
Enabling performance success in occupations of everyday living: The CO-OP Approach™

Spina Bifida Days 2025

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Meet Tess

Tess' mother 6 month after the end of CO-OP intervention:

“The main thing that I think has happened after CO-OP is that it is easier for her to go from thought to action. She has realized that if she gets an idea, she can make it happen herself. And that it is happening now.”

How did that happen?

CO-OP: FOCUS ON SKILL
ACQUISITION

CO-OP is ...

“a client-centred, performance-based, problem-solving approach that enables skill acquisition through a process of **strategy use and guided discovery.”**

(Polatajko & Mandich, 2004, p. 2).

CO-OP



Originally developed to enable skill acquisition in children with developmental coordination disorder (DCD) is:

1. Founded on theory (about occupation, learning and neuroscience)
2. Supported by evidence originally from studies of children with DCD and now several other child and adult populations

Polatajko & Mandich, 2004

Dawson et al 2017



The 4 Objectives in CO-OP

1. Skill acquisition – of own goals
2. Find and use strategies to solve performance problems
 - Global strategy (GOAL-PLAN-DO-CHECK)
 - Domain specific strategies (own plans) through guided discovery
3. Generalization
 - Use the domain specific strategies in different environments
4. Transfer
 - Use the global strategy to solve new performance problems



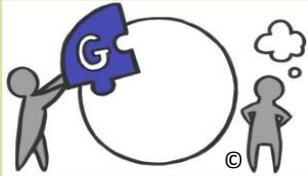
Evidence shows that CO-OP enhance self-efficacy and metacognitive thinking

- Ginemo et al 2021
- Öhrvall et al 2020
- Martini R, 2021

Enables skill acquisition



Four major objectives



1. Skill acquisition
2. Strategy use
3. Generalization
4. Transfer

The overall goal of CO-OP

...clients develop the **metacognitive** skill of using a systematic, strategic approach to solving performance problems.

Evidence from Neuroscience

To foster neuroplasticity (Plautz et al., 2000)	CO-OP
Interventions should:	
• Be explicit, task-specific, and goal-driven	√
• The task should have real world relevance • (Client-centred)	√
• Involve active-problem solving	√
• Promote responsiveness to environmental demands	√
• Provide opportunities' for variation and practice.	√
It should NOT	
• Be rote practice of a simple task	√

CO-OP: Evidence Summary

Last count > 100 published peer reviewed studies provide evidence that:



CO-OP meets its objectives:

1. Skill acquisition
2. Generalization of skills
3. Skill transfer
4. Cognitive strategy use

CO-OP is associated with improvements in secondary outcomes:

1. Participation
2. Elements of motor control
3. Elements of cognition, including cognitive flexibility and self regulation
4. Self-efficacy

The CO-OP Approach™



Initially created for children with DCD

EVIDENCE



Studies on spina bifida

Peny-Dahlstrand M, Bergqvist L, Hofgren C, Himmelmann K & Öhrvall A-M **Potential benefits of the cognitive orientation to daily occupational performance approach in young adults with spina bifida or cerebral palsy: a feasibility study**, Disability and Rehabilitation. 2020;42:2, 228-239

Öhrvall A-M, Lena Bergqvist L, Hofgren C & Peny-Dahlstrand M **“With CO-OP I’m the boss” – experiences of the cognitive orientation to daily occupational performance approach as reported by young adults with cerebral palsy or spina bifida**, Disability and Rehabilitation. 2020;42:25, 3645-3652

Steinhart S, Raz-Silbiger S, Beeri M, Gilboa Y. **Occupation Based Telerehabilitation Intervention for Adolescents with Myelomeningocele: A Pilot Study**. Phys Occup Ther Pediatr. 2021;41(2):176-191

Peny-Dahlstrand M, Hofgren C, Lindquist B, Bergqvist L, Himmelmann K, Opheim A, Sjöwall D, Brock K & Öhrvall A-M (2022): **The Cognitive Orientation to daily Occupational Performance (CO-OP) Approach is superior to ordinary treatment for achievement of goals and transfer effects in children with cerebralpalsy and spina bifida – a randomized controlled trial**, Disability and Rehabilitation; 2023 ;45(5):822-831

Öhrvall AM, Hofgren C, Lindquist B, Bergqvist L, Himmelmann K, Opheim A, Sjöwall D, Brock K, Peny-Dahlstrand M. **Intervention with the CO-OP Approach leads to a transfer effect over time to untrained goals for children with cerebral palsy or spina bifida**. Disabil Rehabil. 2024 Jun;46(12):2512-2521

CO-OP ...



engages the client at a **metacognitive** level in an iterative process of dynamic performance analysis and solution creation and evaluation.

