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COGNITION & INCLUSION

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C&I - IO1

OVERVIEW OF SUCCESSFUL METHODOLOGIES TO TRAIN
TRANSVERSAL SKILLS IN ADULTS WITH AN
INTELLECTUAL DISABILITY.



European Network
of Social Authorities



ASOCIACIÓN A FAVOR DE PERSONAS
CON DISCAPACIDAD INTELECTUAL
VALLE DE LEÓN



Veneto



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INTRODUCTION

Erasmus+ funded project, Cognition & Inclusion¹, is a project running from September 2017 to August 2020.

In this project, the project team develops four intellectual outputs. This document is a report of the first intellectual output which was done between September 2017 and the end of 2018. The goal of the first intellectual output was to make a review of cognitive approaches and methodologies to improve five key transversal competences in our project's target group which is adults with an intellectual disability. These five transversal skills, problem solving, self-regulation, self-direction, flexibility and creative thinking, were discussed and chosen together with all the partners in transnational meetings and are presented in the chapter 1.

The approaches presented in chapter 2, and in more detail in the appendixes 1 to 4, were processed in the following way: first the partners using the approaches did a description and a self-analysis of the approach; these were sent to the partners before the transnational meetings. During the meetings the approaches were presented, discussed and the partners did peer analysis of them. Those descriptions, self-analyses and peer-analyses are summarized in this report. The self-analysis tool developed in this project and used by the partners when self-evaluating the approaches, is presented in appendix 6.

Besides these four approaches, in this report there is also presented a fifth approach, in the appendix 5, which hasn't been presented yet during the transnational meetings of the first part of the project; Gradior hasn't been discussed yet in detail with the partners but can still give interesting insights to possible approaches that could improve cognitive and transversal skills. In the 3rd chapter there are presented some lessons learned from the approaches and possible recommendations to intellectual outputs, mindset tools, to be developed later in this project. All the references used in the chapters and appendixes are presented at the end of the report.

¹ For more information about the project, please see the web page: <http://www.ensa-network.eu/cognitionandinclusion/index-c-i.html>



1. TRANSVERSAL SKILLS

One's Quality of Life is significantly influenced by active participation and contribution to society – referring to the universal rights for all. To be successful in this matter, environmental and individual conditions are critical. When the individuals involved are dealing with an intellectual, learning or other disability, additional challenges appear. Factors that contribute to successful participation in society, are related:

1. to the efforts done by society to adapt the “environment” (physically, mentally, socially, etc.) to the persons with a disability, and
2. to the adaptive skills of the persons who aspire to participate and contribute to the society.

These skills help people to adapt to environmental and changing conditions. In education and in support services, these skills are often linked to practical skills, although it is known that transversal skills are critical for adaptation. Transversal skills don't refer to specific domains or contents, but are “general” skills, useful in all domains of life and contents, and contribute to a successful outcome. Between others, cognitive, metacognitive, problem solving skills are part of the transversal skills, necessary for adaptation. Especially when persons are challenged by intellectual or learning disabilities, specific approaches are needed to help them acquire these skills. This C&I Erasmus+ -project wants to contribute to this challenge.

At the very beginning of the project, the partnership defined the “cognitive” transversal skills, that – according to the partners involved – are playing a major role in the distal goal of this project: successful participation and employment of adults with an intellectual disability. We are aware that the outcome – as presented in this chapter – is a selection of “cognitive” adaptations/transversal skills, but the selected skills are very significant. Based on R. Sternberg² and supervised by prof. Adelinda Candeias (University of Evora), the partnership agreed to work within the framework below, defining 5 critical (meta-)cognitive, transversal skills: problem solving, self-regulation, cognitive flexibility, self-directedness and creativity.

Problem solving

Problem solving is a higher level cognitive process that can be conceived as a cycle of emotional, cognitive and behavioural activity, starting with the awareness that a problem exists, then the definition of the problem, the allocation of mental and physical resources to solve the problem, the finding of a strategy (or strategies) that could be implemented to solve the problem, the implementation of that solution, the monitoring of the ongoing problem solving process, and the evaluation of the solution found as well as of the completed process.

² Sternberg, R. (1997) *Successful Intelligence: How Practical and Creative Intelligence Determine Success in Life*. Plume Book, NY.



Self-regulation

Self-regulation (SR) refers to the subject's competence to change himself and have control over its internal processes and external resources. It implies and promotes transversal competences useful in different situations: learning, professional activities, personal and social life. Self-regulated learning (SRL) refers to the subject's abilities to control his learning, planning, monitoring and evaluating his thoughts, feelings and actions. SRL is an active and constructive process through which subjects determine their goals and monitor, regulate and control their cognition, affect, motivation and behaviour in order to achieve those goals. Self-control consists of using specific techniques to direct attention, to use self-instructions, to manage time, to structure the environment, to search for help and to maintain motivation.

Cognitive flexibility

Cognitive flexibility, as a high cognitive function, influences the way knowledge is received, represented, (re)structured and applied during response elaboration. This way, cognitive flexibility incorporates three dimensions: attention flexibility; representation flexibility and response flexibility.

Self-directedness

Self-directedness is a dimension of character that refers to self-determination or willpower, and is considered the ability to control, regulate or adapt behaviour in regard to chosen goals or values.

Creativity

Creativity is the ability to innovate (being divergent and original) and to respond to requests, challenges, or imposed or self-imposed goals. The creative process is a systemic phenomenon, because it is developed in accordance with potentiality from the setting (extrinsic features) and the characteristics of people (intrinsic features) to produce innovative, divergent and/or original solutions for old/new problems.



2. DESCRIPTIONS OF THE APPROACHES

2.1 MAH – Medierend Agogisch Handelen (Mediational Interventions – adults intellectual disability), Belgium

Name of the approach:

Mediational Interventions (Medierend Agogisch Handelen) – MAH/MI

Developer(s)/contact: den achtkanter, Kortrijk (Belgium) – johan.warne@groepubuntux8k.be

Theoretical basis:

Structural Cognitive Modifiability-Theory (R. Feuerstein), Eigen Initiatief Model (J. Timmer), Transactional Metacognitive Approach (H.C. Haywood)

Target group/audience:

Adults challenged with an intellectual disability and professionals working in support services

Goals:

MAH/MI aims to support independence of adults challenged by an intellectual disability, by addressing and providing focused training of problem solving skills, self-regulations skill, taking initiative and intrinsic motivation. These transversal skills contribute to active participation in society and successful employment, and so to quality of life. MAH/MI supports a growth mindset in the clients, and a belief system of the professionals, characterized by presuming competence. MAH/MI aims to build a challenging and modifying environment that supports lifelong learning and development of everyone involved.

Description of methodology:

Based on the principles of mediational learning experiences adults challenged with an intellectual disability are supported within a regular, safe and inviting working and living context that obliges someone to take initiative, solve problems independently and be flexible. The mediational style of the professional (guidelines) is a continuous invitation for the client to reflect on the way the clients approach tasks (process rather than outcome orientation). Tasks, duties, responsibilities inherent to the working and living situation are the tools used by the professional, addressing and challenging the client. Tools for training transversal skills are part of the model, used whenever clients lack transversal/cognitive skills. 15xPS - referring to 15 levels of interventions to foster taking initiative in problem solving, or SAM - a training procedure for self-regulation are examples of these tools. The implementation of the MAH/MI model is surrounded by a consequent Human Research Management, VET (Vocational education and training) and quality policy.

References:

Warnez, J. (2002). *Mediërend Agogisch Handelen*. Leuven, Acco.

Warnez, J. & Kopacsi, C. (2011). *Breinbreker. Voortgezette cognitieve revalidatie*. Leuven, Acco.



2.2 Referencial de Reabilitação Profissional (RRP-APPACDM), Portugal

Name of the approach:

Referencial de Reabilitação Profissional

Developer(s)/contact:

APPACDM, Évora – ana.guerra@appacdm-evora.org.pt

Theoretical basis:

Ben-Yishay's model, Holistic Program of Neuropsychological Rehabilitation from Centre for Professional Rehabilitation of Gaia

Target group/audience:

Adults with acquired brain injuries (ABI)

Goals:

Promotion of physical and psychological functioning empowering autonomy, decision making, problem solving, quality of life; increase psychosocial adjustment, through development of interpersonal skills and acceptance of the new condition; and supporting the creation of a practical integration project that promotes active participation in society and successful employment through professional requalification and adapted/supervised work experiences.

Description of methodology:

This intervention model is multidimensional and holistic, sequential and time-structured, and considers individual interests, needs and expectations. There are three intervention phases: 1) an initial multidisciplinary assessment (interviews, standardized instruments and tests, Individual Developmental Plan design); 2) there are twice a month review of the intervention with the trainee and his/her family/reference person and with technical team & simultaneously, a group approach is occurring (improve development, autonomy, communication) and individual therapies adjusted to individual needs; and 3) a global assessment to assess positive gains based on the Individual Developmental Plan concerning transversal skills and competences, and design of a future's project about the transition to vocational training or labour market integration.

References:

- Almeida, I., Guerreiro, S., Martins-Rocha, B., Dores, A. R., Vicente, S. G., Barbosa, F., & Castro-Caldas, A. (2015). *Impacto de um programa holístico de reabilitação neuropsicológica na qualidade de vida de pessoas com lesão cerebral adquirida. Psychologica, 58(2), 61-74.*
- Wilson, B. A., & Gracey, F. (2009). *Towards a comprehensive model of neuropsychological rehabilitation. In B. A. Wilson, F. Gracey, J. J. Evans, & A. Bateman (Eds.), Neuropsychological rehabilitation: Theory, models, therapy and outcome (pp. 1-21). New York: Cambridge University Press.*



2.3 Respond Dets Performing Arts, Sweden

Name of approach:

Respond Dets Performing Arts

Developer(s)/contact:

Annie Pettersson, Mia Ekegren, Marie Lindblad. Studieförbundet Vuxenskolan and Kulturcentrum Väst KCV – annie.pettersson@sv.se

Theoretical basis:

Respond Dets Performing Arts

Target group/audience:

People with an intellectual disability. Kulturcentrum Väst (KCV) is an art scene and a workplace with artistic orientation for people with intellectual function variations and it is in Stenungsund. The actors have this as their work, their day care. They go to the theatre every day, work, act, do craft, read and train their cognitive skills. There are around 10–15 persons in the group and 5–10 in the staff.

Goals:

They work on all five transversal skills to make a good scene play and a good working place.

Description of methodology:

Respond Dets Performing Arts are a project in the KCV financed by the Västra Götaland Secretariat with the purpose of collect, defining and formulate the pedagogical methods that have been worked out for many years by drama teacher, director and artistic director Marie Lindblad since the ensemble Röda Hjärtan saw the light of the day in 2007 together with music supervisor and chapel master Magnus Pettersson and cultural educator Krister Jonsson. Theatre and drama exercises, e.g. improvisation and forum play. They create, train and set up different performances. Sometimes its Silent theatre, sometimes singing and dancing. They make their own costumes, backdrops and props. It's a part of their artistic creations. They perform on different arrangements in west of Sweden, on big venues or small. Always with a big heart and often on an important subject, like friendship, environments or love.

References:

Lindblad, M. (2016). Bemötandets scenkonst

*Michaelson, L., de la Vega, A., Chatham, C.H. & Munakata, Y. (2013). Delaying gratification depends on social trust. *Frontiers in Psychology*, 4, Article ID 355.*

Rolfe, B. (1997). Behind the Mask, Persona Products

Schutz, W. (1966). The Interpersonal Underworld. A reprint of FIRO, A three-dimensional theory of interpersonal behavior. Paolo Alto: Science & Behavior Books Inc.

Schutz, W. (1982). Profound simplicity, Learning Concepts (2:a issue). University associates, Inc. San Diego.



2.4 Serious Games & Exercises for Social Competence and Transversal Skills (SGESCTS), Bulgaria

Name of the approach:

Serious Games & Exercises for Social Competence and Transversal Skills (SGESCTS)

Developer(s)/contact:

National Association of Professionals Working with People with Disabilities (Bulgaria) – info@narhu.org

Theoretical basis:

Active Learning Theory (D. B. Elkonin)

Target group/audience:

People aged between 16–55 with different types of disabilities including intellectual difficulties and mental health problems

Goals:

SGESCTS aims to support the enhancement of the social and transversal skills, like self-regulation and self-control, problem solving, creative thinking and flexibility, of people with disabilities (PwDs) and thus to help them to become more autonomous, to be able to make informed and independent decisions, as well as to help them to be better integrated into the labour market. It also aims PwDs to become aware of their own abilities and social sensitivity.

Description of methodology:

SGESCTS method is used to complement the group training method and is targeted mainly to people with disabilities who are confronted with difficulties in participating in group learning activities. The key part of the method is the given opportunities PwDs to reinforce and practice their transversal skills in situations that are close to the real life ones.

The SGESCTS approach embraces two main components: specially designed learning exercises and serious educational e-games. The exercises are labelled with flags indicating the level of difficulty, corresponding to the level of cognitive development of the person. The exercises train the PwDs' capability to collaborate with others, reinforce their decision making skills and help learners to find creative solutions. Serious educational e-games are aimed at increasing skills like creative thinking, flexibility and self-regulation. Each game is divided into three parts: teaching the principles to be understood, learning through playing the game and reflection on the experience.

References:

- Davidov, V. V. (2008). *Developmental Instruction: A Theoretical and Experimental Psychological Study (International Perspectives in Non-Classical Psychology)*.
- Elkonin, D. B. (2005). *The Psychology of Play. Journal of Russian & East European Psychology*, 43(1), 11-21.
- Vygotsky, L.S. (1997). *English, Book edition: Educational psychology / L.S. Vygotsky; introd. by V. V. Davydov; translated by Robert Silverman. Vygotskiĭ, L. S. (Lev Semenovich), 1896–1934.*



2.5 GRADIOR, Spain

Name of the approach:

GRADIOR software

Developer(s)/contact:

INTRAS Foundation. Developer of the employment tool: VALE – vale@asvale.org

Theoretical basis:

Neuropsychological evaluation is the evaluation of cognitive functions (attention, memory, perception, etc.), in order to determine the presence or absence of brain damage, and the level of performance in different cognitive areas. Neuropsychological rehabilitation aims to stop or recover cognitive damage.

Target group/audience:

People with cognitive impairment due to aging, neurodegenerative diseases, mental disorders, brain injury or intellectual disability.

Goals: Prevent, stop and recover cognitive damage. Career guidance and counselling based on the neuropsychological evaluation. Preserved cognitive abilities will guide job selection, and will be used to advice professionals and families.

Description of methodology:

GRADIOR is a multimedia software for cognitive stimulation, neuropsychological evaluation and rehabilitation. It consists of more than 11.000 customized exercises that train attention, memory, orientation, calculation, perception, reasoning, and language. The multimedia environment created by GRADIOR provides highly variable and stimulating conditions for cognitive rehabilitation. A trained GRADIOR therapist is required to accompany and support the user during evaluation and training. Moreover, the evaluation profile generated by the program offers a cognitive performance description used by the VALE Association for career guidance and counselling. Preserved cognitive abilities will guide employment decisions. The evaluation and rehabilitation process will also give relevant information to other professionals and the user's family regarding the kind of support needed to carry on specific tasks or duties.

References:

- Amaya Díaz, L. P. (2014). *Intervención neuropsicologica de procesos cognitivos con el software de rehabilitación gradior en niños con trastorno por deficit de atención con hiperactividad y retraso mental.*
- Bueno, Y., & Orihuela, T. *Sistema Multimedia de apoyo al entrenamiento cognitivo de personas con discapacidad: Software Gradior.*
- Vargas, G. F. (2016). *Usabilidad de un programa de rehabilitación neuropsicológica por ordenador "Gradior" en personas con enfermedad mental grave y prolongada (Doctoral dissertation, Universidad de Salamanca).*
- Toribio-Guzmán, J. M., Vidales, E. P., Aguado, Y. B., & Franco-Martín, M. A. (2018). *Rehabilitación cognitiva por ordenador en personas mayores: programa gradior. Aula, 24, 61–75.*



3. LESSONS LEARNED AND RECOMMENDATIONS FOR INTELLECTUAL OUTPUTS 2, 3 & 4

In this chapter, we present some important and common factors found in the approaches introduced in the chapter 2, and in more detail in the appendixes 1–5. First, in the chapter 3.1, we present critical factors of success. Then we present some remarks that have been divided to seven main domains or subtopics and are presented in the chapters 3.2–3.8. These conclusions and ideas will give the future intellectual outputs 2, 3 and 4, and mindset tools to be worked on those outputs, good information and background where to start developing the tools.

3.1 Compilation of critical factors of success on different levels

In the following table 1 at the next page, we have collected the critical factors of success that the partners have recognized from their approaches through the self-analyses (in more detail see the appendixes 1–5). In the table, number in the brackets indicates in how many approaches the critical factor or the broader theme has been mentioned.



