



Postcard



Module E6 : Support learning activities

Activity	 Keywords	 Tools
1) Inquiring into the learning process to support the learner's activity	Inquire into the learning process Remediation Understanding the instructions	4 tools
2) Linking learner's previous knowledge to the training inputs	Representation Constructivism Weaving	4 tools
3) Using techniques and tools to improve learning	Zone of proximal development Scaffolding / unscaffolding Operative image	2 tools
4) Using reflexive analysis to support learning	Contextualize / decontextualize / recontextualize Reflexive analysis Transfer of knowledge Elucidation interview	2 tools



Summary - keywords and notions

Cat. 1 : Inquiring into the learning process to support the learner's activity (diagnostic)

Problem Junior has a problem with his trainees who can't do his exercise. He doesn't understand why. His is lead into making an inquiry into the learning process.

Issue Evaluating learning accomplishments allows the trainer to measure the gap between the expected objectives of a training session and the performances reached by a learner. When a trainer notices a gap, he inquires about the nature and the origin of the difficulty. Then, the trainer may find an individual or collective solution which is adjusted according to the detected needs.

Keywords	Definition	Drawing
Inquire into the learning process	The trainer notices a gap between the learning outcomes and the performance of the learner. He inquires into the learning process in order to identify the nature and the origin of the difficulty that the learner faces. Then he suggests a teaching solution.	<pre> graph LR LO1[Learning Objective Level 1] --> AS[Assessment Formal or not formal] AS -- Yes --> LO2[Learning Objective Level 1] AS -- No --> REG[Regulation] REG --> LO1 </pre>
Remediation	Remediation is the set of aids and supports that a trainer can provide to a learner in order to help him overcome a difficulty in his learning.	<ul style="list-style-type: none"> -Inquiring into the learning process in order to identify the obstacle -Teaching regulation (Methodological /didactic targeted aid)
Understanding the instructions	Understanding instructions is a mental process that enables the learner to create in his mind an image of the task he is asked to perform and also an image of the steps that he has to go through to perform the task (operative image).	
Tools:	Description	
T61.1 What is learning?	Short definition of what learning is.	
T61.2 Checklist of hypothesis about the learner's difficulty	This checklist is a supporting document that offers various hypotheses that the trainer can ask himself when he faces a learner in difficulty. The checklist also includes some indicators to check these hypotheses.	
T61.3 Active listening to check comprehension	Active listening is a communication technique that ensures that messages (instructions, contributions...) have been fully integrated by the learner.	
T61.4 The needs of a learner	Tool to identify the different extent of a learner's needs	

Tool T61.1

E6. Support learning

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What is learning ?

Definition of learning

What is learning ?

Definition :

Learning is a complex process that combines **symbolic, cognitive, physical** and/or **social** activities. Learning is achieved when the learner appropriately uses knowledge to act efficiently or to solve a problem.

Two elements are important:

- (1) allowing the trainee to **face situations** where he/she must **act** and **solve a problem**;
- (2) providing the trainee with a **socially and humanly secure environment** that will offer adequate support.



- According to **Jean Piaget**, learning is all the more solid when the learner is confronted with **many, varied** and **progressive problem solving exercises**: little by little, he/she will build adapted and relevant solutions, then use them more and more quickly.



- In the same perspective, **John Dewey** says that we **learn by doing** (learning by doing).



- For **Lev Semionovich Vygotski**, learning is possible through **social interactions**, and through relationships with other people: the trainer, other learners, the group of learners.

More recently, the work of Stanislas Dehaene (cognitive psychology approach) has identified 4 pillars of learning:

1. the focus of the learner's attention
2. the commitment to the task to be performed
3. adjusted feedback
4. consolidation of achievements through training

Tool T61.2

E6. Support learning

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Checklist of hypothesis about the learner's difficulty

This checklist is a support that proposes various hypotheses that the trainer can ask himself/herself when he/she faces a learner in difficulty. The checklist also includes some indicators to validate these hypotheses.

List of hypothesis and indicators about the learner's difficulty



Hypothesis about the difficulty	Indicators from the learner
<p>→ The learner does not have access to all his/her means to understand Problems due to stress, having a problem in the past ...?</p>	Perception of the learner's emotional state, signs of stress, shortness of breath, nervousness, agitation...
<p>→ The learner does not have the prerequisites to understand Problem with the prerequisites?</p>	Knowledge of the learner's work history, signs or lack of previous achievements on the subject, pre-requisite tests that are not successful....
<p>→ The learner does not understand because the message is ambiguous or inappropriate in its formulation Problem of misunderstanding the instructions / miscommunication / ambiguous message</p>	Lack of commitment to the task, expression of misunderstanding, doubts expressed about certain words, passivity, nervousness....
<p>→ The learner does not understand because he/she does not connect all of the elements with his/her own knowledge... Problem of misunderstanding the instructions / lack of connection with other concepts and basics</p>	Lack of commitment to the task, expression of misunderstanding, stuck on certain words, showing doubt, confusion, misinterpretation...
<p>→ The learner understands the instructions but is not able to translate them into an action plan and act on them... Problem of commitment to the task / methodological problem</p>	The learner is able to reformulate, but does not commit to the activity, random approach by trial and error, impulsive behavior...
<p>→ The learner is not able to transfer and redo the activity in other contexts Problem of method and awareness of cognitive activities, identification of the rules that govern the activity</p>	The learner has previously been able to perform a task, but cannot repeat it when the context changes or makes mistakes when elements change in the situation...

Tool T61.3

E6. Support learning

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Active listening to check comprehension

Active listening is a communication technique that ensures that messages (instructions, contributions...) have been successfully received by the learner. The method is based on 3 steps: listening, questioning and reformulation.

1°) Listening

In order to create the relationship and encourage the other person to express themselves, it is important to adopt a caring attitude, to pay attention to others and to show that the opinions of others are welcome without judgment.

The listening time: positive silence

Practically, positive silence is achieved by avoiding interruptions of the speaker and by being satisfied with brief pauses marked by expressions such as "yes" or "I understand" as a sign of encouragement to expression.

