

Universal ALP – Assessment of Learning Process – ALP-Facilitating Strategies

Introduction of the ALP-tool

The ALP-tool is a process-based assessment including the **ALP-instrument** and the **ALP-facilitating strategies**. The instrument is used to assess an individual's actual phase in the tool-use learning process and the facilitating strategies give some guidance for the facilitator's approach and provide ideas of how to facilitate learning from the individual's actual stage and phase in tool-use understanding.

The universal ALP-tool can be used with any kind of tool-use involved in occupational performance: simple or complex, using hand tools or equipment for communication or mobility, and associated accessories. The ALP-tool was developed during a rigorous analytical grounded theory process in the field of powered mobility intervention. The identified learning process is universal and useful also for assessment of other occupational performances involving tool use. Our recommendation is to use the ALP-instrument together with the ALP-facilitating strategies (Durkin, 2006; Nilsson 2007; Nilsson & Durkin, 2014 and 2017, Nilsson & Kenyon, 2022).

Facilitator approach

In our research work we embraced the following belief system: to be user led, to work in partnership, and to empower the person. Each individual has their own learning dynamic and will demonstrate their own unique learning pattern. We also view tool-use and the learning process as part of developing personal occupational performance. The goal for intervention is to develop a higher level of complexity in tool-use understanding and performance.

The following bullet points describe the inclusive approach established within the facilitating strategies and the skills required by the facilitator:

- Person-led activity
- Building Partnership
- Facilitator activity is adjusted to the just right level of challenge for the person to encourage their own initiatives for doing and interacting
- Empowering approach – it is all about facilitation of an oscillating learning process
- As a facilitator, you need to know the person and adapt the strategies to meet their specific learning needs. The following are suggestions for you to use and build on.
- In devising your own strategies, you need to constantly explore plausible ways to facilitate the learning process – this can be achieved through the appropriate and well-timed use of allowing trial and error to occur; introducing increased tool-use complexity and taking the person into more challenging and unpredictable situations and environments

- Working as the facilitator, you are building understanding with the person through dialogue and mutual interaction and therefore you require the appropriate observation and listening skills
- As the facilitator, you need to be aware of your own language skills in order to provide each person with a language dialogue which has the appropriate words, content, volume, tone, and emphasis
- Of equal importance is your awareness of how you are communicating visually through the use of your body language. The person will be interpreting gestures of your face, hands, shoulders, and posture.
- The facilitator also needs an understanding of group processes when working with two or more learners together in a situation

ALP-facilitating strategies

The aim of the facilitating strategies is to provide guidance for how to support a person's learning. The starting point is the person's current understanding of how to use a tool or behave in a specific situation. Therefore, the recommendation is that the facilitator first uses the ALP-instrument to assess a person's stage and phase of learning and then uses the ALP-facilitating strategies as a reference to find out which facilitating strategies matches the person's current stage and phase of tool-use understanding.

There are **general strategies for all phases** in the learning process and **specific strategies for each of the three stages and the eight phases**. There are also a few **key factors** for the facilitator to be aware of at each of the three stages:

Stage 1: Explore Functions – body & tool/s (phases 1-3)

Quiet
Vigilance
Attention to slow pace activity

Stage 2: Explore Sequencing – body, tool/s & environment (phases 4-5)

Need to allow trial and error to occur
Involve the person in the process of reflecting on outcomes

Stage 3: Explore Performance – body, tool/s, environment & occupation (phases 6-8)

Depress tendency to act guiding or protectively in order to keep up an acceptable level of expected and/or secure performance.
Sharper observational skills are needed
Attention to multi-varied fast pace interaction in all senses has to be given

General facilitating strategies

- Be aware of the necessity to maintain high levels of energy and focus as the responsive and facilitating partner

- Provide the person with the just right challenge for their phase and stage in the learning process

If Low – too easy, the person will get bored, lose interest/curiosity

If High – continuous failure, the person will find it too difficult, lose interest/curiosity