Table 1 Critical factors of success

Organizational level	Professional level	Client level
<p>Connections and cross-organizational collaboration with the public and private sector to facilitate the integration and transition to the labour market (3)</p> <p>Recruitment of suitable personnel/well trained personnel with relevant previous qualifications (3)</p> <p>Adapted infrastructures/adjusted training environment that facilitates ultimate client's involvement (3)</p> <p>Multidisciplinary teams (2)</p> <p>Coherent policies (HR, VET, Quality etc.) addressing the cognitive development of clients to promote full citizenship and active and successful participation to society</p> <p>Allocation of human resources that ensures individual monitoring of the learning process and employment adjustment</p> <p>Permissive environment</p> <p>Method applicable for all clients independent of the level of functioning</p> <p>Structured and fixed schedule</p> <p>At least 2 individual sessions per week to every trainee</p> <p>Free of charge/low fee for participants</p>	<p>Regular (multidisciplinary) team meetings/support group; learning from each other (4)</p> <p>Empowering and building up clients' identity; facing them as adults (3)</p> <p>Self-reflective/perceptive (3)</p> <p>Constant contacts/ongoing dialogue with clients, families and colleagues (3)</p> <p>Process of initial assessment/profiling, designing individual development plan/goals which are monitored/assessed (3)</p> <p>Initial/induction and continuous training and monitoring of the implementation of methods (2)</p> <p>Appropriate attitude and demonstration of empathy (2)</p> <p>Coherence between verbal messages and actions</p> <p>Active modifying belief system and growth mind set</p> <p>Experience with cognitive trainings and neuropsychological evaluations</p> <p>Following group dynamics</p> <p>Committing to the common values and to the organization culture/must stand for continuity</p>	<p>Motivation (4)</p> <p>Autonomy (2)</p> <p>Proactivity</p> <p>Participation</p> <p>Openness</p> <p>Curiosity</p> <p>Satisfaction found in the activity</p> <p>Willingness to dedicate time</p> <p>Good understanding of verbal instructions</p>



3.2 The importance of a safe environment and challenging environment

Concerning organizations in order to assess growth mindset it is important to evaluate how it provides a safe environment and at the same time a challenging environment. In order to provide a safe environment, institutions try to provide a structured schedule (some with more flowing activities and others with more defined guidelines), but with space for improvisations and to try new things.

All partners made reference that in order to effectively work, the technical skills take second place to the empathic, reflexive and authentic relationship that professionals need to have towards clients. Professionals use their emotions, showing affection and care towards clients. Person-centred approaches, with developmental plans, that instead of focusing on a one-size fits all, focus on clients' specificities, giving them agency (ability to make choices by providing several options).

Establishing explicit and clear rules covering clients, professionals and the institution as a whole, is a good way to give everyone a structure to rely on. Even better, when those rules are directed towards growth mindset such as: everyone should discuss what they feel is important (e.g., situations, feelings), everyone should reflect about exercises or about what is happening during activities (e.g., reflection about how to improve in a specific task/or game, or why someone doesn't feel in a mood to participate in activities). For the broad population involved in this project, adults with an intellectual disability, one thing that is common is their need to be in contact with their feelings and emotions. By creating an environment where challenges, empathy, flexibility and fun are interconnected, this is going to enable people to bring their most authentic selves to work or training and share them with others, which by Yeager and Carol Dweck's account (2012) is one of the most important dimensions of promoting a growth mindset for everyone involved. All this put together will create an organization that enhances transversal skills, a love for learning and a resiliency boost (Dweck, 2006).

3.3 We don't want to look smart and avoid challenges!

The hallmark of human nature is how much of a person's identity is not built in; rather, it is humans' great capacity to adapt, change, and grow. This nature versus nurture debate matters, not only to students of human nature, but to everyone. It matters whether people believe that their core qualities are fixed by nature (an entity theory, or fixed mindset) or whether they believe that their qualities can be developed (an incremental theory, or growth mindset). (Dweck, 2006.)

All approaches in C&I Project seem to impose a stimulating and challenging environment. If clients' self-esteem was maintained through avoiding activities/exercises/tasks/games that would make them take risks or make mistakes, and in turn only inviting clients to do activities where they were flawless, their mindset would be a fixed, and when facing a difficulty in real life, their self-esteem would be shattered, because "*mistakes need to be avoided*" (Dweck, 2006). While evaluating clients' mindset it would be very important to assess the way they look



toward challenges, if they enjoy seeking challenges, if they understand setbacks as part of learning and if they show resiliency while facing difficulties – all facets of a flexible and growth mindset (Dweck, 2011).

Many of our approaches focus on the creation of opportunities to practice skills (in a context as similar to real life as possible) and look into pushing the developmental level of clients to new heights. In order to do this, clients need to be able to dare (it would be important if we assess this availability to dare), and professionals need to be willing to dare. When the level of difficulty of the activities is lowered, it might boost self-esteem in a short-term, but it would lead to clients poorly trained or educated, therefore, less capable of dealing with real life challenges or fearful of new situations (Dweck, 2006).

Human nature has a lot of potential for growth, a great capacity to adapt, change and grow, and it matters a lot what people (clients, professionals) believe it is possible to achieve (Dweck, 2006). As several partners stated, a good self-esteem is central to development as when we fail and make mistakes, we don't feel threatened, because we already feel we are good enough. Challenges should be viewed as a way to promote resiliency and the emergence of new skills, instead of making clients, professionals, and organizations feel “dumb” or unintelligent (Yeager & Dweck, 2012).

3.4 Reflection is essential while dealing with setbacks

When people embrace challenges, there will be, inevitably, mistakes! But clients, professionals and organizations with a mindset directed towards growth, thrive on mistakes. What follows the mistake is an essential part of growth, and that is when reflection comes into place. The way reflection is made has many faces in C&I approaches. But all of them involve communication between client and professional. Sometimes, this reflection is made individually, other times, in a group. That is very important, because clients can teach each other, and they can also teach the trainers. When everyone is at the same page, everyone starts to understand that it is OK to make mistakes. In accordance with Dweck's (2006) perspective, when clients see their peers being capable of doing things they aren't, they might feel as if that gap is unbridgeable. But, when organizations, professionals and clients are growth-minded they give them tools to close that gap.

The way instructions are made is very important. Simply put, we must always look to help clients use better strategies (Yeager & Dweck, 2012). Instructions may involve constructive criticism helping clients do a better job (Dweck, 2006). Also, people need to try new strategies but continually seek for input when they are stuck, and that is exactly what happens in most presented approaches (Dweck, 2015). But, more importantly, the focus shouldn't be in immediate outcome. The clients should learn to trust the process, focusing on strategies, effort and choices (Dweck, 2006).



3.5 Success of others is my success

The successful approaches previously presented use work or reflection in small groups in order to promote development of several skills (e.g., problem solving skills), to promote interpersonal relationships, to present authentic situations, to develop a cohesive support group. It is important that the clients interact with each other, listening to themselves and to others. In order to further personal development and a growth mindset, clients cannot have a stagnant view of other people, forming rapid judgements of other people traits (Dweck, 2011). If they don't develop a growth mindset towards their peers, when facing an ambiguous social situation, they will quickly jump into the conclusion that other people did what they did with the purpose of being mean or that "I'm just not a likeable person" (Yeager & Dweck, 2012). When people learn about other people's thoughts, feelings, motives, needs, and beliefs, they will reflect about these situations as being more hopeful, they will become more resilient and they will perform more prosocial behaviours (e.g., such as trying to help other people) (Dweck, 2011; Yeager & Dweck, 2012). When clients understand that people's feelings and thoughts are changeable, they will understand that they can help through empathy and that while facing a confrontation or rejection from a peer, those are momentary feelings or thoughts (Yeager & Dweck, 2012).

3.6 The importance of commitment

Concerning Dweck (2006), a professional aiming to promote a healthy mindset for growth must create an atmosphere of trust and nurture, instead of lowering the standards. When there is an atmosphere of affection and deep personal commitment, clients feel that the professional is going to teach, and not going to judge. So, as promoters of growth, professionals must be authentic, but also disciplined.

Those professionals and organizations who dare to be authentic, must reflect about their own growth mindset. Institutions from C&I project do this reflection about their beliefs either with tools, or self-reflection or group reflection. And that is a way to evaluate people's values and mindset. But, curiously, there is no clear link between professionals'/parents' mindsets and their clients'/children's mindsets (Haimovitz & Dweck, 2016). This means that mistakes or failures can be seen by professionals as enhancing or debilitating, and this belief (fixed/growth) is going to be reflected in their practices. When professionals face failure/mistake, their reaction to the clients' failure/mistake is more visible than their abstract beliefs about their potential for growth (Haimovitz & Dweck, 2016). When clients make mistakes in a task or activity, a professional with a fixed mindset might feel anxious and react that way. When professionals have a failure-is-debilitating mindset, they might start pitying their clients, doubt their abilities, comforting them for not having enough ability. But, when professionals have a learning oriented mindset, they see failure as enhancing, and focus on how to learn from the experience and improve (less on setbacks and what they mean) (Haimovitz & Dweck, 2016).

With all this theoretical background, we understand why the partners stressed that it is important to have professionals/leaders who have great human values, who want to be inspirators and



teachers, more than caretakers. Professionals need to have a strong dedication, a strong curiosity and strong feedback givers (Rattan, Good & Dweck, 2012). This feedback needs to be challenging, instead of comforting, because the former motivates people to aim higher, and the latter makes people expect less and decrease effort and motivation (Rattan et al., 2012). Well intentioned professionals might easily try to comfort their clients when they face setbacks, but that practice can backfire and be detrimental to clients' long-term development (Rattan et al., 2012).

When talking about organization's and professional's authenticity, it is important to stress that joy, excitement, humour, while simultaneously working seriously, are a must have within any organization that wants to promote development, and with all these ingredients it's possible to put together one environment where it is fun to learn.

3.7 Professionals and organizations need to want to keep learning

Dweck (2006) states "The great teachers believe in the growth of the intellect and talent, and they are fascinated with the process of learning." Fortunately, organizations and professionals from C&I exhibited several practices that they perform in order to make sure that they are striving towards an incremental world of opportunities, where everything revolves around learning and growth. The professionals reported by our partners defend that human nature is characterized in terms of potential, then their task is to get to know their clients and try to help them fulfil their potential (Dweck, 2011). C&I approaches look into this because most institutions have policies in place to encourage reflection about growth mindset beliefs and growth mindset practices (e.g., continuous training, continuous monitoring and supervision, focus groups, intervision).

This space where the professionals can think about their practices and beliefs is essential when working in the context of disability. It is incredibly difficult to continuously learn about ourselves and others, to know what makes people tick, to propose challenging tasks addressing transversal skills, to make adjustments on the go depending on people's dynamics, to promote a safe and modifying environment.

Especially important, when talking about continuously learning professionals, gamification and serious games are here to stay. So, when useful, those approaches could be used. And they are made to promote a growth mindset as they have different level tasks, simulates social interactions, allows simultaneous reflection with a professional, but, even more important, they are used to *support the learning process* (as a complement) (Landers & Callan, 2011). Gamification has a very powerful effect on learners' motivation and it takes advantage of several psychological mechanisms (Landers & Callan, 2011). Research shows that games empowering prosocial behaviours really have an influence on players' prosocial behaviour (Greitemeyer et al., 2010). Partners using these approaches still reported that human connections are at the centre of it all, as it is in the human to human interaction that reflections are made and strategies to overcome setbacks are discussed.



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One of the main takeaways from this lesson, is that professionals and organizations need to believe in the possibility to change, in the possibility for cognitive capacitation and cognitive modifiability. Only this way, their mindsets and beliefs will be of growth instead of fixed.

3.8 Appreciate don't praise

The partners shared that they don't praise clients in a "good" or "bad way", nor "the best" or "the worst". In accordance with Dweck (2006), it is good to appreciate practice, study, persistence and good strategies. Professionals should stay away from praising intelligence or talent. Sometimes, clients are involved in activities just for the sake of their own experience, just the process itself. When praising goes wrong the clients might feel with lower expectations, less capable, less willing to try out new things and take risks (Rattan et al., 2012).



APPENDIX 1: MAH – MEDIEREND AGOGISCH HANDELEN (MEDIATIONAL INTERVENTIONS FOR ADULTS WITH AN INTELLECTUAL DISABILITY), BELGIUM

A1.1 Description of the approach

Introduction

MAH (Mediational Interventions) is part of the holistic approach as being implemented in “den achtkanter” (Kortrijk, B - a support service for adults suffering from a traumatic brain injury or challenged by an intellectual disability and/or dual diagnosed). The holistic approach incorporates strategies taking into account:

- all domains of Quality of Life (QOL) (Bob Schalock): promoting independence, wellbeing and social participation of our clients
- all domains of life – living, employment, leisure, social relations, etc.
- all domains of development – social, emotional, cognitive, etc. development
- client and his network – empowering both levels, not only the client but also the social network, mainstream services involved, etc.

Within this broader framework, MAH specifically focuses on the cognitive empowerment of adults challenged by a learning/intellectual disability (officially not “able” to work) in order to foster autonomy and successful participation in society. As well the personal attitudes and skills of the person, as the quality of the environment are addressed.

MAH is based on the Feuerstein’s Structural Cognitive Modification-theory and consequent concepts of Ecological Brain Plasticity and Mediated Learning Experience. The MAH approach is significantly influenced by Haywood’s Transactional Perspective of Human Abilities and Cognitive Behavior Modification-approaches (Meichenbaum, Kendall, etc.).

MAH is a practical application of these interrelated models on micro (professional and client) and meso-level (organization), developed since 1995. MAH was initially developed within the context of a day care centre and supported employment. Later, but very soon, strategies were



introduced and developed to be used in the context of supported/independent living and as a part of the methods used in a training centre for adults with an intellectual disability.³

Den achtkanter has explicitly chosen to implement a cognitive approach, as positive psychological models are consequent to the beliefs of the organization and address the “core” of intelligence and learning disabilities.

1. Adults challenged by an intellectual “dis’ability have “abilities” and the potential to develop “abilities”;
2. Adults challenged by an intellectual disability are full citizens and can learn to adapt to the ever-changing environment to become a successful and active participant of society. Not only the (social) environment needs to adapt to the adult and his “disability”, also the person himself needs to and can learn to adapt to the environmental demands.

Goals

MAH aims to foster independence/autonomy and intrinsic motivation, by

- developing information processing skills, learning skills, independent problem solving, self-regulation, and
- reducing learned helplessness and supporting intrinsic motivation, self-efficacy and a growth mindset.

The MAH model covers three interdependent levels of actions:

1. MAH refers to a specific set of beliefs on intelligence, learning, learning disability – influencing the quantity and quality of the efforts done by the “social” environment, b.o. by professionals. Presuming competence, not accepting whatever actual level of functioning, active participation in society for everyone without any restriction,

³ The model has been adapted (additionally influenced by Prigatano, Ben-Yishay, Sohlberg and Malia) to be used in a “continued rehabilitation program” for TBI-adults not able to work and live independently after significant functional rehabilitation efforts. The approach “Breinbreker” is actually in its initial stage of implementation in the context of social workplaces and young adults.



understanding the difference and the interdependency of a) intelligence, b) cognition and c) intrinsic motivation, learners as active information processors are some of the core beliefs.

2. MAH is as set of interventions, techniques/tools to promote independent learning, problem solving and self-regulation within adults with an intellectual disability. These tools are inviting adults to develop transversal skills, to reflect on one's behaviour, to learn from mistakes and successes, to take initiative to solve problems by themselves, etc.
3. MAH also refers to a set of guidelines to shape modifying environments, especially by creating a challenging but safe environment.

Methodology and strategies

Within the context of our service for adults with an intellectual disability, no specific training or curriculum/materials were developed. The production process (in the context of challenging “professional” workshops), the daily and general activities done at home, etc. are the “medium” and materials to implement the cognitive strategies below; they always address – and have the potential for training – transversal skills. However, to reach this goal, the (working or living) activities need to be adapted to enable the professional to elicit, foster or reinforce cognitive and transversal skills. The “cognitive map” (Feuerstein's tool for description and adaptation of activities) helps to understand the real nature of the task and what “cognitive” skills demand to address explicitly specific cognitive and transversal skills. MAH is a meta-approach, and therefore not easy to implement.

Concretely, to reach the goals, several strategies have been developed:

1. On the level of the professional:
 - “My Beliefs on Intelligence and Learning”: a tool to reflect on one's belief system regarding intelligence, cognition, learning and learning disability, and social inclusive support.
 - This tool, to be used in different HR-applications, especially wants to invite the professional to reflect on the impact of his beliefs on the level of functioning of the person involved and the acquisition and



implementation of competences by this person. Main concepts involved are learning as an active processing of information, learned helplessness, presuming competence and process orientation.

○ The assessment of the professional's mindset is not part of this tool; a growth mindset – assessment tool to be developed – is seen as a prerequisite for the expected positive oriented belief system that is focusing on “the other”.

- “A Competent Mediator”: a tool to be used by the professional to self-assess MAH competences, inviting to define personal MAH-goals.
- “Checklist Critical Indicators for MAH”: checklist to assess the quality of the mediational interventions, to be used by external assessor.

2. On the level of the adult with an intellectual disability:

- “CMC-8”: assessment tool to observe strengths/weaknesses of metacognitive skills (orientation, monitoring, reflection), transfer/generalization, intrinsic motivation, as a base line and starting point for interventions.
- “A Mediational Style”: a set of general guidelines for professionals for metacognitive reflection with adults – process orientation, justification, questioning, learning from mistakes, bridging, intrinsic reinforcement, cognitive modelling.
- “Cognitive Structure”: guidelines for the development of spontaneous planning, monitoring and reflection.
- “15xPS”: guideline to use 15 levels of gradual support to elicit and reinforce taking initiative in problem solving by the client (see sub chapter Illustration of a MAH tool).
- “SAM – training for self-regulation”: during problem solving and approaching tasks, especially in the domain of employment. This training is based on the cognitive behaviour modification technique to develop self-control/self-regulation/self-talk by internalizing instructions. A visual (set of pictures with problem solving steps, linked to the content of the self-talk during each step) has been developed. Assembly and construction activities are used for training.