Note: The trainer is often tempted to interrupt the learner's speech by immediately clarifying a question. The consequence of this is that the learner doesn't have access to his way of reasoning. It is important for the trainer to learn to suspend reactions and postpone comments and questions.

2°) Questioning

The trainer's practice of questioning allows him/her to assess the learner's understanding of the pedagogical instructions and messages.

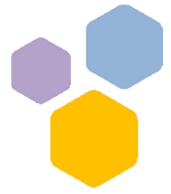
This questioning is carried out in 2 steps (clarification and investigation) and allows:

- First, to help the trainer to clarify the learner's speech.
- Then, to deepen the understanding of the learner's messages by allowing him/her to access his/her way of thinking.
- Finally, to assess the learner's overall understanding of the pedagogical instructions or messages.

1. Time for clarification

As a first step, it may be important for the trainer to clarify the learner's speech and messages. To do that, ask questions such as:

- *What do you mean by "..."? (use the exact words of the learner)*
- *What does this term "..." mean to you?*
- *What do you mean by "..."? (use the exact words of the learner)*
- *What does "...» mean to you?*
- *When you say, "...", what do you mean?*



2. Time for investigation

To deepen the understanding of the learner's dialogue, 3 types of questions can be used:

- Open-ended questions
- Factual question
- Questions of opinion

- **Open-ended questions:**
They allow the learner to approach the topic in his/her own way :
Example: *How will you do it?*

- **Factual questions:**
These questions make it possible to specify essential aspects of the problem, to add more detail to the information:
Example: *How long did it take to complete this task?*

- **Questions of opinion:**
These questions are different from the previous two as they focus on the learner's opinion. This involves asking for the learner's opinion about the task or its characteristics.
Example: *Do you need more time to complete this task?*
What do you think of your work?

3°) Reformulation

Reformulation is to rephrase or say in one's own words, what the other person has just said. It can be used in 2 ways:

- ➔ **By the trainer:**
He/she will use it to ensure that he/she has understood the learner's speech.
It can also be used to help the learner become aware of his/her dialogue , referred to as a "*mirror effect*" or "*reflection effect*".

Examples of expressions associated with reformulation
If I understood correctly what you mean is ...
According to you ...
If I'm following you properly ...

- ➔ **By the learner, at the trainer's request:**
In this case, the learner's reformulation will ensure that the trainer's messages, instructions, or work results are fully understood.
This reformulation by the learner must be prompted by a question from the trainer. The trainer may ask the learner to make a written or oral summary of what he/she has learned from the work done.
Reformulating by learner in his/her own words can show the trainer "where the learner is at" and identify possible grey areas or misunderstanding.

Examples of questions:
In your own words, can you tell me what you have understood?
What am I expecting from you with this task?
Could you give me 3 or 4 key points that you remember from this work?

Tool T61.4

E6. Support learning

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The needs of a learner

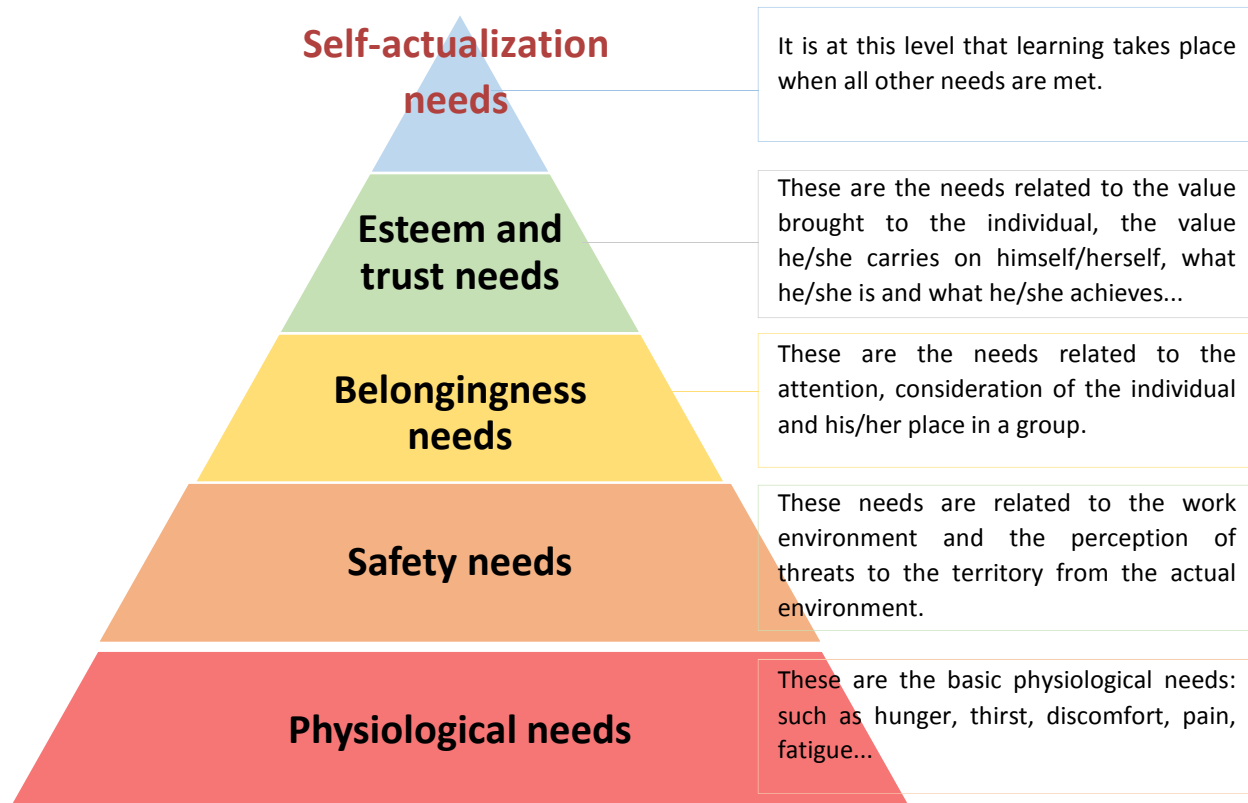
Tool to identify the different levels of a learner's needs

1. Maslow's pyramid model adapted to learning

Introduction:

- A. Maslow's work on motivation can be usefully adapted to identify possible barriers to learning.
- If we follow Maslow, it is necessary to take into account a hierarchy of primary needs so that the learner is available to meet the challenges of learning.
- This empirical work points out the necessary conditions to achieve successful learning.

