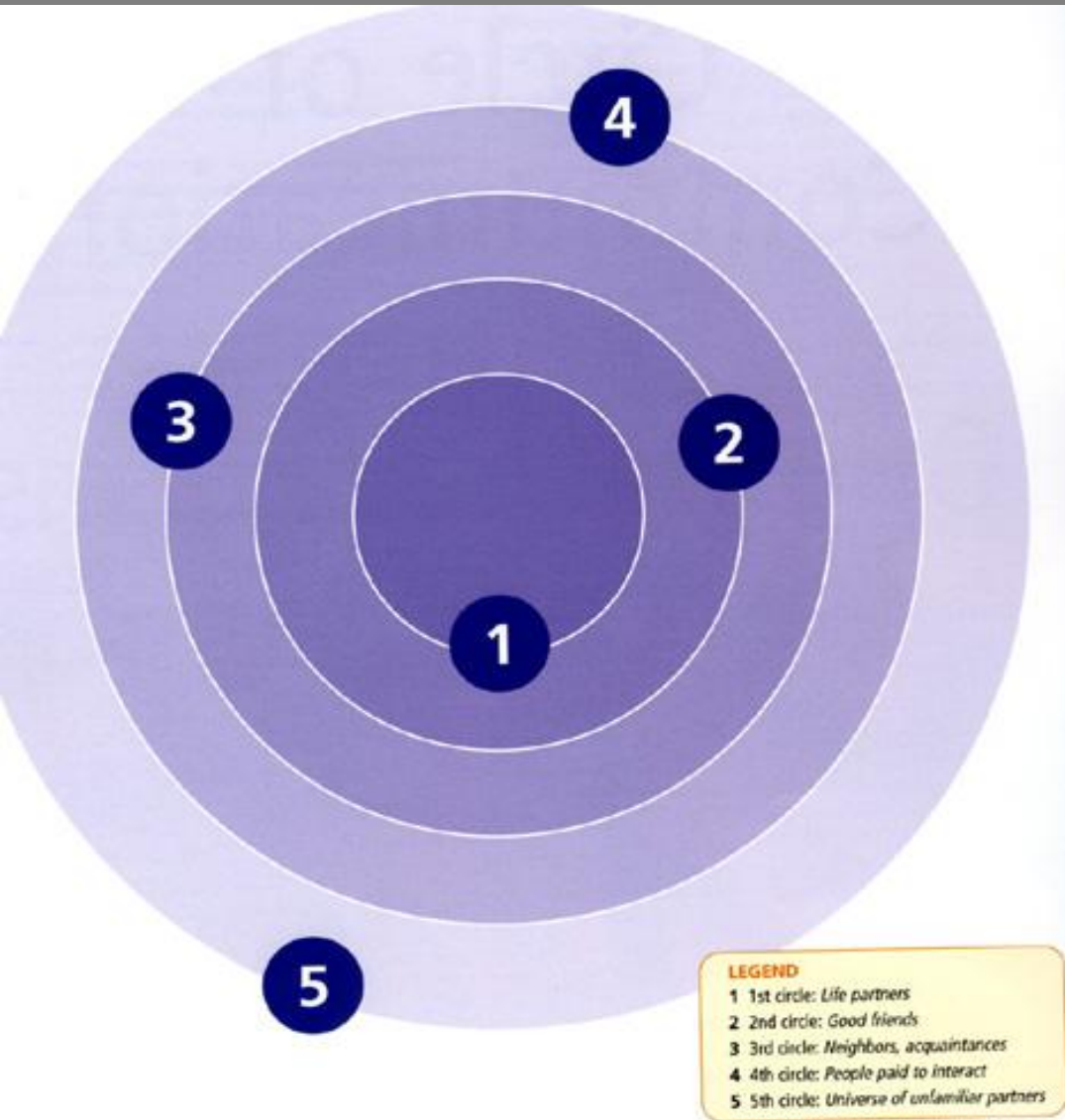
Wolman, Campeau, DuBois, Mithaug & Stolarski (1994)

The AIR Self-Determination Profile
Educator Form



Social Networks

(Blackstone & Hunt Berg, 2003)