Stage 1: Explore Functions – focus is on body & tool/s (Introvert)

- *Give the time needed for the person to explore their own way*
- *Persistence with interactive approaches, encouraging dialogue and physical demands such as touch and manual guidance*

Stage 2: Explore sequencing – focus is on body, tool/s & environment (Difficult Transition)

- *Low level achievement/little success can be observed*
- *Important to adjust the challenge to allow the person success and thereby minimise their level of frustration*

Stage 3: Explore performance – focus is on body, tool/s, environment & occupation (Extrovert)

- *Increased tempo, higher speed, variation*
- *More complex interactive context – physical and social*

At any stage look for the person's **signs of overload**

Shutting down and closed or glazed eyes

Cold sweating, paleness

Signs or expressions of exhaustion

Be aware of the possibility that the person **oscillates over phases** in different ways at different points of the learning process.

Oscillation over phases

A rising and falling pattern can often be observed and looks the same in all stages but some characteristics are specific for the Stage 1 and Stage 2. The oscillation is due to many factors including a drop in energy, motivation and attention. The most marked difference between stages is the rate of recovery, the tempo for restoration or retrieval will take longer in the lower stage compared to the higher one.

Stage 1: Explore Functions – Introvert Stage

- Short periods at highest level
- After drops there will be low retrieval back to highest level
- *Easy to give too low a challenge*

Stage 3: Explore Performance – Extrovert Stage

- Long periods at highest level

- After drops there will be quick restoration to highest level
- *Be aware it is easy to give too high a challenge*
- *Look at causes for dropping performance*

Use of Group Work

Establishing a group for the person to practise tool-use within, needs careful consideration and ongoing reflection. The number of persons and facilitators working within the group at any one time will have an effect on the dynamics of the learning environment. Each person needs to be assessed individually as to how they cope with a multi-level interaction environment.

Persons in Stage 3: Explore Performance

Persons need to have reached phase 6 (Competent) before they can practise and be attentive within a group setting, as their main activity focus at this level is to use the tool purposefully or goal-directed and often ignoring the people around them. A group work environment can be used to gradually introduce the development of multi-level interaction and awareness of others.

Facilitators need to be aware that tool-use practice in a multi-level interaction environment is harder to supervise and guide, and persons may display intensive emotions particularly in respect to developing their own judgments towards their peers and learning to interact with and/or regard, take care of others.

Persons in Stage 2: Explore Sequencing

Persons in phase 4 (Advanced beginner) and 5 (Sophisticated beginner) can benefit from being part of a parallel group where the persons and facilitators are working within the same environment but there is no expectation for multi-level interaction and the space is large enough to allow areas of tranquillity. In this stage the persons will need time out of the group and can benefit from spending some of this time just observing other learners.

Things to consider before introducing tool use in new situations

- The person needs to build their tool-use sequencing patterns (phases 4-5) in a familiar situation before introducing new or more complicated situations.
- The person needs to be able to understand the idea of competent tool use before exploring how to integrate tool-use performance in unfamiliar situations.
- The person needs to learn about a variety of relationships in safe, structured and framed contexts (bodily, physical, spatial, timing, social).
- Exploring tool use in a new situation puts higher demands on the persons' attention regulation, such as sharing or shifting attention, and multi-tasking.
- Tool use exploration/performance in well framed environments indoors are easier than in less distinctively framed natural context outdoors, i.e., boundaries indoors are more defined and easier to spatially relate to than boundaries outdoors that are undefined and more distant .

- A tool-use situation affording synchronizing of body movement with tool-use outcome is more demanding as it involves more forces to react to and interact with, i.e., powered wheelchair, down-hill skiing.
- A tool-use situation involving interaction and communication with unfamiliar people in new situations increases the demand for attention-regulation, i.e., using a device for Augmented and Alternative Communication (AAC) with an unfamiliar person in a shopping mall.