-International CO-OP Academy Executive, 2014

CO-OP is...

client-centred

Client-centredness is an approach to providing [therapy] which embraces a philosophy of respect for and partnership with people receiving services. It recognizes the autonomy of individuals, the strengths clients bring to a therapy encounter, and the benefits of client-therapist collaboration.

(adapted from CAOT 1997)

CO-OP is...

performance-based

- Performance based approaches focus on actual task or skill performance (e.g. orienting oneself, or shoe tying, or getting my homework or CiC done) vs. performance components (e.g. spatial ability, manual dexterity, initiation and time perception).

CO-OP is...

problem-solving

- The process of recognizing a problem, defining it, identifying plans to resolve the problem, selecting a plan, and evaluating the outcomes

- *(Adapted from www.themedicaldictionary.thefreedictionary.com)*

How are new skills learned?

Four types of skill learning



Observational
Learning

The tragedy of the first position»: <https://youtu.be/McRJ6fLtuGs>

Four types of skill learning

MARIA KONNIKOVA

PRACTICE DOESN'T MAKE PERFECT

By Marla Konnikova, SEPTEMBER 28, 2016



Practice matters, but in many fields it matters much less than you might think.

ILLUSTRATION BY WREN McDONALD

Trial
&
Error
Learning

Four types of skill learning



Direct
Skill
Training

Four types of skill learning



Active
Problem
Solving
By
Guiding

YOUTUBE VIDEO: My big foot: <https://youtu.be/VuqjBlotesQ>

The CO-OP Approach™



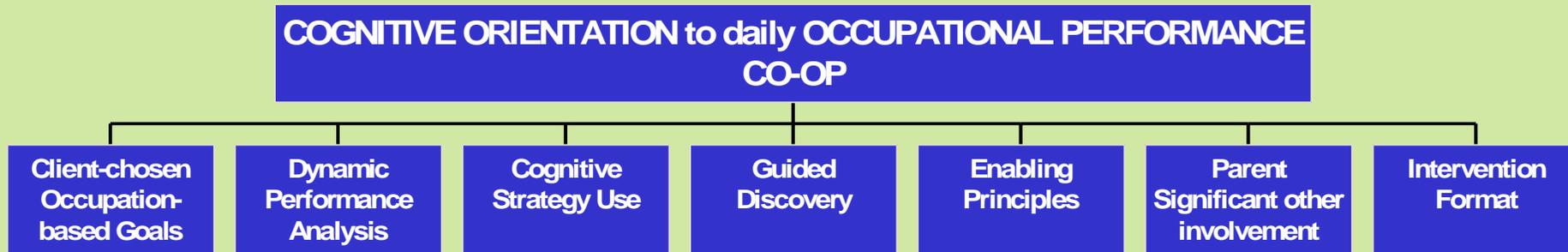
Skill acquisition
Strategy use
Generalization
Transfer

7 Key
Features

CO-OP 7 Key Features



Organization Chart Title



Client-centred goals rated with COPM

It is crucial that the goal is the person's OWN goal

*I am the one who's taken the initiative in working on that particular thing... so **I am the boss*** (öhrvall et al 2020)

The good thing was that I practiced what I wanted to practice (öhrvall et al 2020)

CO-OP: DPA

- **Dynamic performance analysis (DPA)** is an iterative, analytical, observation-based process of the performance of the person's own goal
 - to identify performance problems
 - Where does the performance breakdown?
- the person himself takes gradually over to do his own DPA

Common performance issues for people with spina bifida

Skills to carry out tasks is hampered due to **difficulty initiating**, planning and problem-solving in combination with varying levels of movement difficulties, difficulty managing time and handling stress. Which leads to problems organizing routines and manage their own health. Things just never seem to “get done”

(Lindqvist et al, 2022, Grady et al. 2022, Jacobson 2013, Person et al 2017 Peny-Dahlstrand et al 2009)

CO-OP: Skill Acquisition through Strategy Use

Cognitive Strategy is:

- a cognitive tool put into place to help learn, memorize and problem solve
- a goal directed, cognitive operation used to facilitate learning and problem solving
- a skill under consideration

Why use strategies...