Circle 1 = life partners

Circle 2 = good friends

Circle 3 = acquaintances

Circle 4 = paid partners

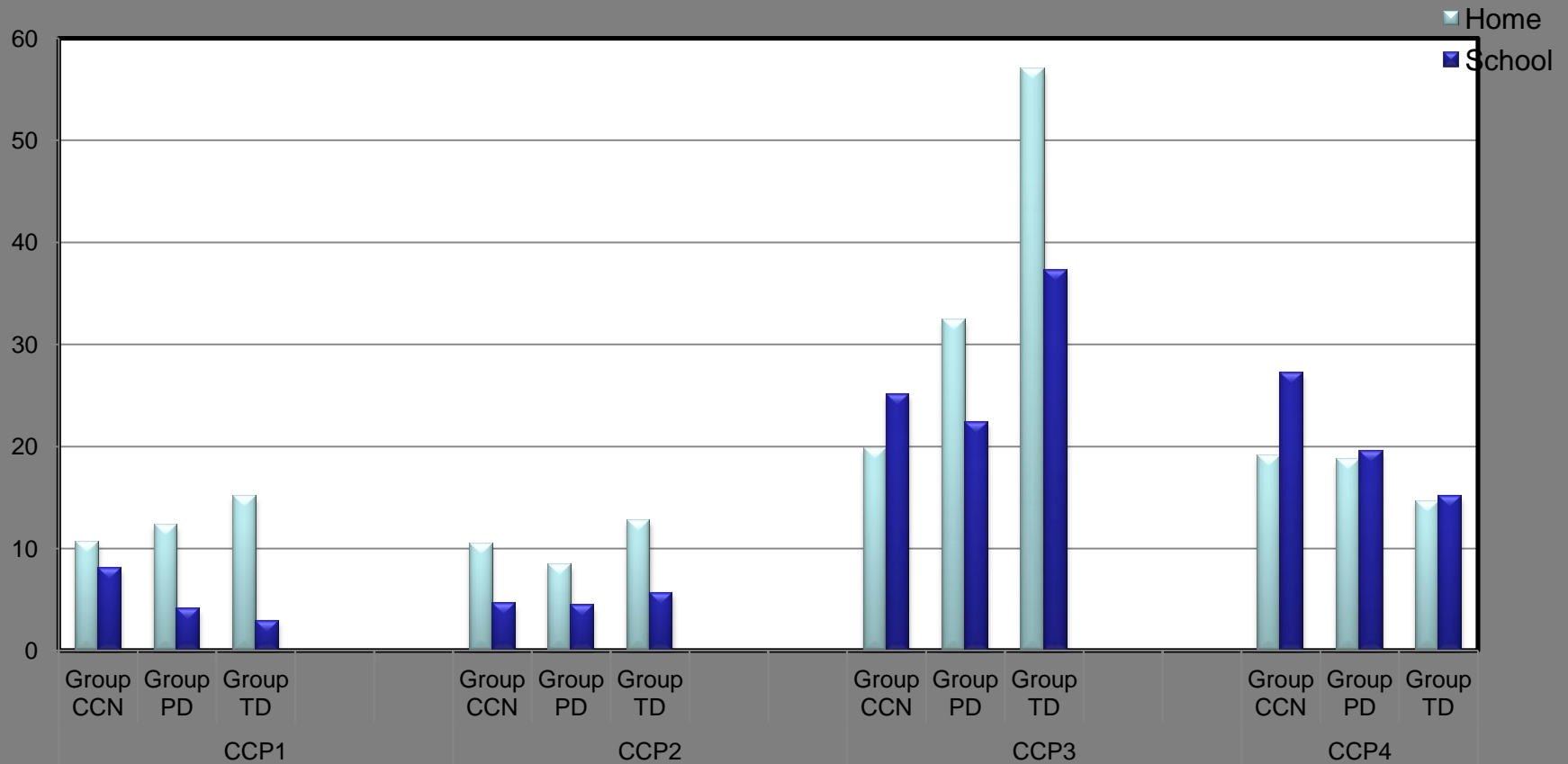
Circle 5 = unfamiliar partners

Levels of Self-determination

	Number of Participants	Mean	SD
Group CCN	7	88.71	8.14
Group PD	10	71.62	13.41
Group TD	14	80.26	6.08

Results

Social Networks: Mean number of communication partners



Key outcomes

- The ICF and ICF-CY provide a good framework for research
- Important to measure personal factors such as self-determination
- Need to obtain information from the child/ adolescent with disability, parents, & teachers
- Families and professionals have a responsibility to build capacity and provide opportunities to facilitate self-determination
- Social networks must be enhanced for Group CCN and PD; opportunities for more involvement in variety of activities

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