Specific facilitating strategies for each of the three Stages and the eight Phases

The specific facilitating strategies give some ideas regarding the facilitating approach and what to think of during guiding of the person's tool-use exploration - first with regard to the Stage and then with regard to each of the Phases included in the stage.

Strategies for STAGE 1: Explore Functions

(Phases: 1 Novice; 2 Curious Novice; 3 Beginner)

Introvert level

Focus is on body & tool/s

Use a gentle approach to establish a safe and secure relationship

Focus the person's attention to tool function and close vicinity

Strategies oriented at tool function and tool interaction

Build awareness of body and mind for tool use

Encourage exploration of tool parts and tool function

Assist the person to enable them to shift their attention back to the tool

Offer manual, non-verbal or spoken guidance, adjusting the amount of input according to the person's needs to achieve the actions of physically handling or mentally elaborating the tool (looking, listening, thinking, reflecting, gripping, pushing, pulling, maintaining grasp. Provide manually a range of strong deep pressure to a light guiding touch, working from proximal to distal.

Constantly shift between withdrawing and re-entering the person's space, displaying to the person "you are on your own, it is you that makes things happen". Withdraw from the person's space and provide silence and give time for the person to act and react. Re-enter the person's space, offer manual guidance and give physical gestures or verbal prompts in dialogue.

Facilitate the person to enable them to synchronize their body and mind to tool function - observe the person during movement/performance and allow the person time to adapt to the effects of the tool use and external forces.

Frustration

Accept the person's rejection, anxiety or passivity and acknowledge there may be signs of basic frustration at this stage. The person may display annoyance that they are unable to repeat a positive effect or pleasant sensation/outcome of using the tool.

Strategies oriented at social interaction

One-to-one interaction

Structured variation of physical and social interaction

Language

Imperative but gentle language

Labelling of body parts, tool parts, acts, effects and outcome of tool use performance
Attaching words to the acts being performed in order to offer labels for objects and doing; thereby providing opportunities for guidance from a distance

Slowly paced and deliberate language

Precise and condensed language

Shift between periods of silence and verbal input

Suppress your reflex reactions such as shouting or increasing your volume of speech in conjunction with any negative outcomes or at unexpected successful events.

Body language used in a concrete, physical, illustrating or demonstrating way.

Explain the functions of the tool through the use of your body language and manually guiding the person, or do it in a language that can be understood by the person

Encourage own initiatives to act – to look, to touch and reflect on all aspects of the tool

Facilitate the person's development of own initiatives by using manual guidance to initiate their explorative acts and then gently release guidance while encouraging the person to continue on their own

Allow the person to explore the tool in their own way

Allow the person to have the opportunity to experience extreme tool use – offer variable levels of difficulty and allow "wrong" utilization of the tool/s. Allow the person to constantly repeat explorative acts to reach their own level of satisfaction as part of storing and retrieving the tool-use experiences from their memory

Allow the person to do trials in their own way

Allow the person to take the lead and direct the exploration – not led by facilitator

Strategies for Phase 1 – Novice

Establish rapport with the person.

Increase arousal and curiosity through the experience of tool use effects and outcomes.

Provide a bodily or mental tool use experience by manual guidance and/or spoken encouragement from the facilitator.

Repeat experiences of tool use effects, sensations and outcomes.

Reduce anxiety; to give way for curiosity and exploration.

Arrange for accidental activation of tool use effects.

Provide deep proprioceptive input through manual guidance at the most acceptable body part to the person – could be the part at the furthest distance i.e. could be the feet to start with

Explain and/or point out and remark on inadvertent outcomes

Strategies for Phase 2 – Curious Novice

Encourage reaching out or elaborating to explore just as an act of its own

Allow the person to explore all aspects of the tool/s within reach of body or mental state

Allow periods of apparent non-activity by being present and staying silent

Assist the growing insight of basic tool use through provision of manual guidance and short direct spoken prompts. Provide encouragement when the person completes the act. Nurture and reinforce all changes in the person's use of the tool.

Facilitate the idea of basic tool use through manual, non-verbal or spoken guidance.