2. Diagram of Maslow's pyramid of learning





3. Using the pyramid as a tool to support learning

► Objective:

The grid below, starting from signs and indications, helps to make hypotheses about the unmet needs of learners that can hinder learning.

The signs are equivocal and may raise several hypotheses.

In a collaborative approach, these signs must be confirmed in the real situation with learners.

Signs, indications	Level	Examples of remediation
Signs of fatigue, distraction, nervousness, dispersion of mind, body movements, lack of commitment to the activity,....	Physiological (hunger, thirst, need to urinate, discomfort, pain, fatigue...)	<i>Offer a break</i> <i>Remind learners of the time framework to support the effort</i> <i>Change of activity</i> <i>Open the windows</i> <i>Change physical posture</i>
Aggressiveness, annoyance, withdrawal into oneself, untimely questioning, critical a priori,....	Safety / security (difficulty in projecting oneself, worry about the future,...)	<i>Create a working environment with rules and rituals that give everyone stable points of reference (e. g. typical daily teaching routine).</i> <i>Restore the setting, mark out the route, the stages of the training,....</i> <i>Establish a group contract specifying rules of kind communication</i> <i>Take objections into account</i>
Clan emergence, negative leadership, learner exclusion, withdrawal, conflict, aggressiveness,...	Belongingness (attention and considération)	<i>Offer a kind welcome to everyone</i> <i>Address learners by their name</i> <i>Vary the composition of the groups so that everyone works with everyone</i> <i>Suspend judgments to avoid exclusion</i> <i>Evaluate the work, not the person</i>
Recurrent signs of self-doubt, Doubt of others, Denigration of oneself, of one's production, of others, Refusal to participate in the task, avoidance, hesitation,...	Esteem and trust (value and self-esteem)	<i>Give value to experience and success</i> <i>Encourage individually and collectively</i> <i>Identify the personal resources needed to act</i> <i>Practice reflexive feedback in situations of doubt and failure</i> <i>Empower individual on one's choices, one's freedom to make one's own choices</i>

■ Self-actualization level

The availability to learn and the ability to meet learning challenges are signs that show that the first 4 levels of needs are more or less met.

At this level, the learner may have other needs to be resolved, more closely linked to the learning object. For that, the trainer evaluates the learning process to identify the learner's level of need, which is more cognitive, methodological...





Cat. 2 : Linking learner's previous knowledge to the training inputs (weaving)

Problem	Junior has a problem with a trainee who does not understand his instructions. He tries to understand what is going on in the learner's mind. He is lead to identify the learner's representations...
Issue	Linking previous knowledge to the training inputs allows each learner to learn step by step by mastering their progress.

Keywords	Definition	Drawing
Representation	<p><i>A mental image or mental content of an individual about a concrete or abstract object.</i></p> <p><i>These subjective mental contents emerge spontaneously in the cognitive process and allow an understanding of the reality. For the trainer it is important to understand that each learner has his own representations about the objects of work and that he must take them into account.</i></p>	
Constructivism	<p><i>Jean Piaget established that the intelligence of an individual develops in successive stages in a specific order, particularly through his experience in the situations he encounters. Each stage corresponds to the emergence of new capacities to act in the real world or to think in the abstract world.</i></p>	
Weaving	<p><i>In the training context, weaving is a regulation practice that aims at connecting knowledge which has already been mastered by the learner and with new knowledge. The use of metaphors, analogies and examples by the trainers facilitates weaving.</i></p>	
Tools:		Description
T62.1 Hypothesis and resolving difficulties checklist		Checklist to identify the extent of a trainee's learning problem
T62.2 Techniques to work on mental representations		List of tools and techniques to work on learners' mental representations: exploring, making them evolve, and comparing points of view.
T62.3 Use of mind map		Short illustration of mind mapping and associated techniques
T62.4 Understanding : mechanisms and obstacles		This sheet illustrates two mechanisms, assimilation and accommodation at work in learning.

Tool T62.1

E6. Support learning

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Hypothesis and resolving difficulties checklist

The hypothesis and resolving difficulties checklist is a support that helps consider different hypotheses of learners' difficulties and proposes adapted solutions.

The hypothesis and resolving difficulties checklist

Hypothesis about the difficulty	Possible remedies for the trainer
<ul style="list-style-type: none"> ▪ The learner does not have access to all his/her means to understand Problem due to stress, having a problem in the past ? 	<ul style="list-style-type: none"> → Help the learner to control his/her emotions, propose a break, leave the room, breathe, get some fresh air... → Make the learner express himself/herself about his/her own state, what he/she is experiencing at the present moment in order to help him/her to step back, to be a witness to his/her own state... → Reassure the learner, point out and value his/her resources and his/her past successes → Ask another learner (or oneself) to talk about his/her similar problems and how he/she was able to overcome them
<ul style="list-style-type: none"> ▪ The learner does not have the prerequisites to understand Problem with the prerequisites? 	<ul style="list-style-type: none"> → Propose an activity to learn the prerequisites → Create self-training modules or summary sheets about the prerequisites → Plan activities which include testing of prerequisites and guidance towards the acquisition of prerequisites
<ul style="list-style-type: none"> ▪ The learner does not understand because the message is ambiguous or inappropriate in its formulation Problem of misunderstanding the instructions / miscommunication / ambiguous message 	<ul style="list-style-type: none"> → Use active listening and reformulation techniques to verify message reception → Use other means of communication: visual messages, illustration, icons in addition to texts and speech → Go through other learners and ask them to reformulate instructions, messages
<ul style="list-style-type: none"> ▪ The learner does not understand because he/she does not connect all the elements with his/her own knowledge... Problem of misunderstanding the instructions / lack of connection with other concepts and basics 	<ul style="list-style-type: none"> → Use mind maps to identify the learner's representations and association → Help the learner to identify some keywords that are problematic for him/her and explain them → Use techniques of working on representations (brainstorming, moving debate, protolanguage...) → Go through other learners (pairs, small group or entire group) and ask them to reformulate messages or instructions.
<ul style="list-style-type: none"> ▪ The learner understands the instructions but is not able to translate them into an action plan Problem of commitment to the task / methodological problem 	<ul style="list-style-type: none"> → Ask the learner to explain what he/she plans to do to ensure that he/she has been able to develop an action plan → Individually, use the "Instructions Understanding tool" with the learner → Use the method of instruction understanding and preparation of an action plan with small groups → Provide a methodological support adapted to the learner
<ul style="list-style-type: none"> ▪ The learner is not able to transfer and redo the activity in other contexts Problem of method and awareness of cognitive activities, identification of the rules that govern the activity 	<ul style="list-style-type: none"> → Use the elucidation interview to help the learner describe the course of physical and mental actions, his/her reasoning and the procedure he/she followed. → Use the reflective analysis method to help the learner to generalize knowledge. → Help the learner to transfer knowledge by helping him/her to identify what is constant in different situations → Suggest that the learner write summary sheets