3. On the level of the supporting environment and organization:

- “SME”: the concept of “shaping modifying environment” refers to inviting and stimulating conditions within the context where the client is living, working, supported, etc. Although closely linked to the social dimension of the environment (the social network, the professionals, etc. and their belief system, approach and skills), for us SME is especially referring to the way contributing conditions are created on the level of the working place and living situation, but also to the necessary, consequent policy of the organization.
- “Workshops”: within the day care context are small companies, promoting a professional identity. The products and the production process are the “materials” the professional uses for “cognitive education” and “mediation”. All workshops (independent of the profession) produce a set of products that differ on the number of steps necessary to complete the product, the complexity, etc. not only to find a match with the (actual) level of functioning or strengths/weaknesses of the client, but also as a set that can be used to (gradually) challenge the client to deal with new, more complex, more difficult, new products. In this way, the “products” are the tool for transversal skills training.
- The “living” situation of the client is always characterized by the Independent Living principles, inviting the client to take initiative, to do efforts, etc. and inviting the professional to limit actions to “residual” actions.
- The organization implements a consequent HR, VET, quality, educational policy (b.o. selection focusing and reflecting on professional’s mindset and beliefs, VET on mediational skills, initial and continuous training and monitoring of implementation of MAH methods, “focusgroep MAH” (a learning and support group to realize a broad impact in all departments of the organization, a management information system with indicators linked to this cognitive approach and realizations, etc.). The supports planning methodology is based on individualized goals, not only towards QOL, active participation in



society, employment, etc. but also explicitly encompasses towards cognitive/transversal smart goals.

Illustration of a MAH tool

15 X PS: INDEPENDENT PROBLEM SOLVING - 15 LEVELS OF STIMULATION

Introduction - instruction

If – often with the best of intentions – we solve the problems that clients have, we overlook a chance for them to take a step in the direction of more independence. When clients are experiencing a problem, we can and often should react in different ways. None of the fifteen proposed ways laid out below is the single “best” way to react.

There is nevertheless a difference in the ways in which clients can contribute to the solution of their own problems. For the first four possibilities noted below, it is the educator/professional who thinks of the solution and the way this solution has to be executed. The other possibilities leave progressively more and more initiative to the client.

Which way is used, depends on the person and the situation: factors include the degree of difficulty in the instruction (if an instruction really is too difficult, then there is no other way but to execute the instruction yourself), self-estimated level of competency, newness of the instruction etc. Often, it is a question of “feeling” which way is the best.

The different ways of reacting will perhaps always occur in combination with each other. By preference, an open approach is applied: you invite the client, as much as possible, to explore the problem. If the client is unsuccessful at it, the educator can progressively pass on to a way of reacting in which the client will participate to a greater degree in solving the problem.

It can also be a process of looking together for the best way and trying it out. It is possible – and it will sometimes occur – that you yourself don’t have a solution ready for a difficulty or a problem. At that moment, the chance that a problem is solved will increase if we search together, try a possibility out, look over alternatives, give suggestions and execute partial tasks (see Level 2 problem solving below).

Learning to tackle and solve problems includes more than reacting appropriately at the moment the difficulty emerges. It also supposes a global stimulating “mediational” attitude and an



amalgam of materials and activities, which invite the clients to come to decisions and initiatives, and which challenge them to break through fixed patterns of behaviour, fixed habits and obstructing limits.

Level 1: Solving the problem for the client

It is possible that a client needs this level of intervention in order to be able to continue independently from that point. It is also possible that the educator hopes clients will learn, from the example, how to solve the problem themselves next time. Or, maybe this form of intervening is the quickest intervention. In all such instances, the share of the clients in the solution of the problem is nought.

When a client is facing a new problem (such as when he does not possess the necessary skills to solve the problem), or when the client is in the midst of a learning process, then it is sometimes the case that solving the problem for the client is the only realistic option. This response must be limited in use because it confirms/may confirm clients' sense of helplessness.

In situations of need and danger (e.g. using scrubbing and cutting machines, filling up tallow moulds, removing bread from a hot oven, dealing with overflowing boiling jam, burning butter, etc.) a level 1 intervention is typically necessary.

Level 2: Solving a (partial) task together with the client

Partial tasks are relatively well-defined tasks, which the clients execute without much thought. The clients help the educator with the execution of the solution.

Level 3: Modelling

This means that the educator shows or “models” the solution of a problem or the execution of a task, while verbalizing. This type of stimulation is useful when learning new tasks or practical techniques, or when learning to use especially complicated devices, or to overcome physical/motor/mental limitations. In these cases, the educator has the explicit intention to teach this new task to clients so that they can execute it by themselves in the future.

Level 4: Explaining how to do it

The educator verbalizes how the task has to be executed or how the problem can be solved, but without demonstration as in level 3.



The first four ways don't give the client the chance to take the initiative in the problem solving process; all initiative comes from the educator, who indicates what has to be done, to the extent that the educator doesn't do it himself. These kinds of assistances can be improved qualitatively by building in principles of mediation: transcendence, intentionality and meaning (What am I doing? How am I doing it? Why? What do I have to pay attention to? etc.).

Level 5: Indicating or mentioning a (single) correct solution

The educator tells the clients what the solution for this problem is; but the clients have to find out themselves how they can execute this solution. No process-oriented explanation is given.

Level 6: Indicating or mentioning several possible and correct alternative solutions

The educator gives two or more possibilities for solving the problem. Clients can choose one of the proposed alternatives. Also, when a problem that cannot be solved immediately emerges, the educator can indicate different ways to prevent this problem in the future.

Level 7: Mentioning solutions that need further examination

This means that alternatives for solving the problem are suggested, without being sure or without arranging that the given alternatives will lead to the desired result. The clients can try out an alternative, but maybe they are still confronted with the problem after this try out. The educator states clearly that he also doesn't know the exact answer immediately.

Level 8: Inviting purposeful thought

The educator puts the clients on a track. A direction is given, more or less; the clients have to explore the suggestions given, and they have to work out alternatives themselves.

Level 9: Clarifying the problem by indicating the cause of the problem

The educator names the cause of the problem. This can be an invitation to search for a solution.

Level 10: Clearing up the problem by probing for the cause of the problem

The educator helps the clients to understand "why it is not working". At level 9 the educator gives the cause himself, but on this level we help the client to look for and formulate the cause of the problem himself.



Level 11: Describing the problem

No more information is given about the cause of the actual situation, but the educator holds up a “mirror”: “look, this is happening here, you are now doing that...” These kinds of descriptions sometimes help clients to take a step backwards and to distance themselves from what they actually are doing, to make them more conscious of what they actually are doing, or to invite them to ask themselves why something doesn’t work out.

Level 12: Stimulating to check after the execution

The clients have to trace if there is a problem or not. They are asked to check by themselves the results of their actions. A correct example or a product can be shown, or the clients are asked if the result of their action is correct. They are invited to decide if there is a problem or not.

Level 13: Stimulating to check during the execution (monitoring)

The clients are taught to ask themselves spontaneously during the execution of an activity whether they are following the correct plan of action or whether they will attain their goal. If they conclude that this is not the case, the clients have to adapt their plan or procedure.

Level 14: Stimulating to check “before” the execution

During the “planning time” (the moment of mentally preparing) the clients are stimulated to think about the way they will act and to consider if the plan they will apply will lead to a good result. Here we appeal to the imagination of the clients.

Level 15: Reflection

Reflection means to look back on the performance – not only on the content or the result, but also on the process that led to the result – in a way that someone not only searches for possible failures, but also for factors which weren’t good or efficient in the planning and execution of the task.



A1.2 Self-analysis of the approach

A1.2.1 Key features of the approach

Theoretical foundation

MAH is based on the Feuerstein's Structural Cognitive Modification -theory and consequent concepts of Ecological Brain Plasticity and Mediated Learning Experience. The MAH approach is significantly influenced by Haywood's Transactional Perspective of Human Abilities and Cognitive Behavior Modification -approaches (Meichenbaum, Kendall, etc.).

MAH is a practical application of these interrelated models on micro (professional and client) and meso-level (organization), developed since 1995, to be used in the context of a day care centre, supported employment, supported living and a training centre for adults with an intellectual disability (officially not able to "work").

Target transversal skills addressed

Cognitive and metacognitive/transversal skills, especially self-regulation, problem solving and flexibility.

Specific goals

MAH aims to foster independence/autonomy and intrinsic motivation, by developing information processing skills, learning skills, independent problem solving, self-regulation, and reducing learned helplessness and supporting intrinsic motivation, self-efficacy and a growth mindset. MAH is complementary to approaches that focus on social and emotional development and practical skills training.



Methods

To reach the goals, several strategies have been developed/adapted:

- On the level of the professional:
 - tool to reflect on one's belief system regarding intelligence, cognition, learning and learning disability, and social inclusive support,
 - tools to monitor and assess the quality of the mediational interactions (checklist for self-assessment, checklist critical indicators for MAH, etc.).
- On the level of the adult with an intellectual disability:
 - assessment tool CMC-8 to observe strengths/weaknesses of metacognitive skills (orientation, monitoring, reflection), transfer/generalization, intrinsic motivation, as a base line and starting point for interventions,
 - “general” guidelines for professionals for metacognitive reflection (mediational style)
 - cognitive structure, to develop spontaneous planning, monitoring, reflection,
 - 15xPS, 15 levels of gradual support to elicit and reinforce initiative in problem solving by the client,
 - SAM – training for self-talk during problem solving and approaching tasks, especially in the domain of employment.
- On the level of the organization:
 - implementation of a modifying environment – especially in the different workshops (to create a professional identity, production as a tool for transversal skills training).



Image 1



Image 2



Materials

Within the context of a service for adults with an intellectual disability, no specific training materials were developed: the production process (challenging “professional” workshops), the daily and general activities done at home, etc. are the “tools” and materials to implement the cognitive strategies, address and train the transversal skills. However, these (working or living) activities are adapted according to the “cognitive map” (Feuerstein tool for description of activities) to address explicitly specific cognitive and transversal skills.

Materials have been developed and selected for the assessment CMC-8. A “visual” has been developed for the SAM-training, representing the content of self-talk during problem solving; assembly/construction activities are used for training.

Target group

Initially MAH has been developed for adults with an intellectual disability, having access to day care centres, supported employment, supported living and “living together” settings (i.e. adults who “officially” are not able to work and do not have access to sheltered workshops or regular employment). This does not mean that the clients can’t move toward working as a volunteer, regular employment, etc.

Adaptations starting from the same positive approach, are made for TBI clients and are part of the Breinbreker program. The philosophy and some of the tools can be used with all people.

A1.2.2 Strengths and weaknesses of the approach

Strengths

Problem solving	Self-regulation	Self-direction	Flexibility	Creative thinking
<ul style="list-style-type: none"> • Clear definition of skills involved (orientation, planning, monitoring, evaluation, reflection). • Coherent method to promote problem solving skills and especially to take 	<ul style="list-style-type: none"> • Clear definition of content of self-talk. • Clear methodology to interiorize (self) instructions. 	<ul style="list-style-type: none"> • MAH influences self-efficacy and supports the development of a growth mindset within the client. 	<ul style="list-style-type: none"> • Metacognitive reflection on the process before, during, after tasks, resulting in adaptation of approach. 	N/A



initiative to solve problems by themselves. • Visual tool.				
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General strengths: not only transversal skills are addressed, but they are also trained in case the skills are not acquired yet.

Weaknesses

Problem solving	Self-regulation	Self-direction	Flexibility	Creative thinking
<ul style="list-style-type: none"> • The model we use – SAM training – makes use of a “person”, a role model, that is chosen to use with our clients, but it may be difficult for many other clients, (older, higher level of functioning, or very low functioning) to identify with this “role model”. • Transfer of learned skills into new situations is challenging and needs a lot of effort and support within the new situation. 	<ul style="list-style-type: none"> • Self-talk, is “talking”, is communication with yourself; concepts, speech, communication is often a challenge within our population. • The choice for a visual tool, as alternative, inviting clients to “imagine”, often limits the scope of the skill and especially the related script. The idea behind each visual is very broad and can’t be fit into one image. • Self-talk is not “visible” and so, difficult to evaluate if the “right” self-talk is used. 	<ul style="list-style-type: none"> • Huge impact of “what parents want” and their worrying about safety of their family member. 	<ul style="list-style-type: none"> • Working, living environments need to be seen as environments with challenges and tasks with an “uncertain” outcome to realize the goals of the approach. This is “challenging” for clients and their network at the beginning. 	<ul style="list-style-type: none"> • Not well addressed, although the cognitive principle “problems can be solved in different ways” is fostered.

General weaknesses: the absence of a parallel program for social environment; not really a weakness, but a challenge, and in our case, part of the approach: to implement this approach, one needs to create right conditions, on the level of the professionals (mindset, self-efficacy, beliefs) and on the level of the organization (policy, modifying environment).



A1.2.3 Critical factors of success on different levels

Organizational level

Explicit choice from the organization to develop a coherent policy, addressing the cognitive development of “cognitive” disabled adults, not as a goal itself, but to promote full citizenship and active and successful participation to society. Coherent HR-, VET-, Quality-, etc. policies. Supports planning from QOL model, holistic approach, smart goals (also explicitly cognitive and transfer goals).

Professional level

Active modifying belief system and growth mindset within the professional. Initial and continuous training and monitoring of implementation of MAH methods. Learning from each other, intervision; learning and support group “focusgroep MAH” to realize a broad impact in all departments of the organization.

Client level

Model is applicable for all clients, independent of the level of functioning.

A1.2.4 Effectivity, impact, evidences etc.

Organizational level

Evidences of effectivity? How is the effectivity of the method evaluated?

Management information system (as part of Self Evaluation – Quality policy) including indicators on support goals. Overall assessment of QOL.

How this method facilitates and supports transversal skills?

Not applicable in organizational level.

How this method impacts on social inclusion and employment?

The impact on the social network, social environment, future students is significant regarding the perception on people with disabilities.



Professional level

Evidences of effectivity? How is the effectivity of the method evaluated?

External and self-evaluation of MAH-competences.

How this method facilitates and supports transversal skills?

Development of a belief system that facilitates the successful implementation of cognitive approach.

How this method impacts on social inclusion and employment?

Methodology helps professionals make transition toward a de-institutionalization culture on the working and living floor.

Client level

Evidences of effectivity? How is the effectivity of the method evaluated?

Assessment (test, retest) using CMC-8. Transition to independent living context and (supported) employment – if relevant. Development of a professional identity. Indicators for taking initiative and reduces learned helplessness.

How this method facilitates and supports transversal skills?

Transversal skills are the focus. So, it is inherent to this approach.

How this method impacts on social inclusion and employment?

The outcome of MAH support and training is seen in dynamic support plans, always focusing on higher level of participation into society, autonomy, QOL.

A1.3 Peer-analysis of the approach

In the approach, Mediation Interventions, the intervention must have specific quality to be mediational and thus contributing to the cognitive development or competence of the client. Educational strategy of mediational interventions is to give a framework, set of beliefs and set of suggestions for the instructor/educator. There is e.g. a tool called “15 x PS” which helps the instructor/educator to define the quality of the intervention from level 1, not expecting initiative from client to level 15, where maximal contribution from the client is expected. The approach



can be considered to be a meta-approach, a framework. The vision is seen to be explicit but the partners using the approach are continuously working on the methodology to refine it, especially regarding the implementation within (very) low functioning adults. The focus is on (thinking, learning, problem solving) processes and on a continuous process of development rather than on content related outcomes. Still the instructor/educator always has the cognitive goals in mind (referring to transversal and information processing skills) and all the time during the “training” the bridges (transfer) between the situation where reflections are made on transversal skills and “other” situation where these skills are relevant, are made.

During the (optional) assessment – as an illustration of what is the focus of the approach – a series of exercises is given where the application of the cognitive transversal skills is checked. The idea is that some of the exercises can be made and some don't. The instructor/educator is observing the problem solving strategies, reactions etc. of the client. It is interesting for observers to see what reactions (talks to oneself, asks for help, waits etc.) the person does when one encounters difficulties. The reflection is part of this and with the cycle of monitoring and reflection it becomes a learning process. During the training, the reflection on the process is done also in a group, not only by oneself. Although mistakes are important, reasoning needs to be asked especially with right answers because in there lies also good learning opportunity.

The approach is based on the SCM-theory, cognitive plasticity and IE-method which is an internationally recognized programme to develop thinking and problem solving skills. It is based on guided exercises that develop thinking skills and the transformation of these new skills to individual's practices in everyday life. The Flemish approach does not use the IE-units or exercises, but use the regular day activity (working, housekeeping, etc.) as a tool to train, rather than a tool to address, cognitive skills. The Mediation Interventions approach, is effective only when implemented within the context of a “modifying” not a “retarding” environment, not only referring to physical characteristics of the living context, but very much referring to the beliefs of the social environment.

It is proven that with the help of the method the cognitive and transversal skills can be reinforced and developed. According to the user experience the training e.g. develops concentration abilities, self-regulation and enhances autonomy and the belief on one's own abilities. The used method centralizes the learner's focus to the most essential factors of knowledge processing by



teaching the needed concepts, by developing the cognitive operating methods of the learner and by generating planned, considerate and insightful thinking.

Based on the demonstration of the approach it can be said that the impacts of the training are often experienced individually. Also, the everyday life ability to function and adapt to ever changing environment and environmental demands is felt to strengthen. It is good to remember that independence needs both problem solving skills and practical skills.

In this type of process the expertise of the instructor/educator is essential; knowing the learning process and how to transfer doing into everyday life situations requires persevering and target-oriented working. Sometimes the working also requires strong motivating of the client and describing how these type of interventions improves the skills needed in everyday life (transversal skills). The approach's main focus is on cognition, but takes into account motivational and emotional factors, that are interrelated. One option is to lower the difficulty level if needed or make things more challenging if it's seen by the instructor/educator that exercises are too easy.

Some feedback from the partners (some comments are stylized):

“Very good framework to work with. Focuses on a continuous process of development and improvement. I learned that this method is always looking to challenge the clients to think and act in a more autonomous way.”