Strategies for Phase 3 – Beginner

Point to, tap or mention the tool to draw the person's attention back to the tool.

Refresh the person's idea of basic tool use

Enable the person's volitional acts by withdrawing and waiting for the person to respond in their own way. Minimize manual guidance, non-verbal and spoken encouragement and use short direct spoken prompts from an extended distance.

At this point spoken words are also used to connect acts with labelling actions of the person and objects being used.

Provide periods of silence to allow the person to integrate their sensations and experiences.

Give the person long periods of time to carry out their actions in order to achieve reciprocal shortening of time, married with a decreasing amount of encouraging input.

Strategies for STAGE 2: Explore Sequencing

(Phases 4 Advanced Beginner; 5 Sophisticated Beginner)

Difficult transition level

Focus is on body, tool/s & environment

Focus the person's attention to tool function and external tool use goals

Strategies oriented at tool use interaction

Encourage exploration and experimentation with pattern building

Non-interference intertwined with manual guidance and spoken prompts or instructions

Introduce variation of speed, tempo or tool use complexity

Introduce the concept of gentle use of the tool – grading of exerted force and direction (physical and mental) - in conjunction with attaining slower more graded movement or approach for using the tool.

Facilitate the person's understanding of relationships in space, time, physical and social environment by directing focus on what is and what changes in the tool-use situation.

Confirm success, difficulties and failure of patterning details

Provide external motivators to convey the idea of a goal for tool use

Frustration

Accept the person's expressions of frustration

Calm and reassure the person to reduce their frustration to a level where it no longer interferes with learning

Take a step back and build up again to give short successful experiences to the person

Strategies oriented at social interaction

Extend interplay distance

Entice and challenge interplay of tool use with social interactions one-to-one, one at a time, back and forth increasing the distance and range of the interactional space

Introduce simple playful enabling one-to-one interactive activities and then gradually upgrade the complexity

Language use

Dialogue using simple verbal language, body language and guiding

Labelling and explaining tool function and tool use outcome

Explaining function of the tool through simple spoken language, body language and manual guiding

Facilitate judgment skills learning to take care of self as the person use the tool within the situation/environment

Encourage own initiatives and trials – find out how it works, give it another try, try another way

Allow the person to explore use of the tool in their own way

Allow the person to make their own mistakes

Allow the person to develop their own strategies (not led by facilitator)

Ask if the person wants help or stand back and wait for requests for help

Strategies for Phase 4 – Advanced Beginner

Offer the person manual guidance or spoken explanation to encourage their own exploration of the tool

Provide repeated attempts to bring the person back to task when distracted, intertwined with periods of non-interference

Offer the person quiet periods in low stimulation environment interspersed with a busier environment

Facilitate the person's attempts to mutual interaction

Strategies for Phase 5 – Sophisticated Beginner

Offer the person co-operative manual guidance or spoken explanation to achieve desired results of tool use working proximally to distally

Read the person's level of energy and adjust the complexity to an acceptable level of challenge in co-operation with the person

Give the person the choice of the complexity they wish to use to reach a goal

Connect tool use to the person's personal frame of interest

Include tool use in interaction

Fuse interaction such as turn-taking with tool use

Consider alternative tool/s

It may be appropriate to consider introducing additional equipment or to review other tool/s in order to address the person's frustration from prolonged efforts of using equipment which consistently fails them. Ask the person what they would prefer as they will now have reached a stage of understanding about how the tool/s operates, specifically in relation to sequencing of functions to environmental circumstances.

It is important to wait until the person has reached the stage of "difficult transition" before considering additional or other tool/s. If new equipment is provided to the person at an earlier stage they will not be given the opportunity to explore the idea of competent tool use and to build up their understanding of the need for building sets of sequences into a pattern for goal-directed tool use.

The person needs the opportunity to make trials and errors to explore which acts that cause favourable or negative tool use effects. The experience of unexpected sensory impact and feedback is guiding the search for sequencing of the activity. Through becoming in control of an increasing number of chains and sequences of tool functions the person can assemble the full tool use control pattern enabling goal-directed tool use performance.