Tool T62.2

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Techniques to work on mental representations

List of tools and techniques to work on learners' mental representations: exploring, making them evolve, and comparing points of view.

4. Brainstorming (Post-it or Metaplan)

► Objective:

Explore and share group representations on a common work object

Method :

1. **Choice of theme:** The trainer defines a theme for the group
2. **Personal exploration:** Each participant notes for themselves their ideas on the theme (on a post-it or)
3. **Sharing ideas:** Ideas are gathered collectively on a common support without judgment or restriction
4. **Organization, characterization:** Ideas can be reorganized; categorized and characterized (the use of post-its facilitates moving around and groupings).

5. Photo language

► Objective :

Explore group representations by using images to facilitate expression of ideas.

Method :

1. **Presentation of the theme, objectives:**
The trainer chooses a question for the group
2. **Choice of photo:**
Each participant, including the facilitator, is invited to choose one or two photos that inspire them in response to the question asked.
3. **Group exchanges:**
Each participant is then invited to present the selected photo(s) and to comment on his or her choice with regard to the question asked.
4. **Analysis of the session:**
The trainer invites participants to express how they felt whilst doing this work with photographs, what it meant to them and how it happened.



6. Moving debate

► Objective :

Confront the opinions and representations of participants about a subject in order to make them evolve.

Method :

1. The trainer chooses a "divisive" topic that may split the participants.
2. He/she suggests that participants physically position themselves in the room, "those who do not agree with what has just been said" on the one hand and "those who agree on the other".
No one has the right to stay in the middle (neutral), the fact of actually moving pushes to choose a side and arguments.
3. Once each participant has chosen their side, the trainer asks who wants to speak to explain his/her position.
4. When one side has given an argument, it is the other side's turn to express an argument. It's like ping-pong.
5. If an argument from the opposite side is considered valid by a participant, he/she can change sides.
6. When the trainer chooses him/her, he/she closes the debate.

7. World Café

► Objective :

Bring out, share and deepen ideas on a theme in large groups (>12 participants).

Method :

The World Café is based on the principle of discussions in a café on various themes.

1. Preparation :

Several questions for discussion are proposed and organized into tables (1 question per table). Participants are divided into as many groups as there are tables.

2. Rotating explorations:

Groups move from table to the other for a defined time (about 20 minutes).

The group members write down their thoughts on the tablecloth. A "memory" participant makes an initial summary of the group's reflections and transmits it to the next group. In this way, he/she ensures continuity in the reflection. The next group takes up the concepts discussed by the previous group and enriches them with new thoughts and ideas.

The work cycle is done in such a way that each group works on all tables.

3. Choice, decision

The best answers are selected through a voting process within each table. A feasibility study can be carried out to put the selected proposals into practice.



Tool T62.3

E6. Support learning

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Use of mind map

The mind map tool is helpful to explore a learner's or group of learners' representations of a subject and to identify their associations with the learning object.

1. Definition and use of the mind map

- Mind mapping is a technique using **graphic presentation of the ideas** of a person and of the **relationships between ideas**. It represents, at a given moment, the associations and subjective links between different notions, concepts...
The notion of mind maps was formalized by the English psychologist Tony Buzan. He suggests a number of rules of proper use.
- Mind maps can be used for different purposes: idea exploration, concept structuring, research, planning, presentation, creativity...
The use described here corresponds to the **situation of exploring a learner's representations** in order to understand his/her reasoning and associations and to better support his/her learning.

2. Method

1. Start-up: Start from the concept or chosen idea

Clarify the purpose of the mind map with your audience: for instance, explore a particular notion or concept. And then ask each learner to place this main purpose at the center of their sheet in a central nucleus.

2. Exploration: Ask each learner to make an exhaustive list of the **notions and ideas associated with the central idea** (on a separate sheet)

In this specific use of mind maps, this activity must be carried out individually to explore each learner's associations without being influenced by others.

3. Grouping: Ask each learner to group and categorize ideas

Invite each learner to choose a keyword for each group/category and place the keyword for each category on a main branch starting from the central core.