“This methodology (well founded) can be the opposite side of other methodologies (less well founded) but very practical ones. All of them must be always taken into account when treating people with learning difficulties.”

“This could be used to structure the way we interact with clients (e.g., 15x PS) because it seems to be a pretty good tool. It promotes a person-centred intervention, as it asks questions always in accordance to the person that is in front of us.”

“You can copy some parts of this methodology to be used in isolated way in other organizations, but you can also read the theoretical foundations to develop your own methodology.”



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“The BE approach will be very useful for professionals working with PwDs in different countries. It is flexible and dynamic. The approach is based on solid theoretical foundation and the suggested tools do not limit the professionals - just opposite, they give a space for interventions in accordance with clients' behaviour and specific needs.”

“When you try to develop this method you have to take into account several things. One is the size of the organization. Huge organization will take too much time to develop (and implement) it. The legal status is also important. NGOs are more flexible than public big organizations.”

“What is important is the process, but this is more difficult to evaluate. Unfortunately we live in a society obsessed with the outcomes and all of this possible to be measured.”



APPENDIX 2: REFERENCIAL DE REABILITAÇÃO PROFISSIONAL (RPP-APPACDM), PORTUGAL

A2.1 Description of the approach

Goal

The Program Referencial de Reabilitação Profissional (RPP-APPACDM) has its roots on the Holistic Program of Neuropsychological Rehabilitation, that started at the Centre for Professional Rehabilitation of Gaia (CRPG) (Guerreiro, Almeida, Fabela, Dores, & Castro-Caldas, 2009; Almeida, Guerreiro, Martins-Rocha, Dores, Vicente, Barbosa, & Castro-Caldas, 2015). Ben-Yishay's model (2000) is the framework followed by RPP-APPACDM and CRPG, and as main goals established that: a) promotion of physical and psychological functioning empowering autonomy; b) increase psychosocial adjustment, through development of interpersonal skills and acceptance of the new condition and; c) supporting the creation of a practical integration project.

Transversal skills addressed

Several transversal skills are approached by this program such as: flexibility, problem solving, self-direction, self-regulation, creativity, inside the modules: Communication and Interpersonal Relationships, Daily Life Activities, Individual Therapies: Psychology, Physiotherapy, Occupational Therapy, Speech Therapy, Group-based Functional Rehabilitation and Cognitive Training.

Target/Audience

This program aims to include people of age equal or superior to 18 years old who has suffered a BTI, stroke, brain tumour or other acquired cerebral lesions, who fulfil the necessary conditions to work and who need specialized-technical support to access vocational training/labour market or to design a vocational rehabilitation plan.



Theoretical basis and background

After acquired brain injury (ABI) rehabilitation aims to increase the individual's functionality promoting their Quality of Life (QOL) (Almeida et al., 2015).

The concept of QOL has been deserving of growing interest in Portugal, as it is most visible in the several studies of instruments for its assessment (e.g. Carapeto et al., 2017; Gaspar, Matos, Ribeiro, Leal, Erhart, & Ravens-Sieberer, 2010; Vaz Serra et al., 2006). Yet, it is becoming an important topic for institutions that intervene at the psychosocial level. This is the case, for instance, of recent Portuguese legislation about individual specific curriculum for special needs students at secondary schools (Ministério da Educação e Ciência, 2015) or about residential facilities for persons with disabilities (Ministério da Solidariedade, Emprego e Segurança Social, 2015).

The need of a QOL conceptualization emerged from the World Health Organization (WHO) definition of health as “a state of complete physical, mental, and social well-being not merely the absence of disease . . .” (1948, p. 100). In such a context, the WHO defined QOL “as individuals perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns” (WHO, 1997, p.1). In addition, other recent approaches propose a more comprehensive conceptualization, beyond the scope of this health approach, especially committed with the United Nations' Universal Declaration of Human Rights (United Nations, 1948) and, in particular, with the Convention on the Rights of Persons with Disabilities (CRPD) (United Nations, 2006). For instance, the Schalock and Verdugo (2003), defines QOL as “a desired state of personal well-being that: a) is multidimensional; b) has universal (etic) and culturally bound (emic) properties; c) has objective and subjective components; and d) is influenced by personal characteristics and environmental factors” (Gómez, Verdugo & Areas, 2010, p. 459). This model is based on an international consensus about the main aspects of the conceptualization of quality of life as well as about its measurement and applications, especially concerning the intellectual disability field (Schalock et al., 2002). In this model, QOL is operationalized in three different levels (e.g., Gómez et al., 2010): dimensions, indicators and personal outcomes. Eight core dimensions have been proposed: personal development (PD), self-determination (SD), interpersonal relations (IR), participation or social inclusion (P), rights (R), emotional well-being (EWB), physical well-being (PWB), and material well-being (MWB). Each



dimension is operationalized in its main indicators, that is the perceptions, behaviours or specific conditions reflecting the well-being of a person). At the bottom, the model places the personal results, that is the aspirations and valued outcomes by the concrete person. In this model, the importance of the dimensions is considered to vary from one person to another, as well across the lifespan (e.g., Gómez et al., 2010). QOL assessment integrates the analysis of responses that individuals give about their needs, such as level of satisfaction in diverse daily life dimensions (Costanza et al., 2007). While working on rehabilitation, QOL has, recently, gained more prominence as marker from intervention results' analysis (Fabian, 1991), given that it reflects the patient's subjective perception concerning personal experiences about the disease and intervention services (Bullinger et al., 2002). The evaluation of the intervention programs impact on rehabilitation and health contexts, now, integrates, besides biomedical markers, the patient's perspective regarding the effect of the condition on their health and its physical, psychological and social treatments. QOL is a marker of the effects of the disease, the treatment's path, and the rehabilitation level in the person's life (DePalma, 2001).

The diversity of impairments related to brain injury, together with its effects in functionality and social and professional reintegration, states the need for intervention programs meeting, in a integral and comprehensive way, the person's needs (Guerreiro et al., 2009; Almeida et al., 2015). Rehabilitation, after-ABI, has as a main goal supporting people to meet their optimal level of well-being, reducing the impact of deficits on daily life and empower recovering to different and appropriate life contexts (Wilson & Gracey, 2009; Almeida et al., 2015). The programs based on the Holistic/Comprehensive Rehabilitation Model after ABI has been recommended has intervention good-practices, in post-acute phases, aiming to reduce cognitive and functional disability in people with moderate or severe ABI (Daniels-Zide & Ben-Yishay, 2000; Cicerone et al., 2011). This approach proposes that different interventions, individual and group, must be integrated in a coherent way, and it must include cognitive rehabilitation, psychotherapy, psychosocial interventions and vocational (re)orientation services.

The main constructs of this program are:

a) Acquired Brain Injury

Acquired brain injury (stroke, TBI, brain tumour) produces meaningful changes on cognitive, emotional, physical, social, vocational and familiar functions.



b) Participation in the community

The majority of adults with acquired brain injury are unable to resume their professional activities or aren't reintegrated into the labour market.

c) Rehabilitation method

This intervention model looks to facilitate the transition phase between hospital rehabilitation and access into the labour market/vocational training.

Description

There are diverse type of materials used throughout the program such as: therapeutic games, sports goods, computers, cognitive training sheet, and a blackboard. Some other materials are: the Snoezelen room (useful for several therapeutic interventions); the multidisciplinary team comprised by a psychologist, a speech therapist, a physiotherapist, an occupational therapist, an arts teacher, and IT trainer (this team is a key part in promoting transversal skills); an internal pool; an apartment (useful to train daily life tasks and skills) and a gym (useful for physiotherapy).

Concerning methodology, it is important to stress that this intervention model is multidimensional and holistic, sequential and time-structured, and considers individual interests, needs and expectations. There are three intervention phases. Firstly, there is an initial multidisciplinary assessment (interviews, standardized instruments and tests, Individual Developmental Plan design). Secondly, there are twice a month review of the intervention with the trainee and his/her family/reference person and with technical team (goals' monitorization, discussions about adjustments). During both of these phases, a group approach is used in order to facilitate the development of autonomy, professional attitudes, communication, self-image and self-esteem improvement, motivation, and learning/relearning of conditions needed to participate on labour or vocational life. Simultaneously, individual therapies occur adjusted to individual needs. Finally, a global assessment occurs aiming to assess positive gains based on the Individual Developmental Plan; individual and group therapies analysis; data collection about the acquisition/development of transversal skills and competences; designing a project for the future assuring the transition to vocational training or labour market integration.



APPACDM established as ideal intervention conditions:

1. a group with a maximum of 8 people;
2. a daily workload of 6 hours, from Monday through Friday, based in a fixed and structured schedule;
3. immediate transition to actualization and rehabilitation of skills for a vocational training path or a support to work action and;
4. monitoring by the multidisciplinary team.

The RRP defined 6 key areas in which is important to actualize and recover skills:

Key skills areas	Workload (hours)
Guidance for Performance	25
Communication and Interpersonal Relationships	100
Daily Life Autonomy	200
Daily Life Skills	100
Physical, Cognitive, Psychomotor and Functional Rehabilitation	200
Work Experience	175
Total:	800

Following the program’s framework logic several modules were developed inside each one of the key skills areas:

Key skills areas	Modules
Guidance for Performance	Guidance
Communication and Interpersonal Relationships	Communication and Interpersonal Relationships



Daily Life Autonomy	Adapted Sports
	Daily Life Activities
Daily Life Skills	Daily Life
Physical, Cognitive, Psychomotor and Functional Rehabilitation	Individual therapies: Psychology, Physiotherapy, Occupational Therapy, Speech Therapy
	Group-based Functional Rehabilitation
	Cognitive Train
Work Experience	Experiences in Training areas or other entities

Also, the content of each model was set:

Modules	Contents
Guidance	Motivation, basic needs (sleep, eating, security), habits and routines, rights and duties, “know how”, personal/professional values, vocational orientation, future projects.
Communication and Interpersonal Relationships	Self-knowledge, communication (verbal/non-verbal, obstacles to communication, assertiveness), self-esteem, building relationships with others, accepting differences, emotions and feelings, emotional management, conflict management, problem solving.



Adapted Sports	Team games, cooperation training, coordination, balance, complying to rules, competitiveness, learning how to win and how to lose. Recreational, educative and therapeutic dimension.
Daily Life Activities	Mobility, recreation and leisure, specific routine training (prepare lunch, budget management), home life, self-management, sensory stimulation
Daily Life	News analysis, managing training fellowship, personal and home hygiene, daily life expenses management, gender equality, education and employment, participation and citizenship, sexuality, addictions, Information and Communication Technology
Therapies	Individual therapies of Psychology, Physiotherapy, Occupational Therapy, Speech Therapy
Group-based Functional Rehabilitation	Hanwork, restoration, reutilization of tools/objects, planning and implementation of a garden.
Cognitive Train	Attention, memory, perception, arithmetics, planning, logic, creativity training. Compensation strategies.



Experiences in Training areas or other entities	Training areas of gardening, laundry, confectionery or public/private entities wanting to collaborate
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Evidences/references

Below we present some evidences of activities and materials during RRP. Image 1 through image 4 are evidences of experiences in training areas.



Image 1



Image 2



Image 3



Image 4



The following images are evidences from the Snoezelen room (Image 5), therapeutic games (Image 6 & Image 7), engagement in Art's activities (Image 8), and Cognitive training sheet (Image 9).



Image 5



Image 6



Image 7



Image 8



Image 9



A2.2 Self-analysis of the approach

A2.2.1 Key features of the approach

Theoretical foundation

Acquired Brain Injury

Acquired brain injury (stroke, TBI, brain tumour) produces meaningful changes on cognitive, emotional, physical, social, vocational and familiar functions. The acquired deficits can be diverse, presenting frequently difficulties on personal and social adjustment because of emotional, behavioural and cognitive factors. Those deficits are predictors of long-term disability and they might impair social and vocational performance. (Almeida et al., 2015.)

Participation in the community

The majority of adults with acquired brain injury are unable to resume their professional activities or aren't reintegrated into the labour market. The absence of a professional activity has as impact on social dimensions, on QOL and well-being.

Rehabilitation method

This intervention model looks to facilitate the transition phase between hospital rehabilitation and access into the labour market/vocational training. The rehabilitation phase focus on optimizing transversal personal and social skills, also aims to support retraining/vocational training, trying to reduce the impact of the impairment caused by the injury, and improve well-being.

Target transversal skills addressed

Several transversal skills are approached by this program: flexibility, problem solving, self-direction, self-regulation.

Specific goals

- Personal and social re-adaptation through recovery, actualization and optimization of personal skills;



- Development of self-consciousness, of potential and growth areas, while accepting limitations;
- Promoting acceptance of realistic and doable goals;
- Empowering the development of coping strategies, problem solving and cognitive-behavioural flexibilization;
- Supporting development and improvement of interpersonal relationships and strengthening of social support networks;
- Encourage vocational experiences that facilitate reorganizing vocational values while (re)constructing well-adjusted perceptions concerning vocational training and labour market;
- Requalification and/or vocational rehabilitation aiming to an adjusted vocational training;
- Requalification and/or vocational rehabilitation aiming to promote supporting measures of professional integration using skills and knowledge acquired before the injury and benefiting from specialized technical-support for socio-vocational integration, support for tasks and roles required for the work position, and mediation of personal and social behaviours adequate to the worker status.

Methods

The intervention model is multidimensional, sequential and time-structured, and considers individual interests, needs and expectations.

Intervention phases:

1. Initial multidisciplinary assessment (interviews, standardized instruments and tests, Individual Developmental Plan design).
2. Twice a month review of the intervention with the trainee and his/her family/reference person and with technical team (goals' monitorization, discussions about adjustments).

In the first phase, a group approach is used in order to facilitate the development of autonomy, professional attitudes, communication, self-image and self-esteem improvement, motivation, and learning/relearning of conditions needed to participate on labour or vocational life. Simultaneously, individual therapies occur adjusted to individual needs.



3. Global assessment (positive gains based on the Individual Developmental Plan); individual and group therapies analysis; data collection about the acquisition/development of transversal skills and competences; designing a project for the future assuring the transition to vocational training or labour market integration.

Ideal intervention conditions:

- a group with a maximum of 8 people;
- a daily workload of 6 hours, from Monday through Friday, based in a fixed and structured schedule;
- immediate transition to actualization and rehabilitation of skills for a vocational training path or a support to work action and;
- monitoring by the multidisciplinary team.

Materials

- Snoezelen room
- Therapeutic games
- Sports goods
- Computers
- Cognitive training sheets
- Blackboard
- Apartment (simulates one apartment to train life skills)
- USB flash drive
- Multidisciplinary team (psychologist, speech therapist, physiotherapist, occupational therapist, arts teacher, IT trainer)
- Internal pool
- Gym (physiotherapy)

Target group

People of age equal or superior to 18 years old who suffered a BTI, stroke, brain tumour or other acquired cerebral lesions, who fulfil the necessary conditions to work and who need



specialized-technical support to access vocational training/labour market or to design a vocational rehabilitation plan.

Prioritised people:

- People who need a vocational rehabilitation given that their professional skills and qualification level prior the injury precluding resuming the prior labour situation;
- People exhibiting changes in cognitive and/or psychomotor, and/or sensorial functions and who need to articulate their professional life with other supports such as treatments/therapies;
- People presenting emotional instability and/or impulsive and aggressive behaviours and/or impactful difficulties at the interpersonal relationship level;
- People presenting a mismatch between their present skills, their expectations and self-image, related to the situation prior the injury.

A2.2.2 Strengths and weaknesses of the approach

Strengths

Problem solving	Self-regulation	Self-direction	Flexibility	Creative thinking
<ul style="list-style-type: none"> • Better balance and coordination in matters concerning self-management (e.g., money). • Significant improvement in memory and attention. 	<ul style="list-style-type: none"> • Improvement concerning social isolation and well-being. • More autonomy. 	<ul style="list-style-type: none"> • Positive gains at the routine level. • Better self-acceptance. • Better competence perception. • Better acceptance of difficulties. 	N/A	N/A



Weaknesses

Problem solving	Self-regulation	Self-direction	Flexibility	Creative thinking
<ul style="list-style-type: none"> • All the individuals of the target-group have injuries in pre-frontal cortex originating a generalized impairment in several dimensions. • People with lower levels of education have a lower cognitive reserve. • Cognitive levels improved throughout the intervention usually decline as time passes by. 	<ul style="list-style-type: none"> • All the individuals of the target-group have injuries in pre-frontal cortex originating a generalized impairment in several dimensions. • They don't have a good familiar/social network. • A cerebral injury causes behavioural and emotional changes. 	<ul style="list-style-type: none"> • All the individuals of the target-group have injuries in pre-frontal cortex originating a generalized impairment in several dimensions. • People feel discouraged easily. • Difficulties sticking to a routine. 	<ul style="list-style-type: none"> • All the individuals of the target-group have injuries in pre-frontal cortex originating a generalized impairment in several dimensions. 	<ul style="list-style-type: none"> • All the individuals of the target-group have injuries in pre-frontal cortex originating a generalized impairment in several dimensions.

A2.2.3 Critical factors of success on different levels

Organizational level

Multidisciplinary team; vocational training after project completion; articulation between resource centre (IEFP- APPACDM) facilitating the integration on the labour market; adapted infrastructures for people with disabilities (promoting mobility, problem solving, daily life skills).

Professional level

Initial assessment, designing a Individual Development Plan, goal monitorization and empowering people to achieve those goals (the goals are objective and measurable); team meetings (multidisciplinary team); constant contact with families and more intimate people.

Client level

Motivation; autonomy; better self-acceptance; better well-being; better social network; structured and fixed schedule.



A2.2.4 Effectivity, impact, evidences etc.

Organizational level

Evidences of effectivity? How is the effectivity of the method evaluated?

Not applicable in organizational level.