It can be very confusing for the person to suddenly have the facilitator or the tool/s take over handling or operation which will then reduce their opportunity for developing more complex operation and problem-solving competencies.

Additional equipment or new tool/s can assist the person who becomes too frustrated at their consistent low level of success when trying to operate within more complex situations/environments or who needs an electronic mechanism to assist with the preservation of their energy levels.

Strategies for STAGE 3: Explore Performance

(Phases 6 Competent; 7 Proficient; 8 Expert)

Extrovert level

Focus is on body, tool/s, environment & occupation

Focus the person's attention to competent tool use and physical and social environment

Strategies oriented at tool use interaction

Encourage exploration of tool use in everyday environment

Facilitate the synchronization of movements of body parts with tool use to achieve precision.

Frustration

Facilitate the person's development of strategies to release blocking and decrease frustration

Strategies oriented at social interaction

Unstructured variation

Group interaction

Free tasks, occupations, play or games with rules at a complex level

Language use

Verbal dialogue

Labelling the person's expressions of emotions with regard to the outcome of tool use

Reasoning language

Sophisticated language

Body language used in an abstract, symbolic way
Rapid and spontaneous language with variable tempo

Give instructions for the person to carry out

Make mutual agreements of how practice situation should be structured

Facilitate the person's development of judgment skills by making them aware of how to anticipate and forward plan in new and more complex situations/environments.

Facilitate the development of higher judgment skills as the person attains the importance of taking care of others in different situations/environments

Promote the person's own initiatives

Encourage development of the person's own desires, goals – “what would you like to do?”

Encourage the person's own initiative – “try on your own, do it the way you would like”

Allow the person to explore use of the tool in their own way

Allow the person to make their own mistakes

Allow incorrect or unsafe operations to a certain extent

Allow the person to take the lead (not led by facilitator)

Strategies for Phase 6 – Competent

Allow the person to pause and have periods of rest in order to be able to refocus and retain energy.

Facilitate development of fine precise generation of force and grading and timing of movement as part of working towards smooth and fluent tool use.

Facilitate and challenge the person's development from gross to fine smooth motor performance by intermittently increasing the tool use complexity.

Encourage exploration of undefined boundaries within the tool use in relation to the social and physical environment.

Encourage exploration of tool use on their own.

Offer tasks that don't involve complicated use.

Encourage bimanual activities or activities that demands shared attention.

Strategies for Phase 7 – Proficient

Offer the person tasks in everyday situations/environments that extend their tool use skills in conjunction with operation and interaction. Complexity, play, and everyday tasks can be deliberately changed and added in order to provide the person with higher challenges.

Start with simple handling/operation tasks and gradually add complexity by asking the person to perform handling/operation in situations/environments which range from large and small, open and narrow, confined and full of activity, indoor and outdoor, familiar and new unpredicted. The performance can also be made more complex by adding interactions which range from silence; background noise; imperative directions; verbal instruction, general chit-chat, simple routine questions, in depth specific questions.

Examples of gradual progression from lower to higher challenges:

Ask the person to:

- use the tool in another situation on their own while keeping silent
- use the tool in another situation and provide the person with interactive distractions from the task while they are performing tool use
- use the tool in a situation where problem-solving is required
- use the tool in a situation that requires multi-tasking and repeated problem-solving.
- use the tool in a variety of situations involving different social and physical relationships requiring prediction, planning, multitasking and problem-solving.

Allow and encourage playful tool use (free play and play with rules) and discovery

Facilitate reflection of experiences to build understanding of consequences as a result of trying new things – what did you learn?

Encourage enduring tool-use on their own including integration in other tasks or interactions.

Strategies for Phase 8 – Expert

Offer opportunities to exercise tool use skills in a wide variety of contexts, situations and environments both familiar and more complex or challenging. Integrate automated tool use in everyday activities, lifestyle and culture.

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