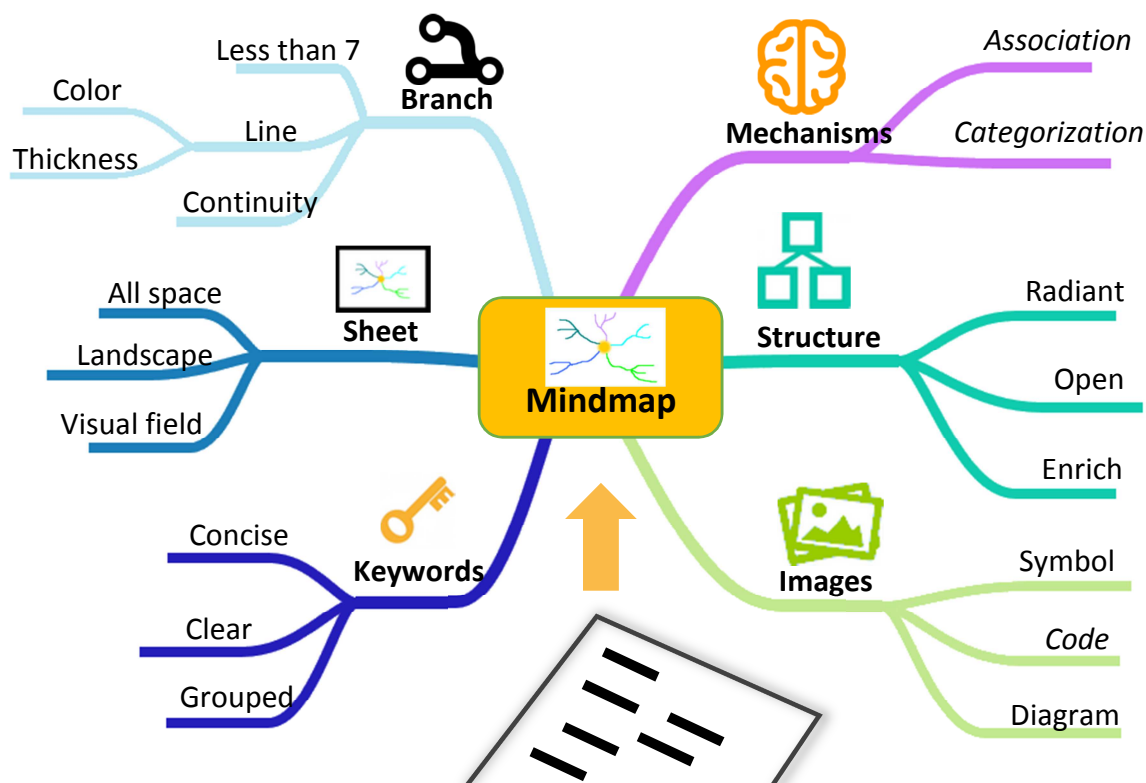
4. Achievement: Ask the learner or group to place all the ideas identified in point 2 and place them in each of the categories

Place each idea of a category on secondary branches starting from the branch corresponding to the category. Each branch can then be colored with its sub branches if necessary

5. Development: Invite each learner to add other ideas and place them on the map in the appropriate branches

The process of creation of the mind map spontaneously brings out new ideas that can be added to the map in a second exploration. The learner then completes his/her map according to what emerges from himself/herself by placing them in the existing branches or sub branches.





Following the development of ideas, new categories can emerge and enrich the map of the learner's representations. New branches can also be added.

This process graphically shows the learner's associations of ideas. These representations are likely to evolve with the inputs of the training, the confrontation with the representations of other learners during exchanges and group work.

Advice on mind map implementation (Tony Buzan)

In order to facilitate reading and new ideas development, Tony Buzan gives the following tips:

- **Suspend any judgment of a map regarding learner's choice of idea or relationship.**
The map represents his/her own associations and he/she is the one who can make them evolve through his/her reflection.
- **Use 1 keyword** on each branch and sub-sub-branch, which requires conciseness
- **Use 1 color per branch** to facilitate the identification and reading of ideas and stimulate associative thinking
- **Draw branches that radiate from the main** branches with a continuity that allows a natural gaze movement to be followed from one branch to another ("radiant thinking")
- **Use a maximum of 7 branches or sub branches** to facilitate reading by optimizing short-term memory usage
- **Illustrate with key images** the main key words to stimulate creativity and use of both brain hemispheres
- **Use the sheet in landscape format** and use the **entire space of the sheet** to adapt to the characteristics of the human eye's natural field of vision

Tool T62.4

E6. Support learning

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Understanding : mechanisms and obstacles

This tool illustrates two mechanisms, assimilation and accommodation, at work in learning

Assimilation and accommodation mechanisms

For Piaget, **conceptualization** is not just a matter of perspective. By acting, the subject constructs action plans that are gradually organized into operational structures.

Thus the action allows adaptation through a double mechanism:

1. Assimilation

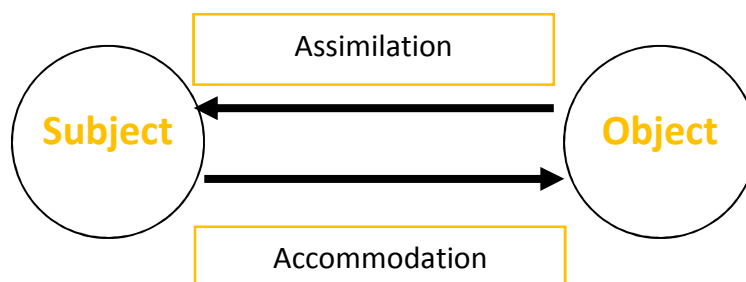
Assimilation allows the learner to mentally internalize the properties of a situation or object (movement from outside the subject to inside the subject).

Example: *A child sees a basketball. He only knows football and identifies the ball as a football and wants to play with his foot. He assimilates the object to its existing structure, the game of football.*

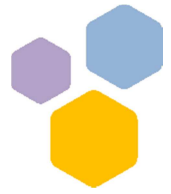
2. Accommodation

Accommodation allows the learner to transform his/her action patterns to adapt to the objects and situations he/she encounters, i.e., from a conceptual point of view, to learn.

Example: *The child who only knew the game of football discovers basketball and its rules for using the ball with his hands. When he sees a basketball, he recognizes it as such and starts playing with his hand and bouncing it. He has changed his representations and action patterns and has therefore adapted to this new knowledge.*



Understanding is not always easy for the learner. There are obstacles or resistance to understanding (G. Bachelard).



"Resistance" to certain learning objects: cognitive conflict

The accommodation mechanism process suggests that:

- there should first be an **attempt at assimilation** so that the learner's mental reception structures are mobilized and that the elements which are the subject of the learning process are linked to what the subject already knows,
- assimilation creates an **imbalance** that leads to "**cognitive conflict**",
- the conflict is "**regulated**" by a "major rebalancing", i.e. the imbalance is truly overcome and it leads to a new form of balance corresponding to real progress in terms of cognitive development. This is measured, in particular by progress within the stages of development (level of abstraction), as described by Piaget.