How this method facilitates and supports transversal skills?

Given that this is a pilot project everyone had to be creative, to adapt training and teaching methods. It was necessary to understand the functional profile of each individual and support each one of them on their tasks. The intervention model is practice-based so it was adjusted on-the-go.

How this method impacts on social inclusion and employment?

Developing other activities and other partnerships with external entities, enterprises, promoting inclusion and integration on the labour market.

Professional level

Evidences of effectivity? How is the effectivity of the method evaluated?

The more the trainees are known, the more the trainers are able to find activities during training or internships, aiming to adjust tasks to the individual impairments, in order to ease up integration.

How this method facilitates and supports transversal skills?

Professionals from the institution always worked in the disability field, but they had to learn several neuropsychological cognitive rehabilitation technics. It's essential to acknowledge the target group and their specific questions. While engaging in this project, the professionals had to improve their teamwork in order to find more ways to solve problems and more ways to learn how to manage professional frustration. Learning how to deal with target group's disinvestment and/or demotivation and, consequently, frustration management of the responsible professionals.



How this method impacts on social inclusion and employment?

The professionals were propelled to change their way of working. Enhanced articulation with other entities. Continuous support to trainees even after the training/internship termination.

Client level

Evidences of effectivity? How is the effectivity of the method evaluated?

Creation of a project of life and future, adapted to each client. More autonomy relative to family and professionals. Having an occupation. Development of social relationships. More active participation on the community (e.g., voting, attending a party, and sporting events). Actively seeking a job. One evidence of success is the clients being integrated vocational training at the employment centre or an internship. Assessment after the training with objective measures.

How this method facilitates and supports transversal skills?

By investing on the improvement of transversal skills individuals from the target group are going to be better prepared to integrate and maintain a job. Some interpersonal relationships were also rehabilitated. Relearning of how to be in a group setting.

How this method impacts on social inclusion and employment?

The improvements and the work developed during this program have direct impact on the perception that our target group has regarding their skills.

A2.3 Peer-analysis of the approach

The theory base of this approach appears to be strong, clear, broad and persuasive. It can be seen versatile and the sources are fresh. The theory also seems to be synchronized with the method. For plausible clients the approach has a structured inclusion and exclusion criteria that has e.g. an evaluation of cognitive, emotional, behavioural and physical functioning level. The partners using the approach describe that this evaluation is not so much evaluation of the cognitive abilities but probability of vocational employability. The partners have recognized critical competences of the trainers and has explicitly presented those. They sum up: “The most important competence is not a technical one (empathic relationships, motivation, and expectations management). ’It is the relationship that we establish with them that makes all the



difference. Without it we cannot work. And we show them our affection and that we care for them.’ (Ana Guerra)’.

The concept of the approach can be generalized to other target groups as long as they have acquired brain injuries (ABI). APPACDM has other approaches also but the pilot has been concentrating to the ABIs because there was a need for it. There were nine clients in this pilot project and at this point everyone is in a internships. Soon there will be 2nd cycle with 8 clients. The coordinator of the project and the other professionals are working part-time.

The strengths of this method appear to be that it is holistic, flexible, addresses all transversal skills, incorporates critical elements that address the needs of people with traumatic brain injury (TBI) and the methods suite to broad range of clients. On the other hand, clear target group enables the selection of the better suiting methods and rehabilitation exercises. The process appears to advance in a clear and structured way and the clients has e.g. timetables and the skills are trained in actual working situations. There is a 1st assessment that is multidimensional. At a certain point of the process it is observed and analysed that is the client going to continue vocational retraining in APPACDM or do the client transfer outside to more challenging training or to work.

It strongly seems that this method has a humanistic approach and the individuality is truly acknowledged. The approach appears also as a very personalized and person-centred e.g. clients have individual development plan and there is lots of options. In order to this to happen it takes of course multidisciplinary team’s evaluation of the client’s situation. This also greats a challenge to this approach. Because it needs this multidisciplinary team it is not easy to transfer this approach from one organization to another. A challenge could be to transform temporary training into a lifelong term approach and also the strong infrastructure around makes it difficult to transfer it to some other context.

Other challenge or weakness in this approach can be seen that it is difficult to assess the learning potential in a sufficient level as it doesn't give to a group of TBI clients access to this program. It is exclusive because clients have to have ABI and not e.g. mental disorders. Also, the amount of the people that has participated to learning through this approach is quite small so the experiences received is narrow. TVVs are already trained in a lot of activities and implicitly “addressed” during the activities but it could be important to have a framework and describe



and train them explicitly in order to be evaluated. It's hard to reflect something that is not explicitly named. Also, one thing to ponder is that do the clients feel that the work they are doing is meaningful and important to them.

Some feedback from the partners (some comments are stylized):

“A detailed presentation on your behalf of APPACDM with your analysis and academic framework is not usual. It's interesting that a university gives input about the added value of the practices.”

“Very interesting to learn about the integrated and holistic approach.”

“Interesting! But a little difficult to duplicate. I want to know more exactly about the exercises.”

“Lovely. I think it's a good program. Lot of different activities. Like the training in daily tasks. I will send this information to day care in Sweden.”

“It is a very useful program. It could be used for a wide types of disabilities and also is good for professionals because it is easy to learn so professionals can be really motivated to use it. Also I see a huge potential for transferability because it can be used by any organization dealing with disabilities issues.”



APPENDIX 3: RESPOND DETS PERFORMING ARTS, SWEDEN

A3.1 Description of the approach

About KCV

KCV started as a three-year project funded by the Allied Heritage Fund in 2013 with the Studieförbundet Vuxenskolan. SV is a leading Swedish non-formal association for education, training and culture for adults.

The project involved artistic activities for adults with intellectual functional variations in the Nösnäsgymnasiest drama hall and stage in Stenungsund. Participants, primarily users in LSS, came from different municipalities within commuter distances to Stenungsund. The final goal of the project was to become a permanent activity for persons with intellectual function and to become an artistic workplace in the areas of theatre, music, dance and image and form as well as a free professional theatre.

Educational methods and attitude of the Respond Dets Performing Arts

In next chapters we share some of the pedagogical methods that created success for the individual as well as the ensemble in great at KCV.

About the importance of creating a common value base

Basic values of equality (all people equal value) and freedom form our leadership at KCV. Leaders with a gender approach do not judge other people. No one is judged or praised. Nobody is good or bad. These leaders show respect and listen to the will of the intentions while setting boundary issues consistently.

Your leadership and commitment are influenced by your approach and your values. These are basically important needs that affect far from your childhood. We share all the different leadership experiences we have experienced in our lives. We carry memories that are characterized by different leaders: your family, teacher, employer and more. As a leader, you should be aware of your underlying values and how they affected you so that you can develop leadership that primarily builds on humanity and, secondly, on professionalism.



To create relationships and rules of play

Leadership is largely about the ability to communicate and to create relationships. We do this best in a stationary environment where it is safe to feel vulnerable while being respected for it. Judging or criticizing corrective comments can quickly reduce the desire to create.

In the artistic work, we have all experienced the magic when the ensemble “knows the power” and expands, but it does not happen without contradictions. We need continuous training and increase our knowledge of how we communicate. It’s easy to overlook when other daily work takes time from an artistic process and everything seems to work until sudden misunderstandings occur and it turns out that we have lost the direction and that we steer in different directions.

To schedule moments and create spaces where we can talk openly and lift what’s not working and what works well during a workout or performance. It is a prerequisite for the artistic process to be developed. When we say our experiences, we contribute to our own learning culture in our workplace.

We need a common approach and create rules about how we communicate between colleagues, with participants and with the group. We need to invite participants to be active in discussions, to reflect and make their voices heard. It creates involvement and responsibility.

When setting up game rules or arrangements in the group, it might be good to formulate how to WANT what the climate should be instead of how you DO NOT WANT it to be. Example: “Everyone must speak to the point” instead of: “We do not interrupt each other!” Use a positively formulated action language.

A game rule we have, is that we should ask each other if the other wants a hug and it is important to say no if one does not want it. We all have different views about where our private space goes. This game rule helps us to grow integrity, respect and to listen to each other. To be able to follow a rule of play it is important to make it as concrete as possible and to go down to the “how” level. The game rules you create together are fresh, not static. Follow your game rules regularly, otherwise they will easily fly away. As the group evolves, joint agreements may need to be replaced or supplemented.



Coaching approach

Several of our actors at KCV have evolved astonishingly in the years. When a person begins to speak after fifteen years of silence or another person has taken from ten years of involuntary isolation, on how his physical health has grown after only a few months at KCV. There are many examples.

Our artistic work is targeted with a clear framework, within which our participants get space to take new steps in life without performance or competition. What the participants receive from us is an increased self-esteem.

We leaders are primarily artists, inspirators and coaches more than caretakers. As a leader and authority, it is easy to come up with different solutions. We often have a good intention, but the risk of that approach is that we take away people's own ability to find their own solutions or their trust to believe in inner abilities. With the help of clarifying moods and empathy, we can instead promote people to become independent and creative individuals.

A coaching approach is more about "how to be" than "what you do" as a leader. It's not about acting and being active, it's more about presence, listening and asking questions and being responsive to things that work differently for individuals. Avoid the question "why". It creates resistance and defences and blocks contact. People with functional variations can have difficulty interpreting social interaction, and several have a concrete thinking and make literary interpretations. Therefore, never force someone to follow you in your way of reasoning. It's good to be concrete and clear.

The difference between praise and appreciation

At the KCV we choose not to tell each other that we are "good". The driving force is not to do things to be called good or the best. The driving force is the excitement of our own power. When we succeed, we feel an inner peace. Our goal is for our actors to express themselves and create for their own sake and for their own experience, not for praise or rewards. Praise and rewards easily create a system of external motivation where you become addicted to others' confirmation. It rather inhibits your self-esteem than building it up. We work instead with something we call estimation.



Judging someone like “good” or “great” is in parity to judge someone as “bad” or “wrong” in that they belong to the same kind of mindset, the individual can easily change the feeling from being “good” to being “bad”. Praise is usually estimating of appreciation, releasing us from the role of judge. The difference between an assessment/praise and appreciation lies in the approach. An assessment/praise is aimed at the individual as a project, an estimate aimed at the individual as a subject.

This approach contributes to a greater learning and insight for the participant. Our actors are actively training to express appreciation. It is an important part of our stage training. It can be lined with a positive learning process where we train to confirm ourselves and each other and the group.

Talk to people instead of people.

“I have experienced that staff and educators often speak to us people who have a functional variation, rather than with us, as if we were children and not adults.”

Robert, actor

Without being aware of it, it is easy to downplay and reduce the abilities of others: You do not talk to each other but with each other. It appears mainly in body language and tone mode. We people listen to both what “others say to us” and “how” they say if you are uncertain and maybe have a low self-esteem. It’s easy to get caught up in someone else’s image of oneself and not be able to get past it.

“It’s nice with someone who can relate to me for who I am, see me as I am. It’s okay that it will be wrong too, we can teach each other. Keep in mind that nobody needs to be perfect let’s go in with the approach you never know who teaches who.”

Anton, actor



To be treated as an adult and competent person

“Claims are too many negative, but it is also positive if you place them in a respectful way. I do not want anyone to feel sorry for me. There may be too much baby language. I want to be treated as an adult. I appreciate that leaders claim that we can develop as actors in our ensemble, the actors are performed with what we ourselves and our environment are used to. To be treated as an actor and not as a person you must take care of, made me grow as a human being.”

Robert, actor

Self-esteem means you think you're okay and you're good enough just like you are, but self-esteem can be weakened by getting things to perform that are too easy for you. It's common for people with functional variations are impeded from trying new things. Not because others want them wrong but because they want to protect them from failing. Every human being is entitled to develop within reasonable limits and to do that. We need to take risks and to step outside our comfort zone. When we take one step and feel comfortable with it, step two comes by itself and with it an increased self-esteem.

If you as a leader focus on opportunities instead of on dependents, you can make people grow and do things that they themselves do not even dare to dream about. When the requirements are adapted to each person's ability they will be able to succeed.

Make a difference between personal and private

Several of our actors with functional variants have difficulty with intrusion, to set boundaries between what is personal or work. You need in your role as a leader think about, what the difference is between personal and private and what integrity means to you.

Having fun, laughing and kidding together takes us to the same level of daring to be authentic expressing how to feel – even if you have a bad day. It will make us human and lower the performance and competitions. These qualities are important in a personal leadership.



Adapt the leadership to the individual's ability and manner of day

People with intellectual functional variations have reduced cognitive functions – in diverse ways cognitive functions are the processes that occur in the brain when we receive the tools and convey the information ability to think and learn. They create order and comprehension in existence.

We as a leader have a responsibility to respond to the individual on a level that is understandable to him or her. It is about being able to respond to each one after the manner of day and personality. About being able to adapt and prevent misunderstanding. Professionalism is about taking a step outside of ourselves. We are leaders who need to adapt our leadership and plan out of everyone not after the group. If you have this awareness from the start you save time and the result gets better. People are different even when they need support. Everybody has a different learning style. Talk with your participants, they know their function variant, they are experts on themselves.

Adapting to everyone is not about compromising the community in the group. If we make sure that motivating and giving an opportunity to evolve according to their prerequisites, they will also be better able to adapt to a group. Try to find forms where everyone has an opportunity to participate. Custom Leadership requires time for preparation, time to implementation and even more time for reflection, for you and the staff group.

About self-esteem and self-confidence

Our actors' roles change as their self-esteem grows. They take care and stand up for themselves more. Once they have become aware of their needs, the desire to grow well is also growing. They start setting requirements that may not always be comfortable for the environment at this stage, it is important that both the leader and the group are based on the same value base. Developers performance is positive even if it involves challenges for us leaders. It is important not to take their emerging demands and criticism personally without seeing them as part of their development. We leaders are responsible for room for change in a safe group.

“We also need humility for ourselves about the great demands placed on our leadership. Continuous supervision is important.”

Magnus Pettersson, music supervisor & chapel master



Pride and self-esteem are the biggest motivational factors in our creative work. The question is how we as a leader can contribute to increasing self-confidence and self-esteem among our participants. At KCV, we assume that everyone has the same value and that everyone has something to contribute. Simply put: If someone believes in you, you get more energy and a sense of being able to succeed. Conversely, you lose energy and confidence. Basically, self-esteem and pride are about emotions. In the creative work, it is our task to learn to express what is alive in us; to build the tones in our expression register.

Authenticity creates a permissive and inclusive environment

If you do not have contact with your feelings, you will lose contact with your needs and your inner compass. You become addicted to others, lose your self-esteem and your pride. When we started the KCV, we introduced morning rounds, an arena where everyone gets the space to make their voice heard. It's a great start to the day with the purpose of contacting yourself and the group. An important part is to feel and express your feelings, how the situation is and how we feel right now. At the beginning, most of the attendees at our rounds expressed that they were happy. We leaders felt they said what was expected of them. It was clear that there was an unspoken but given norm on which feelings were accepted or not.

In our stage training we are actively working on awareness of our actors about their feelings. There is no wrong or right feeling. All feelings are needed. We cannot walk around and feel happy all the time. It is equally important to dare to feel that you are sad, tired or angry. Denying certain feelings is like denying life within us, which can create sudden and violent outbursts that create fear of the individual in the group. In our stage training all feelings are okay if we take responsibility for them. It is not all times easy, but from experience we know how important it is to train our actors to listen to themselves and to express what they feel and need. It is a preventive work that deals with reading their own and others minds perceiving social codes and regulate emotional impulses in our ensemble. This training has created a more stable and safer group.

Nowadays, our actors can express that they are tired, happy, expectant, sad, shy or maybe grumpy. We are a group and ensemble where it's okay "just to be". It has opened for an admirable and prestigious environment where we get power by dare to be authentic; to be



ourselves. Here we get a place, just the way we are. People who visit our stage training from outside describe everyone the same thing; a rare presence, openness, warmth, a liberated and healing environment that touches in depth.

The body language of communication

There is a great potential in being able to work with multiple expressions than just vocals. We work consistently with body language and movement in our stage exercises. Your body language, tone of voice and eye contact create more emotion than words. Dance, movement and mask developed, not only the physical expression of the actors, but also their social skills in general.

It is an important part of our scene training to make our actors aware of the meaning of the body language in the communication between people and the scenic expression. We leaders are amazed at how easily our actors address this knowledge, even those who, according to their specific function variance, have difficulty expressing emotions. The accompanying staff may have more difficulty understanding this than our actors and are often surprised when they understand the wordless faster. We interpret it as a cultural clash that basically deals with our different approaches to leadership. Through our scene training, however, it has become clear to everyone that we have both common and very personal body language.

Some people are easy to read, and others are more difficult. But as we get to know each other, we can easier read each other. When we are unsure of what a person wants, we can either ask how the person is feeling or say, “You are feeling tired today. Are you tired?” If the person then answers, “No, I feel fit for fight” then it’s probably only the person’s unique body language that makes him or her look tired. As leaders, it requires the presence and acceptance that we all share the same needs and feelings. But express them in diverse ways, even though the body language.

In the physical expression we have found it easier to highlight everyone’s unique personality, than when we use the speech. There is something in the wordless communication that makes us more authentic. We experience how it brings more depth and authenticity to our gesture on stage, but also how this awareness simplifies communication in our other work. We have actors that has difficulty communicating verbally. Finding new ways of communicating with the body,



has this proved to be liberating and strengthening self-esteem for those with limited language. Some of our actors with autism have initially struggled with social interaction.

To train people to lead others

“Leading the workshop on performing depts and leadership has made me grow and feel valuable. It’s awesome to feel that what. I share with me and make a difference to many of those we meet.”