- An effective learning strategy develops an awareness of one's thinking (Riding & Rayner, 1998).
- Metacognitive behaviour helps novice, as well as skilled, learners to adjust to new conditions, to transfer previous knowledge and skills to related learning situations, and to cope with demands not previously experienced (Woolfolk, 1998; Lidor, 1999).
- Instructors may need to assist learners in activating effective cognitive processes at the appropriate time (Lidor, 1999; Anderson, 2001).

CO-OP: Two types of strategies



Global Strategy

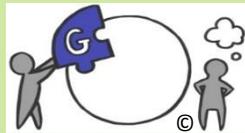
- Generic strategy | Executive strategy | Metacognitive strategy
- Supports problem solving
- Taught to the client

Domain Specific Strategy (DSS) – finding the solution

- Personalized
- Tailored to the task
- Addresses performance problems identified by DPA
- Discovered through guidance

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CO-OP Global Strategy



GOAL - What you want to do!



PLAN - How to do it?



DO - Do the plan!



CHECK - Did you do the plan?

- Did it work?

How is CO-OP done?

Period of approximately 10 weeks / Once a week



Doing it together - Guided Discovery

The key mode of guiding CO-OP

a process of guiding clients to individualized solutions to their performance problems.

Embedded in the GPDC framework, GD serves to:

1. Identify breakdowns | opportunities for learning
2. Uncover solutions to performance problems
3. Support skill acquisition
4. Promote Generalization & Transfer

Guided Discovery: Theoretical underpinning

As clients discover solutions, they:

- create and add to their own understanding (PLAN)
- formulate and evaluate hypotheses (PLAN | DO | CHECK)
- reject those that don't achieve the intended goal (CHECK)
- confront poor plans, encounter surprises and finally come to a workable solution. (PLAN | DO | CHECK)

(Emanuel "Ely" Sachs, 2018).

Adapted from: <https://openlearning.mit.edu/events/guided-discovery-teaching-method>

Guided Discovery

The challenge of teaching by guided discovery is to know:

1. how much and what kind of guidance to provide
2. how to ask questions that help the person to discover something without telling

Enabling generalization and transfer

Generalization

- Applying what is learned from one context to another

Exemple: CIC can be carried out in different environments and contexts.

Transfer

- Learning one skill influences the learning of a new skill, allowing the learner to draw on previous experiences to perform new skills”

(Dawson et al 2017)

Exemple: Using the global strategy in a new activities

Transfer and self-efficacy are developed jointly

Virtually all people can identify goals they want to accomplish, things they would like to change, and things they would like to achieve.

However, most people also realize that putting these plans into action is not quite so simple.

Bandura and others have found that an individual's self-efficacy plays a major role in how goals, tasks, and challenges are approached.

(Bandura, 1997)



Self-efficacy is...

The belief in one's capabilities to organize and execute the courses of action required to manage prospective situations."

(Bandura, 1997)

CO-OP from the psychologists perspective

Self awareness

Self efficacy

Self confidence, competence

Positive chain reaction

Social interaction

Outside perspective

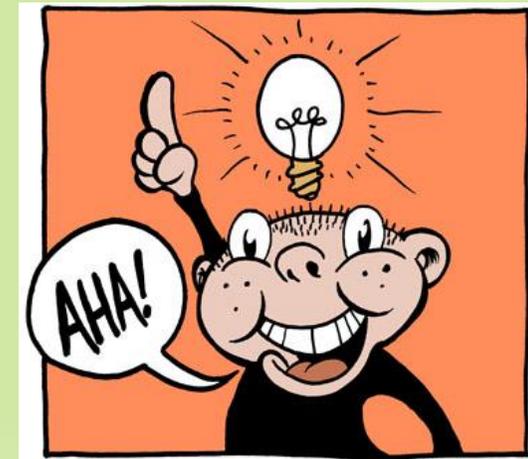
Internal perspective - CO-OP:s strength

How can we support self-confidence and self-efficacy?