During his time, Piaget did a series of experiments confronting learners with situations which were likely to create a cognitive conflict within them. He showed through these experiments that it was possible to promote accommodation by regulating the learner's approach through appropriate interventions (see examples...).

By experimenting, the learner can observe the steps taken to overcome the cognitive conflict he had induced.

Examples of interventions that promote accommodation

A learner comes to training with his experience and mental representations from his practice.

For example, he may consider that safety rules are a brake or an obstacle to his work (He may say: "it is hot, I don't wear my helmet").

The following interventions facilitate assimilation and accommodation mechanisms.

- **Questioning the learner** on his/her representations of the situation, its characteristics, its dynamics and the consequence of 'such and such' actions...
- The **provision of counter-examples** that show the limits of his/her understanding of the situation and which illustrate a neglected or ignored aspect...
- The **confrontation of points of view** between learners to provoke a "socio-cognitive conflict", a tension between the representations of different learners that lead to regulation or adjustment by "peer effect",
- The **moving debate** leading learners to position themselves on different proposals or assertions related to a situation and organizing an exchange about the points of view of the different defenders of a position.


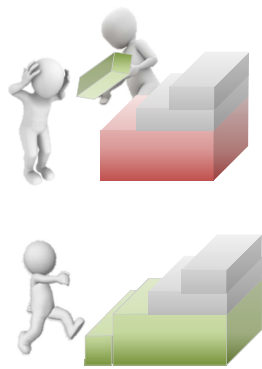

Cat. 3 : Using techniques and tools to improve learning (Scaffolding / unscaffolding)

Problem

Junior has a problem with a trainee who seems to have understood the instructions, but cannot start the exercise. Junior is lead to understand what is going on in the learner's mind.

Issue

The functions of cognitive support and scaffolding allow the trainer to propose alternative cognitive and emotional learning processes, starting from the gap he observed between what is expected and what is accomplished during the learning process.

Keywords	Definition	Drawing
Zone of proximal development	The zone of proximal development is the symbolic area where the learner will soon be able to perform a task by himself without the support of the trainer.	
Scaffolding / unscaffolding	<p>Scaffolding is a concept of problem resolution which is about the following actions :</p> <ul style="list-style-type: none"> - enroll the learner in a learning task, - simplify this task momentarily, - point out the specific characteristics of the task, - perform a demonstration, - help the learner to keep the objective to be achieved in view, - emotionally and cognitively support the learner in case of errors. <p>Symbolically, the trainer provides structural support for the learner to facilitate the construction of his knowledge.</p> <p>Unscaffolding is about carefully removing the support to anchor the learning accomplishments.</p>	
Operative image	This notion is close to the notion of mental representation or mental image. The operative image guides the activity of a person which is being performed according to a kind of mental scenario. It integrates steps and check points in order to identify, if necessary, the gap between what is expected and what actually happens in the activity and regulate these gaps.	
Tools:	Description	
T63.1 Understanding Instructions tool	It is a useful tool when working on learners' representations of a task to be performed. It can be used on many topics as long as instructions are provided to the learners.	
T63.2 Method of understanding instructions within groups	Method to facilitate the understanding of instructions within a group, by a methodical study of the instructions and a reformulation of an action plan before starting.	

Tool T63.1

E6. Support learning

Author : J.J. Binard
 Organisation : GIP-FAR
 Date : 9/10/2018

Understanding Instructions tool

It is a useful tool to help trainers to understand the **learners' representations** of a task to be performed.

It can be used on many topics as long as instructions are provided to learners.

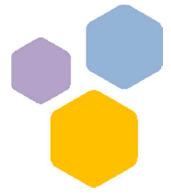
1. Support

- The **support** is a sheet of paper that is provided to the learner and looks like this:

SUBJECT / TOPIC:	
What I think the trainer expects me to do, what he/she expects me to know...	What I am doing, or could do, to achieve this is...

Golden rule :

The trainer should indicate that there is no "right" or "wrong" answer, and he/she should guarantee that there is no judgment.



2. Process

- **Learners complete the tool** as much as they can, **individually and in writing**. The answers are sometimes poor, in particular when it is the first time a learner is put in a position to question himself/herself in this way.
The answers should be anonymous if the idea is to have a general idea about the learners' understanding of the work. If the trainer knows the group well and has already started individual support relationships, it may be interesting to have personal answers. Then the compilation and the summary may be done by the trainer, by the learners themselves or by both of them.
- **Compilation and summary by the trainer:**
The trainer compiles the answers between two sessions. He/she can make a written document presenting the answers by grouping them together; this document may be used as a starting point for the group's work during the next session. It may be:
 - requests for clarification on specific activities,
 - observation of the diversity of the representations,
 - additional details about the trainer's suggestions that explain his/her expectations,
 - identification of what to ask another trainer about his expectations, etc.
- **Compilation and summary by learners in small groups:**
The trainer divides the whole group into groups of 4 or 5 learners. In each small group, the members share the understanding tools that were completed **anonymously**; each group reads the tool and lists the answers by grouping them together in a summary;
Then each small group reads the summary to the whole group (the 1st group gives all the information it has collected, the others only give information that has not been mentioned by the previous groups), the trainer notes on the board. All groups work as described above.

Tool T63.2

E6. Support learning

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 Date : 9 /10/2018

Method of understanding instructions within groups

It is a multi-step method used to help the understanding of instructions in groups and to prepare a learning activity. The method starts with individual thinking and uses sharing in small and large groups. As the method is long, it is recommended for important learning activities in a training course.

The 6-step method of understanding instructions within groups

■ Providing instructions to the learner

First, traditionally, the trainer gives instructions for a task to be done, an exercise or a complete self-study file that can represent part of a training session or can take place over several sessions. The instructions can be provided orally or in writing and may include illustrations or pictograms for audiences with limited reading skills.

■ Individual reading of the instructions

In a second step, the trainer leaves the learners a specific time for their individual understanding and integration of his/her instructions, in appropriate conditions where they can concentrate.