Robert, actor

In dealing with performing arts, we train our actors to take active responsibility and lead others. If you have a function variation, it’s easy to get stuck in stereotyped rolls, shrinking to becoming a recipient of society’s help and support. You receive rules that are raised, teach you to obey and do is. It will lose contact with your own power you end up in a trap where you become your disability.

To lead others is therefore an important part of our scene training that strengthens both self-esteem and self-confident from being just a “recipient”, one gets the role of a “transmitter”. It’s a big shift in a person’s life. That we leaders really take the step in full and let our actors lead presentations exercises or relaxes in the large group has changed the dynamics of the group. Our players take more initiatives and expressing their needs in a clearer and more obvious way than before.

Humour

In our leadership role we have a lot to gain from giving up on prestige and inviting ourselves and our mistakes and failures. There is nothing so seductive as humour. When we laugh together we find ourselves on the same level. Humour creates a relaxed approach so effectively keeps performance and competition away.

We have at the KCV created a fun filled environment where it is fun to learn. We do not aim to walk around and laugh all the time but using humour as an educational step. Besides the humour there is always the seriousness, we are working seriously with critical issues in our theatre, but



with the help of humour we create a good balance and mood in our group. We never laugh at anyone but with someone. We choose not to use irony because that easily creates confusion.

Tips

- Motivate with your own dedication, desire and curiosity. Threat and demands create resistance.
- Be concrete and clear in your instructions, avoid too much chat. Rather show how to do than talk in too many words and sentences.
- Continuity and recognition give security. Do not be afraid to repeat exercises. Are you confident in the form you have easier to find new angles and depths you can vary simple exercises in infinity. We know from experience that this is where we find the most creative ideas when we let go of our own thoughts on achievement.
- Create a structure for the layout of the day that creates security and recognition start and end the day in the same way. Build a clear frame that can be filled with improvisations and space to try new things.
- Be patient and give the actor time to decide at what rate he or she is ready to take new steps.
- Take responsibility for your leadership and do not let others take over. It creates uncertainty in the group.
- Divide leadership into different exercises if you have several colleagues who collaborate in a class. It can easily become unclear and confusing with several who lead at the same time.
- Prepare and find different strategies to address charged situations that may occur to example with diversion of humour, conversation, or a question of the person needing to be alone for a while.
- Participating actively and engaging gives the participants good role models. Get to work in time and land before your work schedule begins, keep break times, turn off and unplug your mobile and focus only on the participants under the classes. This contributes to a good working environment and good morale in the group.



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Images of the Respond Dets Performing Arts



A3.2 Self-analysis of the approach

A3.2.1 Key features of the approach

Theoretical foundation

Earlier drama projects in Sweden.

A personal in day care by LSS in Hudiksvall started a theatre group in 1996. They started small but now they have a big theatre group with two films, six big performances and they have performed on Broadway in New York. That inspired KCV to try this in Stenungsund.

Background

Kulturcentrum Väst (KCV) is an art scene and a workplace with artistic orientation for people with intellectual function variations and it is located in Stenungsund. Respond Dets Performing Arts is a project in the KCV financed by the Västra Götaland Secretariat with the purpose of collecting, defining and formulating the pedagogical methods that have been worked out for many years by drama teacher, director and artistic director Marie Lindblad since the ensemble Röda Hjärtan saw the light of the day in 2007 together with music supervisor and chapel master Magnus Pettersson and cultural educator Krister Jonsson.

Leaders and actors

We call our artist staff leaders when they work with stage training and lead the artistic work of repetitions and performances. The person who has intellectual or mental disability we call an actor. The methods we share with you can easily be applied to other activities outside the artistic field, which we call the actor, the reader can translate it to users or participants.

Disability or function variation?

The concept of disability means a reduction in physical activity, physical or intellectual functionalities. People vary in bodily and cognitive function, it is completely natural, and therefore we choose the word “function variation”.

LSS Support and Service

LSS is a law that provides special rights to persons with intellectual disability. One of these rights is daily activities, meaning work for the user to go to (Law (1993: 387) on support and service for certain disabled people.



Target transversal skills addressed

- Self-regulation and self-control
- Problem solving
- Creative thinking
- Flexibility

Specific goals

- to encourage the learners in the group to find creative solutions;
- to strengthen awareness of their own abilities and development capabilities;
- to increase self-examination in a safe environment, to achieve development of social competence and transversal skills;
- to realize the importance of the social competence and transversal skills to social relations and professional realization;
- to increase the sensitivity to the significance of the transversal skills;
- to strengthen the motivation and self-confidence of PwDs.

Methods

Respond Dets Performing Arts approach

Respond Dets Performing Arts can be resembled an investigative method that changes and grows in an ever-reflecting process, it is both inward and outward. Inwardly the method strengthens the actors in their personal development through increased self-confidence, which increases their social skills. Outwardly the method also helps to develop our actors' artistic expression on stage.

Respond Dets Performing Arts, however, is not only a method, it is also an attitude of life, based on values of equality, people equal value, the importance of making meaning in their lives, participation and freedom.



From “receiver” to “sender”.

We grow when we use and develop the power that we all have. The focus of the Respond Dets Performing Arts is to get our actors to experience themselves as active senders and as a resource for community development.

From being stuck in an identity where they are “recipients” of society’s support, to those “senders” who contribute to society with their performing arts by participating in our performances and workshops allow them to inspire, touch and educate other people far outside the circle that they usually are in.

We want to create the conditions for our actors to experience success of achieving their goals and perhaps even exceeding their and other expectations. As self-esteem grows, a new awareness grows that brings new hopes and dreams. If you have managed a big leap, you know that you can take other one.

About the individual, the group and the view of success.

The show performing arts will also be a counterweight to today’s commercially driven performing arts. Respond Dets Performing Arts represents another view of man and art. We want to work with the respectful personal response of everyone in the group. It is a tool in artistic work and a method of picking up and encouraging the personal, unique life experience of our actors.

Our actors are co-creators of the performances that grows where everyone gets the time, space and encouragement to get past the banalized cliché to “be a star”, instead seeking their own expressions and using them in unique formations. Our actors are individual artists in collective performances, where each one’s unique story adds depths and opportunities to our artistic work.

Materials

Respond Dets Performing Arts

Theatre and drama exercises, e.g. improvisation and forum play.

In concrete terms, it is possible to inspire participants to share their own experiences and thoughts about inequalities and conflicts through, for example, valuation exercises, statue



exercises or current conflicts. Based on these thoughts and experiences, a realistic event that becomes a forum game is dramatized. The game ends when the conflict reaches its peak. Through this build, you want to inspire the spectators to take the initiative to go into the game themselves and try out different possibilities for action to resolve the conflict or injustice. The game plays in its entirety the first time. During the following play, the spectators may say stop somewhere in the game, go up and take a role by swapping someone on the stage and try their idea of how to act in the conflict situation to break the injustice or resolve the conflict. The same game is played repeatedly with several different people to be able to test their ideas. Through this approach, we want to develop a variety of different proposals and solutions to inequalities and conflicts.

Target group

People aged between 21–65 with diverse types of disabilities – visual impairments, all kind of intellectual disabilities and learning difficulties, physical disabilities, and mental disorders.

A3.2.2 Strengths and weaknesses of the approach

Strengths

Problem solving	Self-regulation	Self-direction	Flexibility	Creative thinking
<ul style="list-style-type: none"> • During the time a new production is developed, drama exercises are performed. They work with e.g. Forum game where they are expected to solve problems: If the group is not content with the solution, someone else jump in and solve the problem. Everyone must think, and everyone’s solution is as much worth like the others, but there can be 	<ul style="list-style-type: none"> • In drama they can play out their emotions and it can increase their self-control. • Game rules during gatherings: One must wait for their turn and not talk on each other. • They must let everyone be a part. Not to be externalized. • Working on self-control they will see themselves 	<ul style="list-style-type: none"> • The exercises strengthen so that the prefrontal cortex, the conscious part of the brain, takes over in front of the reptilian brain. • Movement and dancing can help to strengthen the body and increase self-control. Take it in small steps in the individual level and have small groups and see the individual and the daily form. 	<ul style="list-style-type: none"> • They practice to be able to release when it does not go any further. Change the focus on problem solving • Reconcile with the others, see their solutions as good stuff. 	<ul style="list-style-type: none"> • One must in theatre exercises of the model forum all the time come up with novel solutions, they must be alert to get through their idea of how the show should be.



<p>different solutions to the problems.</p>	<p>from the outside in the role play.</p>	<ul style="list-style-type: none"> • Starting with easy things to practice their self-control Trust to the surroundings are exercised in drama and this allows the self-control to increase. • Social expectations strengthen self-control. They come up with goals for themselves where the goal is the show. 		
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Weaknesses

Problem solving	Self-regulation	Self-direction	Flexibility	Creative thinking
<ul style="list-style-type: none"> • Not everyone dares. • If it is a large group, not everyone speaks. • Not everyone has the intellectual ability to come up with problem solving how much you train them. All can make a small adjustments that can in any case lead to a slight improvement. 	<ul style="list-style-type: none"> • You can have trouble to get out of the role, understand the difference between drama and reality. • A weak leader does not have control over the group. • If they don't let their emotions come out they can explode. • Should they sharpen up or should we increase tolerance? • If they always try to be someone else and they try to be happy, eventually their emotions will explode. 	<ul style="list-style-type: none"> • If they don't feel safe, they won't dare to release the inhibitions. • They have too little time together to feel safe. 	<ul style="list-style-type: none"> • Difficult when they do not have language or intellectual talent to be flexible, it becomes chaos in them when much should be treated and all in the group to be heard. 	<ul style="list-style-type: none"> • To be creative they must practice many different entrances, test many different variants and have some experiences of life. • Risk of too little time or too large groups to develop themselves. • Weak leader doesn't let everyone come forward.



A3.2.3 Critical factors of success on different levels

Organizational level

Recruitment of suitable leaders who can lead, who don't let someone take over and do not give up on those who requires more time. They must commit to the common values and the organization culture.

They must stand for continuity.

They must have an ongoing dialogue in the wishes and views of participants and leaders.

It must be for free of charge or have a low fee for the participants.

Professional level

Those who work in the business are very important, must deal with the Respond Dets Performing Arts, that is so much more than theatre. The educator's perceptivity is of paramount importance.

They must face the actors as adults.

It should be fun and liberated in a permissive environment.

They are using pedagogy based on music and acting and use sign language.

They don't need a high school education, but they must put their heart into it. It is good if they have taken courses in drama, pedagogy, sign language and music.

Client level

Motivation!

Actors must be proactive and have participation.

Be open and curious.

A3.2.4 Effectivity, impact, evidences etc.

Organizational level

Evidences of effectivity? How is the effectivity of the method evaluated?

- Many applications to join KCV.



- Good working operation.
- Good working climate.
- Mention in the media.
- 5000 views on YouTube.
- 50000 has seen the shows.
- Considerable number of visits to KCV from politician, authorities and other theatres.

How this method facilitates and supports transversal skills?

Not applicable in organizational level.

How this method impacts on social inclusion and employment?

Not applicable in organizational level.

Professional level

Evidences of effectivity? How is the effectivity of the method evaluated?

Leaders get response and they see that the actors develops with joy.

Many relatives and audience praise the performances.

Crowded performances.

How this method facilitates and supports transversal skills?

See Critical factors of success on different levels.

How this method impacts on social inclusion and employment?

The leaders have worked close to the actor's staff and family for a long time.

Client level

Evidences of effectivity? How is the effectivity of the method evaluated?

Good working climate Everyone loves to go there. Low absence rate. Good relationships in daily activities.

The success of everyone is documented in an implementation plan.

They have better self-confidence. Some of them are holding lectures for school pupils.



How this method facilitates and supports transversal skills?

See Critical factors of success on different levels.

How this method impacts on social inclusion and employment?

It is not a goal to be employed. Daily activities are a “job”. The social community is a big win.

They are actors and not just people with an intellectual disability.

Theatre is not only for fun, you train for life and interpersonal relations, communication, conflict management. You get better social inclusion and skills.

This group will never be employed they have their occupation forever in daily activities.

A3.3 Peer-analysis of the approach

Drama (art) as a working method is commonly considered to be very inspiring and art to be a creative force. As a teaching method it is in general seen to have positive effect to self-esteem, social skills and learning. With the help of drama, working in a group and teaching are coalesced effectively and drama also develops individuals' interaction skills. The partners using the approach describe the approach as extra-ordinary methods for teaching intellectually disabled people. The people have lots of different backgrounds (immigrant, unemployed, learning difficulties etc.) and very different cognitive levels but the feeling is that this method works for everybody and it is stressed that it is all right to be different. Every morning starts with meditation and it's structured. They work a lot with metaphors and the exercises are training e.g. attention, focus, memory and capacity to answer and they are based on reactions, imitation etc. Exercises drive one to make decisions. The implementation of the method is evaluated by documentation.

Based on the demonstration of the approach it can be said that the important things that can be learnt through drama are the interaction skills; listening to other people, taking other people into consideration, discussion skills, focusing and trust skills. Also, the development of self-knowledge and good self-confidence through exercises are very important. It could be seen that the approach allows participants to learn in enjoyable, friendly and safe environment where sharing of feelings is supported and if it is combined with other approaches it can be helpful for people with intellectual or learning difficulties. This kind of context can be seen as a modifying



environment in which transversal skills are addressed, participants are invited to take initiative, to set personal goals and to develop a growth mindset.

Why drama is often chosen as a teaching or a guidance method, is based on the idea of communality. How can we help and support the learning of each other? According to reports, the using of drama method requires establishing trusting and safe environment and feeling. One of the most important tasks of the instructor/leader is in fact to grow self-esteem, self-confidence and wellbeing in individual so that the individual has energy and also wants to support others. At its best the individual's experience of communality, good group spirit, lifts up the self-esteem and self-confidence of all the members of the group which is seen in wellbeing and in better life.

To produce drama in a successful way requires that there is a strong instructor/leader who is familiar with drama and understands the effects of it. Also, the instructor/leader needs to have a good contact with the client and very high sensitivity to feel what the client needs or wants. Building confidence is very important and the clients are not pushed to do what they don't want to. Without confidence and external support there can't be progress. This obviously gives quite big importance to good recruitment of professionals.

It would be important that immediately after the drama work it is discussed and reflected that what happened during the process. Why was it acted as it was and to what all is this related to? In addition, it would be good to observe what was experienced in emotional level and how to withdraw from the role (closure phase). But what if the transversal skills are not yet present or acquired by the participant, is a specific tool or method missing the ability to train these skills? When these skills are not present, can one ask a participant to use them and can one reflect on the process of e.g. decision making or problem solving? On the other hand it can be seen as a challenge in a drama as a working method, that how it can be connected to the situations in everyday life (transferability). Is the working with drama easily left to the experience level?

Some feedback from the partners (some comments are stylized):

“Very interesting approach. This is a different way to train cognitive skills that can be visible through new kind of behaviours.”

“I love drama! Their approach to the participants is lovely. I think drama is a wonderful way of teaching (and learning ;)) people with disabilities; I want to



learn more. Maybe Marie Lindblad can have a workshop in different countries to teach us more?"

"Lovely. It's a fun way to learn transversal skills. They learn for life, feel proud and being."

"I understood more in depth how the actors and leaders develop themselves as persons and as actors. The creation of a safe place where sharing of feelings is supported is a great idea. This can be used to inspire programs centred around drama and an humanistic approach. We would need people with an arts background and/or therapeutic background (e.g., arts trainer, art-therapist)."

"Maybe we can try using it when we use role play as a method during education or training with our people. This way can help to progress their confidence and self-esteem. We can promote to implement this in our art workshop."

"The point in this methodology is not whether it is the most efficient methodology, the point is that it is effective."

"Not all cognitive methodologies can be completely evaluated and scientific proven."



APPENDIX 4: SERIOUS GAMES & EXERCISES FOR SOCIAL COMPETENCE AND TRANSVERSAL SKILLS (SGESCTS), BULGARIA

A4.1 Description of the approach

Introduction

SGESCTS method is used to complement the group training method and is targeted mainly to people with disabilities who are confronted with difficulties in participating in group learning activities. The key part of the method is the given opportunities PwDs to reinforce and practice their transversal skills in situations that are close to the real life ones. The SGESCTS approach is partially based on the Active Learning Theory which is usually defined as use of one or more interactive approaches to train adults for the purpose of their engagement, as well as to acquire different skills such as: problem solving, self-regulation and self-control, creative thinking, flexibility, and self-directedness (see Theoretical foundation section). In SGESCTS approach we interpret the term “active learning” as technology-based learning when it comes to the used serious educational e-games, an as activity-based learning and group work when it comes to the training exercises’ implementation.

The SGESCTS approach embraces two main components: specially designed learning exercises and serious educational e-games. The exercises are labeled with 3 types of flags, colored differently according to the level of difficulty. The trainers may use various supporting materials to facilitate the performance of the exercise – for example, there is specially designed rich illustrated book that exemplifies particular skill with relevant illustration. The exercises train the PwDs’ capability to collaborate with others, reinforce their decision making skills and help learners to find creative solutions. SGESCTS approach achieves this by offering individual and group work. Some of the exercises requires individual work using worksheets, drawings, and targeted cards. Others requires collaboration within a group where the participants are given with specific roles suitable for the preliminary defined scenario. Thus, according to the type of the exercise the trainees are being given with opportunity to develop various transversal skills in safe interactive and engaging learning environment.



The second component of the approach includes serious educational e-games, designed for tablets and desktop use. They are aimed at increasing skills like creative thinking, flexibility and self-regulation. The player may choose to follow the game either in single player mode or in multiple player one. The training scenarios of the serious games are always targeted and have learning goal, i.e. mastering of specific cognitive and transversal skill like decision making, problem solving, self-directedness and others. Each game is divided into three parts: teaching the principles to be understood, learning through playing the game and reflection on the experience.