- Psychological assessment in order to understand assets and limitations
(according to MMCUP at four, six and twelve years of age, adults when needed)

- Counseling

- CO-OP



Outside perspective

You are good at playing basketball

You are a really good friend

You're a great singer



Self perspective

I did well last time, I want to try again!

I know what to do, and if that doesn't work I'll try another way.

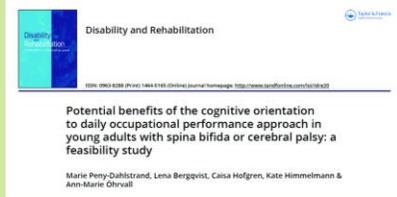
I decide what I want to learn and that works!



CO-OP advantages

- Working with the self perspective, we reach goals and boost self efficacy. Positive connections are created.
- An important and effective accessory tool when counseling and self reliance aren't enough.
- We can work together as a team.

Results of our studies



CO-OP is a feasible approach for people with SB



COOP gives the person the opportunity to participate in the entire process from goal setting to planning to goal achievement. The person find their own solutions to everyday-life problems and thus develop meta-cognitive thinking and self-efficacy



The CO-OP Approach is more effective than ordinary treatment when it comes to achieving both trained and untrained goals, and to reduce self-rated problems in everyday life. indicating a generalization and transfer effect which may enhance children's self-efficacy.



Results are sustained, and transfer effect seems to increase over time.

Goals chosen by the participants with SB – most of them participation goals

To be able to do

To dare to do

To get it done

Hygiene

- CiC –procedure in due time
- Bowler emptying
- Showering

Educational related – goals

Orientation - finding my way

Meals/snacks

Prepare my thing for school

Talking to friends

I carry out my CiC procedure as schedule without anybody reminding me

I do my home-work befor deadline

Experiences from CO-OP users and parents

The OT act's as a sounding board for my thoughts and ideas
(adolescent)

That you get an understanding of what it really is that you do when you solve a problem ... Then you kind of realize how good you really are at solving the problem, if only you think about the fact that you're solving the problem ... (adolescent)

No, just as I said before, you don't do any, like, new things, it's more that you learn how you've been thinking all along. And this awareness, it's ... it's useful to you in the long run, I think. (adult)

There is much less nagging nowadays.
(mother to young boy with SB)



Experiences from adult users

...

I learned a way to think, which I can bring with meand use in other situations

Earlier, if a little detail went wrong I just gave up. I wouldn't even bother to try. Now instead of skipping it I'll pick it up again.

You realize what's going wrong and especially why

In CO-OP you learn how to think – in ordinary treatment the show you how to do.

It has made a difference in my personality, I have confidence in myself now

The key to success by using CO-OP:

...the person actively participates during the entire process and finds his own solutions, increasing self-efficacy

We do not learn from experience... we learn from reflecting on experience

John Dewey

Implementation and further research

- Implementation issues
- What is needed for a successful implementation?
- More studies on persons with Spina Bifida
- Register intervention with CO-OP in follow-up programs?

Courses and further information

Three day's workshop (2+1 day)

Next workshop in Sweden: open to everybody that understand Swedish, November 12-13 2025 CO-OP - Sveriges Arbetsterapeuter

Digital – versions and IRL courses now planned in US, Canada, Europe (instructors also Brazil, Japan, Singapore, Australia-NZ),

ICAN –CO-OP homepage

<https://icancoop.org/>

<https://icancoop.org/blogs/first-hand-account/co-op-for-people-with-spina-bifida-fits-like-hand-in-glove>

Questions and Discussion

- ✓ We have briefly:
 - ✓ Described CO-OP
 - ✓ Described The use of CO-OP for people with SB
- ✓ What are your questions / your comments?

Tell me and i'll forget

Show me and I'll remeber

Involve me and I'll understand forever

Confusius

Thank You!

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