■ Writing an individual action plan

In a third step, the trainer invites the learners to individually write down an action plan, i.e. to describe, in order, the activities that each person will follow to do the requested task. This job of drafting the action plan may be more or less formalized depending on the importance of the requested task.

■ Grouping learners and sharing action plans in subgroups

Then, the trainer asks his/her learners to work in subgroups of 3 to 4 people and to share their action plan, one after the other. During this phase, learners often become aware of omissions, aspects of the task they had not thought of, or they identify other ways to do the task.

■ Writing a subgroup action plan

Once the individual action plans have been shared, the trainer invites the members of each subgroup to produce a summary and to write an action plan for the subgroup. This summary can be negotiated and compromises can be found between the group members. Sometimes, it may be interesting to appoint representatives and facilitators in each subgroup to ease exchanges and decisions.

■ Collective sharing of each group's action plan and adjustment

Finally, to finalize the understanding process, the trainer invites each subgroup to share their action plan with the entire group and the trainer.

In this phase, it sometimes happens that a subgroup has not taken into account one aspect or another of the problem, and this leads to regulation between the groups.

To finish this work, the trainer invites each group to adjust its action plan by taking into account the contributions of the other groups. At this stage, individuals are ready to work.



Cat. 4 : Using reflexive analysis to support learning

Problem	Junior faces a learner who cannot do a new exercise in another context. Junior does not understand why because for him it is almost the same problem. He will learn about the transfer of learning and reflexive analysis.
Issue	Reflexive analysis helps the learner to take a step back and become aware of his own mental and physical process. This is very useful to develop and anchor the understanding and create symbolic rules needed for learning.

Keywords	Definition	Drawing
Contextualize / decontextualize / recontextualize	<p>Contextualizing a problem is about taking into account all the specific information of the concrete environment that corresponds to the surface elements of a problem. This allows weaving with the knowledge or experience of the learner.</p> <p>Decontextualizing the problem is an abstract operation that consists of identifying the problem's own structure, independently to a specific context. It involves sorting and identifying symbolic constants (example: apply a mathematical rule).</p> <p>Recontextualizing enables the solving of a problem with the same structure in another context</p>	<pre> graph TD Abstraction[Abstraction General rules, rules of action, models] --> Decontextualize[Decontextualize Understanding, generalisation] Decontextualize --> Practice1[Practice Situation / Context 1] Practice1 --> Recontextualize[Recontextualize Application of the rules and models to a new context] Recontextualize --> Practice2[Practice Situation / Context 2] Practice2 --> Abstraction </pre>
Reflexive analysis	<p>In the field of education and training, reflective analysis consists of taking one's own activity as an object of analysis using a clear and rigorous methodology.</p> <p>This form of inner inquiry (Dewey) by the subject on himself and on his own action (whether he is a trainer or a learner) allows a critical distance on the actual performances and enables regulations, corrections when they are necessary.</p>	
Transfer of knowledge	<p>The transfer of knowledge consists, for a subject, in moving from the resolution of a known problem 'situation x' to the resolution of a new problem 'situation y' with a similar structure: this implies an ability to generalize (identify problem classes) and to abstract (not focus on the surface of problems). The deductive approach, when guided, promotes the transfer of knowledge and know-how.</p>	<pre> graph LR SX[Situation X Beaker] --> T((1/4 ?)) T --> SY[Situation Y Cars] </pre>



**Elucidation
interview**

*In the field of education and training, the elucidation interview is a **verbalization** technique that focuses on the real activity of the learner, which is very useful to the trainer to help **scaffolding**. This technique is used for the visible activity (actions and behaviors) and also for the invisible activity (takes of information, organization and sort of information, reasoning...)*



Tools:	Description
T64.1 The elucidation interview	Elucidation interview, definition and base rules
T64.4 Reflexive analysis Method	This is the method that Perrine followed to facilitate learning transfers and allow a learner with difficulties to access abstract rules from concrete situations.

Outil T64.1

E6. Support Learning

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Date : 05/10/2018

The elucidation interview

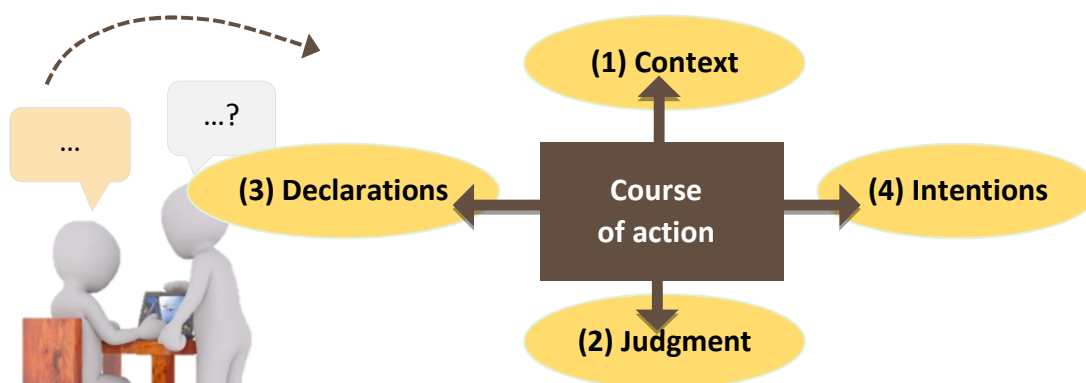
Basics, definition and method to practice the elucidation interview to support the learning process.
The elucidation interview is a powerful tool that requires real training.

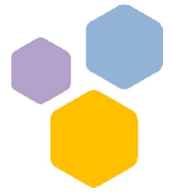
1. Basics for conducting the elucidation interview

- In the training field, the elucidation interview allows the trainer to obtain **information about the trainee's learning activity**. Through this interview, the trainer is able to regulate the learning activity in a more reactive and relevant way, thanks to more adapted support.
- The elucidation interview is a way for the trainer to make the trainee **verbalize his/her activity**, in particular the invisible cognitive activity that accompanies the visible behaviors which correspond to what the trainee actually does. Thus, the description of the **visible, but also invisible, dimensions** of the trainee's activity is valuable, as it provides personalized information to the trainer for correction purposes.
- In addition, it helps the trainees to become aware of their own functioning through **reflexivity** and **self-correction**.
- Elucidation requires a climate of trust and is based on "how" type questions ("why" type questions, where the subject rationalizes his/her action but does not describe it should be avoided).
- The trainer "guides" the trainee's verbalization of the action with empathy and without judging.