Goals

The SGECSCTS approach aims are:

- to encourage the learners in the group to find creative solutions;
- to strengthen awareness of their own abilities and development capabilities;
- to increase self-examination in a safe environment, so as to achieve development of social competence and transversal skills;
- to realise the importance of the social competence and transversal skills to social relations and professional realisation;
- to increase the sensitivity to the significance of the transversal skills and;
- to strengthen the motivation and self-confidence of PwDs.



Methodology and strategies

SGESCTS approach uses two main methods: game-based learning and training in group.

The group training method



Image 1

Unlike of the classical group training approach, in the one applied by NARHU the essential point is the creation of opportunities to practise skills in situations that are close to real life situations, which would reinforce the belief that learning can be applied in real situations and become part of personal

experience of the individual with disability. Of course, the teachers/trainers are not able to provide real context. But they can use a variety of scenarios which are similar to real situations, to aid the transfer of the learned transversal skills from didactic to real situations.

The process of acquiring transversal skills within our approach has the following sequence:

- Stage 1 – Observing models of transversal skills and social competence, demonstrated by others.
- Stage 2 – Self-observing and experiencing of own social competence.
- Stage 3 – Practising transversal skills and social competence in didactic, playful and safe context.
- Stage 4 – Using the mastered transversal skills and social competence in everyday life.

The selected practices and exercises applied in our approach vary in difficulty. They are divided into three levels which are indicated with coloured flags or no flag:

1. First level (no flag): exercises with highest difficulty, designed for learners who can reflect on their own conditions, experience and behaviour. In addition, these exercises are designed also for the teachers/trainers in order to support them in developing their own social competence and transversal skills, to experience the effects of the



development of social competence and transversal skills that will support them to be more effective in organizing the learning process and communicating with learners.

2. Second level (yellow flag): exercises are designed for people with disabilities with basic social and transversal skills and no learning difficulties (people who do not possess a high degree of reflection on their own conditions, experiences and behaviours).
3. Third level (blue flag): exercises with the lowest difficulty, designed for learners with mild learning difficulties (who have no reflection on their own conditions and behaviour and experience difficulty in achieving more complex goals).

Each of the targeted exercises consist of the following components:

1. Aims
 - E.g. to understand the effects of self-control.
 - E.g. to increase awareness of self-control.
2. Content
 - E.g. self-control helps us to deal with challenges, be firm in pursuing the objectives, to be resolute, to deal with the emotions that overtake us and with our impulsive behaviour.
3. Materials
 - E.g. writing materials and worksheets
4. Procedure
 - E.g. write down the statement “Self-control is perhaps the strongest factor for success” in front of the group and then participants complete the preliminary distributed worksheets and discuss the effects of self-control.
 - Then each participant shares an event of failure to self-control (when they succumbed to the temptation) and how they felt.
 - Then the participants form groups of four and each participant shares a case when they have achieved success after making efforts for a long time, and how they felt.



The game-based learning method

Inca Island is a desktop game. The game is a first person role-playing multiplayer adventure game. The player works with an artificially intelligent non-player-character (NPC), to solve puzzles leading to an ultimate goal. Each puzzle is in a separate room, where solving the puzzle will allow the players to progress together to the next room.



The puzzles are broken down into groups to address different social competences identified in the research period.

The following six competencies were identified, and three rooms have been produced to target each:

- Communication – How I express myself at work
- Cooperation – How I can interact/cooperate with others
- Conflict Resolution – How I solve conflicts with colleagues
- Self Esteem – How I should feel good about myself
- Self-Control – How I should control my feelings
- Assertiveness – How I maintain my own opinion

Image 2

When we discuss games for learning it is essential that teachers/trainers/educators see a benefit to the use of the game. Once they recognise this, and realise that a particular game can motivate students to learn, is fairly simple to implement, and can support learning targets, standards, and distinct goals can be met, then a game has great potential to actually be used in the training room. One fundamental difference between gaming for fun vs. gaming for educational purposes is that educators “start with learning goals, and gaming media choices will be made based on the games potential to meet those goals” (Dijkers 2015).

In NARHU practice this method is used to complement the group training method and is targeted mainly for people with mild and moderate learning difficulties and intellectual disabilities who face challenges in joining the group and participating in group exercises. In these cases the trainer works individually with each learner using various didactical materials like illustrated handbooks and serious educational games for desktop computers and mobile devices.

Our serious educational games concept is: The goal of the mobile application is to increase the social skills of disabled people by engaging them in playing a number of games with themes based on selected social competences and transversal skills.



The application is structured in different games and some of their themes are:

1. The user learns to recognize the emotions of the people through the facial expressions.
2. The user learns how to react to different emotional situations.
3. The user learns how to make the best decisions in everyday social situations.

Each game is divided into three parts: teaching the principles to be understood, learning through playing the game, reflection on the experience.

Target group

People aged between 16–55 with different types of disabilities – hearing impairments, visual impairments, mild and moderate intellectual disabilities and learning difficulties, physical disabilities, and mental disorders.

Target transversal skills addressed

Self-regulation and self-control, problem solving, creative thinking and flexibility are the addressed transversal skills.

Available

<http://games4competence.eu>

[Illustrative handbook EN](#)

[Practical guide](#)



A4.2 Self-analysis of the approach

A4.2.1 Key features of the approach

Theoretical foundation

The SGESCTS approach is partially based on the Active Learning Theory which is usually defined as use of one or more interactive approaches to train adults for the purpose of their engagement, as well as to acquire different skills such as: problem solving, self-regulation and self-control, creative thinking, flexibility, and self-directedness.

Some of the commonly used teacher-centred forms driven by the Active Learning Theory are:

- Role play games, game-based scenarios, group exercises and other similar approaches;
- Paired or small group work;
- Problem solving exercises;
- Blended learning using appropriate technological resources to support;
- Training such as serious educational games, illustrative handbooks, specially designed mobile apps for learners with disabilities;
- Individual or group work using visual, auditory or kinaesthetic stimuli to prompt discussion, discourse and learning process.

The game-based approach is based on the culture-historical approach where the development is examined as a process of mastering of natural experience which is materialised in cultural artefacts. This development itself is being realised in different activities. The culture-historical theory adopts the idea that one of these fundamental activities through which the development has being accomplished is the play.

The didactic play has a considerable place within the classification suggested by D. B. Elkonin (2005). Various empirical researches reveal that the didactic play has significant heuristic opportunities with regards to mastering of the learning content. The implementation of the didactic play can be in different domains of the cognitive sphere.

Target transversal skills addressed

Self-regulation and self-control, problem solving, creative thinking and flexibility.



Specific goals

- to encourage the learners in the group to find creative solutions;
- to strengthen awareness of their own abilities and development capabilities;
- to increase self-examination in a safe environment, so as to achieve development of social competence and transversal skills;
- to realise the importance of the social competence and transversal skills to social relations and professional realisation;
- to increase the sensitivity to the significance of the transversal skills;
- to strengthen the motivation and self-confidence of PwDs.

Methods

SGESCTS approach uses two main methods: game-based learning and training in group.

The group training method

SGESCTS group training approach lays on selection of training exercises that requires both trainer's and trainee's commitment. Unlike the conventional one, SGESCTS group training approach is split into 4 stages. First two stages requires observation and self-observation of acquisition of transversal skills and social competence. The last two stages are focused on practicing the acquired transversal skills and social competence first in didactic context, then in to the everyday life.

As mentioned in the description of the approach, the selected practices and exercises applied are divided into three levels of difficulty which are indicated with coloured flags or no flag. The reason why they are structured in the described way is that the learners usually experience different level of cognitive development and functioning.

Each of the exercises follows the same design and comprises of 4 elements: learning goals, content, materials and procedure. The content of each exercise allows learners to master at least one transversal skill.



The game-based learning method

When we talk about e-games the trainers should be able to clearly distinguish gaming for fun and gaming for educational purposes, that is why in SGESCTS approach we clearly introduce game scenarios that have educational purposes and engaging activities and tasks that lead to the mastering of specific social and transversal skills.

It is necessary to highlight that the serious e-games are used as a complementary training tool in addition to the SGESCTS group training method. Games are targeted to people with disabilities, including those with intellectual difficulties and mental health problems who are unable to follow the group dynamics.

SGESCTS e-games concept is based on the assumption that game playing which requires examination of tasks like recognition of emotion through facial expressions, or taking a decision how to react in typical everyday situation will enhance the transversal skills of learners with disabilities. Each game is divided into three parts: teaching the principles to be understood, learning through playing the game, reflection on the experience.

Materials

Serious educational games, computers, mobile apps, illustrated handbooks, work sheets, training exercises, flipcharts, materials for drawing etc.

Target group

People aged between 16–55 with different types of disabilities e.g. hearing impairments, visual impairments, mild and moderate intellectual disabilities and learning difficulties, physical disabilities, and mental disorders.



A4.2.2 Strengths and weaknesses of the approach

Strengths

Problem solving	Self-regulation	Self-direction	Flexibility	Creative thinking
<ul style="list-style-type: none"> • Emphasis on building up abilities to: define the problem; generate solutions; evaluate the suggested solutions; select solution; apply decision; strengthen pro-social orientation. • The mastering of the problem solving skills is facilitated by group training exercises, game-based scenarios, and reflections by the trainers. 	<ul style="list-style-type: none"> • Strengthens the confidence of success. • Outlines the boundaries of what the person would undertake and what would not. • Improved self-esteem and self-confidence. • Prevents from feeling fear, frustration, hostility and guilt. • Ensures achievement of the goals. 	N/A	<ul style="list-style-type: none"> • The method encourages: imagination; ability to generate many alternative responses; ability to build associations between individual ideas; to consider the individual situation/problem from different perspectives; seeing the problem as deserving to be seen; the capacity to think about things in a new ways; strengthening relations with others. 	<ul style="list-style-type: none"> • The training exercises develop the ability to: recreate certain content (themes, experiences, ideas) by different means in different forms; seeking original solutions; create the conditions for experiencing “immersion” in the process creation.

Weaknesses

Problem solving	Self-regulation	Self-direction	Flexibility	Creative thinking
<ul style="list-style-type: none"> • Some clients face limits to generate ideas, unconventional approaches and views. • May increase negative emotions. • People with moderate learning difficulties or mental health disorders have limited capacity to participate in group activities and to generate alternatives, as well 	<ul style="list-style-type: none"> • Limits satisfaction of the needs. • Put emphasis on the self-control while other aspects are not equally embedded in our approach. 	N/A	<ul style="list-style-type: none"> • People with certain disabilities may have low or no level of self-reflection. • The flexibility is being trained mainly through mastering the skill to stand on the other’s point of view. 	<ul style="list-style-type: none"> • People with certain disabilities may have low or no level of self-reflection.



<p>as to implement the decision.</p> <ul style="list-style-type: none"> • People with certain disabilities may have low or no level of self-reflection. • The enhanced cognitive skills as a result of the training usually might decrease especially if the PwD leaves in isolated environment or is unemployed. 				
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A4.2.3 Critical factors of success on different levels

Organizational level

Well trained multidisciplinary team with relevant previous occupation and qualification that should consists of psychologist, VET trainer, employment specialist, and occupational therapist. Induction training of the trainers aiming to present the course materials and structure, the training method and interventions needed. Cross-organizational collaboration that facilitates the transition from the training programme to the labour market. Adjusted training environment that facilitates ultimate client’s involvement, e.g. proper equipment with desktop computers and mobile devices, suitable arrangement of the training room, appropriate trainers attitude.

Professional level

Clients’ profiling, pre- and post-assessment of the level of the social and transversal skills, following group dynamics, setting of SMART training goals. Regular meetings of the multidisciplinary team on monthly basis. Building up clients’ identity with focus on abilities rather than disability. Prevention of burnout. Self-reflection and demonstration of empathy.

Client level

Willingness to dedicate time to attend the training sessions. Motivation. Autonomy.



A4.2.4 Effectivity, impact, evidences etc.

The approach was tested and implemented in Bulgaria, Turkey, Serbia, Austria, Lithuania and United Kingdom among trainees from different age groups; however, the majority of trainees belonged to the age group 16–20. On the other hand, trainees who were younger than 16 were less represented in the trainings as well as trainees in the age group 41–50. The smallest number of trainees were older than 50.

The trainings involved people with disabilities, which constituted the majority of the trainees' group. Among them were: people with an intellectual disability, people with complex disabilities, with Autism spectrum disorder, mild and moderate mental disorder, visual and hearing impairment and mental health problems. The effectivity of NARHU's approach has been tested on iterative basis with number of user groups each facilitated by different trainer. The analysis of the effects of the training on the development of social competences and transversal skills was based on soft outcome measurement which has been carried out using the pre-test and post-test design, namely, through assessment of the difference between ratings of teachers/trainers and self-assessment of trainees before and after the training. Pre-test training has been used to establish a baseline against which the progress could be observed.

The post-evaluation included questions designed to assess the causes of the failure in particular activity.

For every targeted social competence and transversal skills the major improvements were registered. In the area of communication skills the improvements that have been observed are maintaining eye contact with the trainer and other students, willingness to share personal information, initiation of conversations and expressing trust in relationship with others. As for the cooperation, improvements that are noted are in the area of participation in collaborative problem solving and ability to understand other emotions. After the training, it has been observed that the trainees show increased awareness about the need of generating ideas and ways when solving different problems. The trainees have shown better resistance on temptations/instant gratifications when solving task, whereas they still find it challenging to keep their anxiety/fear under control, and to use strategies to improve self-control and control the anger.



Organizational level

Evidences of effectivity? How is the effectivity of the method evaluated?

The approach was tested and implemented among trainees from different age groups; however, the majority of trainees belonged to the age group 16–20. On the other hand, trainees who were younger than 16 were less represented in the trainings as well as trainees in the age group 41–50. The smallest number of trainees were older than 50. The trainings involved people with disabilities, which constituted the majority of the trainees' group. Among them were: people with an intellectual disability, people with complex disabilities, with Autism spectrum disorder, mild and moderate mental disorder, visual and hearing impairment and mental health problems.

How this method facilitates and supports transversal skills?

Not applicable in organizational level.

How this method impacts on social inclusion and employment?

Not applicable in organizational level.

Professional level

Evidences of effectivity? How is the effectivity of the method evaluated?

The professional who acts as trainer is given with the freedom to choose the most suitable activities for the learner with disability. Personal observation by the professional alongside with skills quest and observational check list are the basis for the creation of individual learning paths when needed, as well as for the assessment of the achieved results.

How this method facilitates and supports transversal skills?

The NARHU's method place the trainer in a central role. He is fully engaged in all stages of its implementation starting from identification of the trainees, profiling of the trainees, choosing of training materials and intervention techniques, pre- and post-assessment of the trainees' skills and analysis of the achieved results. The trainer may rely on the multidisciplinary team which includes psychologist, special educator and SE consultant or case manager.

How this method impacts on social inclusion and employment?

Professionals had to deal with different types of disabilities vs. with different abilities, identity and level of self-reflection. The provided training exercises and serious games prepared the



participants to face real life situations and to cope with problems related to their social inclusion and labour market realisation. The professionals were supposed to work in collaboration with other specialists to achieve the overall objectives of the training and to support trainees to retain the achieved progress.

Client level

Evidences of effectivity? How is the effectivity of the method evaluated?

The effectivity of NARHU's approach has been tested on iterative basis with number of user groups each facilitated by different trainer. The analysis of the effects of the training on the development of social competences and transversal skills was based on soft outcome measurement which has been carried out using the pre-test and post-test design, namely, through assessment of the difference between ratings of teachers/trainers and self-assessment of trainees before and after the training. Pre-test training has been used to establish a baseline against which the progress could be observed. The post-evaluation included questions designed to assess the causes of the failure in particular activity.

How this method facilitates and supports transversal skills?

Accepting another's point of view; recognition of the achievements and the merit of others; gratitude; following rules, instructions, guidelines; foreseeing and solving problems; engaging with pro-social behaviours encouraging, sharing, relief, assistance; defining the problem; generating solutions; evaluation of the solutions; selection of a solution; applying the decision.

How this method impacts on social inclusion and employment?

Development of a positive attitude towards the world; solving various problems; better control over the working process; achieving objectives more effectively; dealing with occupational stress and workplace issues; considering that the responses and the behaviour may have consequences; regulation of the negative emotions.

A4.3 Peer-analysis of the approach

Theoretical background of the Bulgarian approach appears to be good but quite narrow or compact. There could have been found more substance to the theoretical background. For example the gamification has risen to a big role but in this context its role is quite narrow. The



research results of the effects of gamification in developing learning abilities could have been presented in the theoretical background. Also, description that why this approach has been chosen would be in order.

The approach is divided into two methods, group training and game-based learning method. The two methods seem to be supporting each other and for example the game-based learning is filled in with the group training activities. Deep analysis has been made where different kinds of groups have been identified. Depending on the client's situation and needs, guidance is either given or not and also the length of the learning situation varies. If the client can reflect one's own situation one is asked to evaluate the situation before and after the training. The game-based learning has different kinds of games and it can be used with computer, tablet or phone but the main idea of it is a action-reaction. The learning can happen in different places for example in shelter houses but no matter what the target group is, the goal is to have a familiar environment.

Group training method

The approach generalizes and realizes the transfer and has a clear list of social and transversal skills. The big strength in the group training appears to be the endeavour to authentic situations. This is very essential considering the transferability impact of the cognitive skills. Working in groups is also good because it strengthens all the transversal skills and encourages to social interaction. Social skills are only learned in groups and in interaction with others and the approach starts from an social or interpersonal context. Peer groups allow the clients to achieve the feeling of equality and peer support but on the other hand if the groups would be more heterogeneous it would allow develop the skills more. In the group training method the practices and exercises are divided into three levels of difficulty and are designed to be used with people with different levels of intellectual disability. The strength in this seems to be that the different levels are colour coded in the used handbook and the trainer can choose the right practices and exercises and decide their order. Through this flexibility and trainer's influence, clients with different kinds of learning backgrounds can do the exercises. The handbook also offers to the learners an opportunity to reflect on what they should learn.

It seems that the challenge of the group training is that the learning of the skill and transferring it to authentic environment and circumstances is very difficult. The learning should happen in



genuine context because for example person with an intellectual disability it is not easy to transfer learned things into another context. The trainers should have the aim of the activities and the pedagogical idea very clear at all times.

Game-based learning method

The other entity in the approach is the game-based learning method. The young people of the target group could be very interested of these kind of activities and also adults get excited and engaged through the gamification. Through this big excitement and motivating and addictive working method, learning can occur. Also, the experience of the partners using this approach is that the game-based learning method works well with autistic persons and sometimes communicating with persons with mental illnesses is more successful with computer than face to face. Strengths of this method can also be that it isn't bound to time nor space and it enables individual progress. The transition from virtual reality to reality is the goal of the method and it is being supported by the trainers. After every training session there is a follow up.

The challenge of the game-based learning method appears to be that clients need to have some basic IT abilities. Also, the technical issues are sometimes hard to get working with the heavy computer programmes and sufficient internet connection needed etc. The partners using the approach has also recognized cultural challenges in the game-based learning as the avatar should resemble the person playing the game or it should be neutral. With the mobile version, less skills can be taken into account than in the computer version. The evaluating how the skills has developed is difficult and also client's self-evaluation is used, although problems with self-reflection are always present with the people with mental disorders. Also, the transferability effects can be pondered: how easy it is to distinguish the virtual reality and the games from the reality? There is possibility that context of everyday life will be missing. How to link the exercises and the practice and is there some practical exercises in addition to the games? Do the clients get enough guidance? The experience from the partners using the approach is that the working with the games can be challenging and sometimes the clients need multiple repetitions. Also wakening of the interest or maintaining the focus and concentration can be challenging at times. Experience has also been that the clients breaking the equipment e.g. tablets, can be a challenge in some working environments and with some client groups.



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Some feedback from the partners (some comments are stylized):

“Interesting! I will try exercises from the handbook at ‘home’.”

“We’d like to present to our LEG.”

“I learned that through socioemotional skills is also possible to improve cognitive skills.”

“I learned that this method is very useful for a wide range of clients. As I understood it, they developed a theory about social interaction and applied it to games. They developed paper & pencil tools and digital tools. Especially the digital version is a great way to engage clients through gamification. It would be really interesting watch developments from virtual reality.”



APPENDIX 5: GRADIOR, SPAIN

A5.1 Description of the approach

Introduction

GRADIOR is a neuropsychological evaluation and rehabilitation multimedia software developed by “Fundación INTRAS” and widely used in Spain by professionals working with people with cognitive impairments due to ageing, neurodegenerative diseases, mental disorders, brain injury and intellectual disability.

The program consists of more than 11.000 customised exercises that train cognitive function. It processes, stores, and transmits the information in images, sounds, texts and data. The enormous variability of exercises prevents the effect of task memorising and makes the training more stimulating and less repetitive. Interventions are always customised and adapted to the user level.

GRADIOR is always guided by a “therapist” that follows and supports the training process. This software offers a user-friendly and direct interaction with the program using the mouse or a touch screen and no previous computer knowledge is needed. The user receives an input (task instructions) and an output (task feedback). Immediate task feedback is supplied through visual and acoustic messages.



Image 1



GRADIOR trains the following cognitive abilities:

- Attention
- Memory
- Orientation
- Calculation/computation
- Reasoning
- Perception
- Language
- Executive function

Professionals have access to different program modules where they can include clinical data, develop personalised programs, and write reports. The three main modules are: 1) task generator, 2) clinical record and 3) session viewer:

1. Task generator: enable the generation of customised tasks, adapting the difficulty to the cognitive damage.
2. Clinical record: here professionals insert relevant user data, e.g. personal data, clinical observations, medication and clinical assessment. Besides, the module includes a treatment manager that enable professionals to define individualised evaluation or rehabilitation sessions. Finally, the report manager provides performance and progression data.
3. Session viewer: users directly interact with this module that presents the session information and provides feedback.

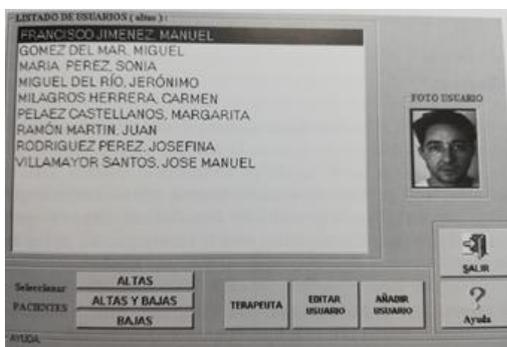


Image 2



Image 3



Association VALE's innovative approach uses GRADIOR's evaluation module as an employment counselling tool for people with intellectual disabilities. The information provided by the user's evaluation profile, can be used for several purposes:

1. To guide professionals in their everyday work with users (e.g., emphasised the potentials and limitations in specific cognitive areas and its relationship with particular behaviours).
2. To guide the working place adjustment process regarding working tasks, supports, and conditions.
3. To improve work efficacy, being more precise and efficient in the selection of work responsibilities.
4. To enhance work satisfaction, self-esteem, and motivation.

Goals

GRADIOR's general goal is to prevent, stop and recover cognitive damage. VALE uses this Software with people with intellectual disabilities and stresses the relevance of a person-centred evaluation.

The aims of our employment approach are:

- Adjustment of working space characteristics (supports, task, environmental conditions, etc.) to cognitive profile of adults with intellectual disabilities
- Working place discomfort and disappointment reduction
- Employment self-confidence improvement
- Work efficiency enhancement
- Working space stress reduction
- Enhancement of personal satisfaction



Methodology and strategies

Evaluation and treatment sessions are individual. The steps to complete the GRADIOR treatment are:

1. Cognitive evaluation
2. Data analysis
3. Establish baseline cognitive skill levels
4. Create an individual training profile based on the evaluation
5. Support the training with task instructions
6. Supervision of sessions
7. Career guidance and counselling
8. Counselling sessions with professionals and families
9. Treatment update

In addition to the cognitive data, results are analysed taking into account personal characteristics, support used, sensorial or motor limitations, and behaviour during the session.

Different factors play a role in order to establish the treatment:

- Functionality
- Quantitative results in different cognitive areas
- Subjective evaluation during the session

Session development

- Time management: a standard session lasts between 15 and 20 minutes. Recommended frequency is once or twice per week. Duration and frequency should be adapted to user needs and functionality.
- Resources: therapist, GRADIOR software, touch screen.
- Before the session: the professional gives the following instructions:
 - “Please ask, whenever you have any questions.”
 - “It is more important to understand your answer than to answer very quickly.”
 - “If you feel stuck, give yourself time, and if you can’t solve the task by yourself ask for help.”



The relevance of these instructions is to reduce the level of potential stress, the subjective pressure of answering correctly, and the probability of answering mechanically.

- During the session: the professional offers help if he/she observes the user answering mechanically or if the user has difficulties understanding the task.
- After the session: debriefing (professional and user share subjective perceptions, feelings or difficulties). The professional can show the performance graph (reaction time, errors or correct answers) in order to give some visual feedback (see image 4 below).

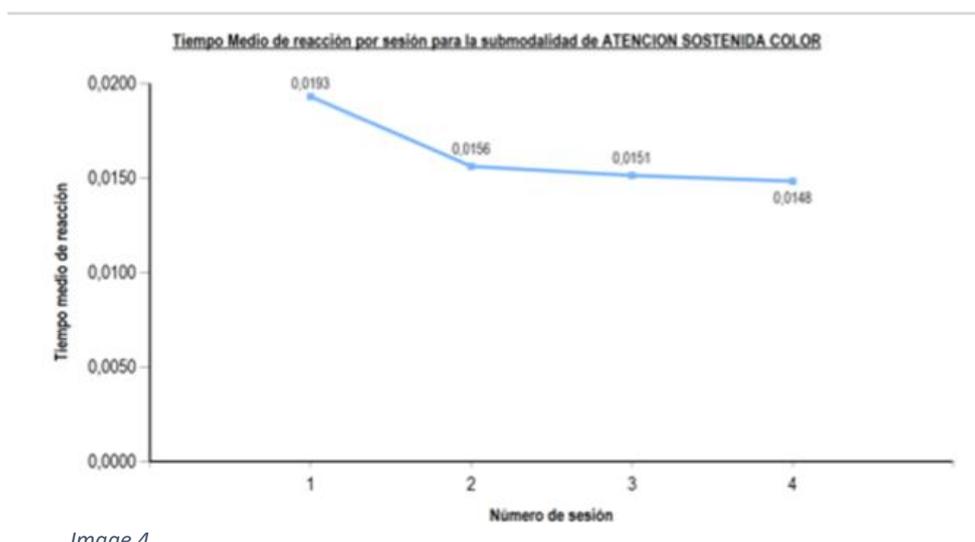


Image 4

It is very important to check with the user the comfort and motivation level during the session. The context must be secure and provide confidence. It can be very useful to write a daily report gathering subjective impressions, the user's emotional state and performance.

Use of GRADIOR as an employment counselling tool

Once the user passes the cognitive evaluation, professionals match their cognitive profile with different working task descriptions, and a specific working place will be suggested. The idea is to suggest a working task that can be effectively performed by somebody with the cognitive potentials and limitations shown in the evaluation. This method will reduce negative experiences related to the working place and will enhance efficacy. In order to use a cognitive evaluation for employment counselling the following steps need to be ran:

- Working place task descriptions: a list of all the behaviours and steps needed to successfully complete the task.



- These behaviours should be “translated” into specific cognitive abilities (e.g. for selling a coffee you need to know how to calculate).
- A match between the different working places and the cognitive profile should be done.
- The working place where more preserved cognitive abilities are useful, should be the one elected.
- A trial period of one month will be carried out.
- After one month an evaluation of the employment efficacy and employment satisfaction will be performed.

Target group and target transversal skills addressed

The target group is the adults with cognitive impairments due to ageing, neurodegenerative diseases, mental disorders, brain injury or intellectual disability. The GRADIOR addresses self-regulation and self-control, problem solving, creative thinking and flexibility.

Available

<http://ides.es/gradior>

A5.2 Self-analysis of the approach

A5.2.1 Key features of the approach

Theoretical foundation

Intellectual disability is a disorder that begins during the development period and includes limitations of intellectual functioning as well as adaptive behaviour in the conceptual, social and practical domains (taken from Diagnostic and Statistical Manual of Mental Disorders, American Psychiatric Association, 2013).

Cognitive skills are understood as operations and procedures that the person can use to acquire, retain and recover different types of knowledge and execution. They assume the person’s representation skills, selection abilities and self-direction capabilities. According to the above, cognitive abilities allow the subject to expand their conception of the world from their mental



operations, experience and experiences provided by the context in which it operates. Their efficient use enables to appropriate knowledge to solve problems and transform the environment. Its background can be found in the works of Piaget, Vygotsky, Gestalt psychology, linguistics, information theory, cognitive psychology and computer science.

Neuropsychological evaluation is the evaluation of cognitive skills (attention, memory, perception, etc.), in order to determine the presence or absence of brain damage, and the level of performance in different cognitive areas. Neuropsychological rehabilitation is the process that aims to improve or recover the existing deficits in cognitive skills.

Target transversal skills addressed

Problem solving, self-regulation and self-direction.

Specific goals

Please see the Goals chapter in A5.1.

Methods

Please see the Methodology and strategies chapter in A5.1.

Materials

Computer and GRADIOR software. Headphones. Therapist.

Target group

Adults with an intellectual disability.



A5.2.2 Strengths and weaknesses of the approach

Strengths

Problem solving	Self-regulation	Self-direction	Flexibility	Creative thinking
<ul style="list-style-type: none"> Reasoning tasks pose problem solving situations. Facing potential problems in task comprehension forces users to use their problem solving abilities. 	<ul style="list-style-type: none"> Cognitive abilities such as memory, attention, perception or reasoning set the cognitive basis for self-regulation. Users are provided with tools that facilitate the self-management of the tasks and the interaction with the program. 	<ul style="list-style-type: none"> Session follow-up increases the feeling of self-control. The task difficulty, adapted to previous performance, is carefully balanced to be challenging within individual capabilities, thus producing a stimulating but secure environment. 	<ul style="list-style-type: none"> Subtle changes in task presentation evoke flexible adaptation and avoid automatic responses. 	<ul style="list-style-type: none"> Creative thinking is not directly addressed.

Weaknesses

Problem solving	Self-regulation	Self-direction	Flexibility	Creative thinking
<ul style="list-style-type: none"> The type of problems presented are not adapted to real life situations of people with intellectual disabilities. 	<ul style="list-style-type: none"> GRADIOR cannot be used by people with major needs of support. Interpersonal self-regulation situations are not addressed. 	<ul style="list-style-type: none"> Individual tastes and preferences are not considered (e.g. the user could choose stimuli, screen background, sounds, etc.). 	<ul style="list-style-type: none"> The rigid training and evaluation procedure does not foster cognitive flexibility. 	N/A

A5.2.3 Critical factors of success on different levels

Organizational level

- Well-trained GRADIOR therapist able to accompany trainers in their individual learning process.
- Human resources that ensures individual monitoring of the learning process (e.g. one therapist for no more than 1–2 trainees).
- Offer at least 2 individual sessions per week to every trainee.



- Adjusted training environment (quiet training room with computers and suitable desks and chairs).
- Economical investment in GRADIOR's license that guarantees software updates.

Professional level

- Experience with cognitive trainings and neuropsychological evaluations.
- Offering individual and dynamic support to the learner in order to promote a better understanding of the tasks and learning process.
- Monitoring trainees' evolution.
- Empathy and accompany the learning process in a calmer and supportive way.
- Self-reflection.
- Coherence between verbal messages and actions (e.g. deal with emotions, accept and learn from mistakes).
- Open and ongoing communication with other professionals and families.
- Interdisciplinary meetings.

Client level

- Motivation to attend the training sessions.
- Satisfaction found in the activity.
- Good understanding of verbal instructions.

A5.2.4 Effectivity, impact, evidences etc.

Organizational level

Evidences of effectivity? How is the effectivity of the method evaluated?

The organizational climate is evaluated by asking workers about their workplace satisfaction. Usually organizational climate improves due to a higher satisfaction with the workplace.

This software is validated and recommended by the Andalusian Government for training cognitive impairments in adults with Alzheimer. More than 1700 users daily train in Andalusia cognitive abilities with GRADIOR software.



How this method facilitates and supports transversal skills?

The use of this approach, changes organizational behaviour, creating a new one, more creative, open-minded and participatory.

How this method impacts on social inclusion and employment?

GRADIOR helps organizations to adapt job demands to the individual cognitive profile of people with intellectual disabilities, thus increasing the likelihood of work success and work inclusion.

Professional level

Evidences of effectivity? How is the effectivity of the method evaluated?

Stress level and uncertainty reduction as a result of a better understanding of the users' needs, strengths and impairments.

How this method facilitates and supports transversal skills?

Professionals need to adapt their work to new qualitative information which implies an improvement in his/her own skills.

How this method impacts on social inclusion and employment?

GRADIOR provides information that helps professionals to understand individual cognitive capacities and limitations, designing an individual career orientation that includes necessary task supports. This has a direct impact in employment options and employment success of people with intellectual disabilities.

Client level

Evidences of effectivity? How is the effectivity of the method evaluated?

Data shows that training enhanced specific cognitive abilities during long periods of time, reduces functional impairment and promotes a greater autonomy.

Regarding the use of GRADIOR as an employment tool, there is still no empirical evidence available. Nevertheless, experience shows that users adapt faster to their working tasks and working places due to a better matching between the working place demands and their cognitive profile. This tool is still under trial.



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How this method facilitates and supports transversal skills?

By improving training and empowerment, the person faces more real life situations, increasing transversal skills.

How this method impacts on social inclusion and employment?

GRADIOR helps users to access a work environment that fits with their individual potentials and limitations, thus having an impact in the probability of employment success and social inclusion.



APPENDIX 6: SELF-ANALYSIS TOOL

Organization:	
Method:	
Author:	
Date:	

The focus should be on how current method/approach can facilitate the learning of the transversal skills and through that, promote the social inclusion, especially employment. The target group is adults with an intellectual disability. This document is the analysis and gives information on the key features and critical things. To have the IO1 as desired, each method or approach must be described in e.g. 5 pages (A4), to give the one who reads the IO1 all information on the method/program/approach.

* Transversal skills: 1) Problem solving, 2) Self-regulation (time management, learning skills), 3) Self-direction, 4) Flexibility and 5) Creative thinking.

Key Features:

Theoretical foundation:	
Target transversal skills* addressed:	
Specific goals:	
Methods:	
Materials:	
Target group:	



Strengths and Weaknesses:

	1. Problem solving	2. Self-regulation	3. Self-direction	4. Flexibility	5. Creative thinking
Strengths:					
Weaknesses:					

Critical Factors of Success on Different Levels:

Organizational level:	
Professional level:	
Client level:	

Effectivity, Impact, Evidences etc.:

	Organizational level:	Professional level:	Client level:
Evidences of effectivity? How is the effectivity of the method evaluated?			
How this method facilitates and supports transversal skills?			
How this method impacts on social inclusion and employment?			



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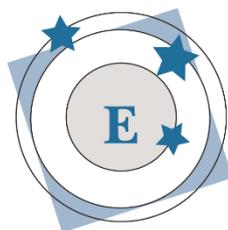
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