2. The heart of elucidation

The questioning of the trainer focuses primarily on the description by the learner of the course of action and secondarily on the peripheral elements of the action: the context, judgments, declarations and intentions. From the learner's speech, the trainer should be able to identify the type of information and if necessary, should be able to bring the learner back to the procedural aspect of the action.



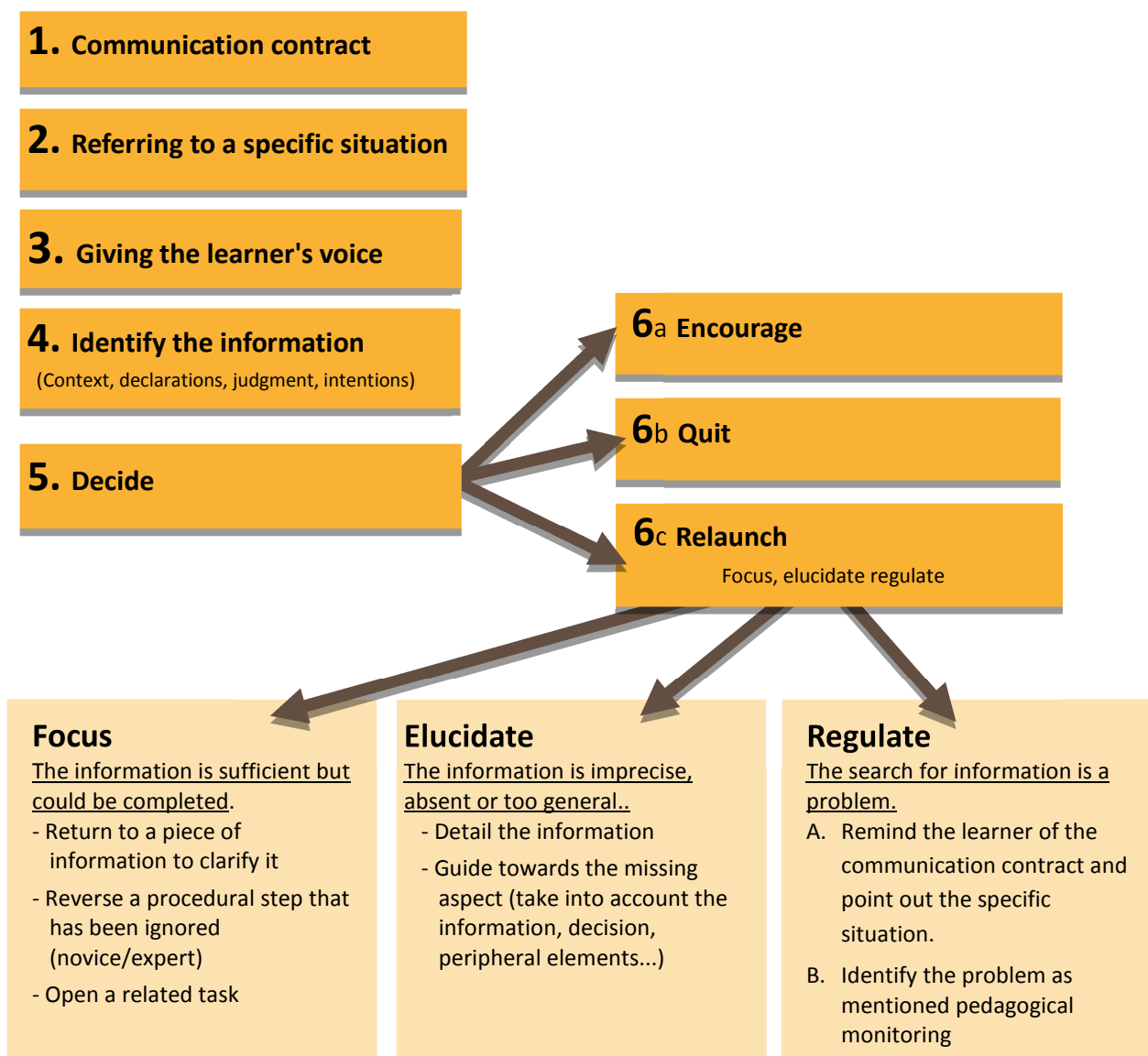


The **course of action** described by the learner concerns:

- practical knowledge (pragmatic concepts)
- steps of elementary operations (=>start/end indicators)
- mental and physical actions (interpretation, arbitration, decision)
- effective implemented action

- (1) **The context** of the action refers to the circumstances and the environment of the action and helps situate the accomplishment of the action on the physical, spatial, temporal, emotional or symbolic level.
- (2) **Judgments** relate to the opinions and beliefs of the learner. Noticing judgment allows the trainer to better understand what the subject thinks about what he/she is doing and how important it is to him/her.
- (3) **Declarations** refer to the theoretical knowledge, the procedural knowledge formalized by the learner. The trainer can identify a gap between what the trainees say and what they actually do.
- (4) **Intentions** give information about the goals and motives of the learner. The trainer can identify a gap between the goal the learner claims to be pursuing and what he/she is actually doing.

3. Method to conduct the elucidation interview



Tool T64.2

E6. Support learning

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Date : 9/10/2018

Reflective analysis method

This is the method that helps learners to transfer their acquired knowledge and allows a learner with difficulties to access abstract rules from concrete situations.

Perrine's reflective analysis method

This method is useful when the trainer is confronted with a learner who has been able to perform a task or exercise but who cannot do it again in another context. The learner is thus unable to step back to perceive the steps of his/her own reasoning, the procedure that he/she has followed to transfer the knowledge to another situation.

- **Elucidation by the learner of his/her reasoning**
The trainer uses the elucidation interview to help the learner describe his/her method, his/her reasoning to perform the task or the exercise.
- **Proposal of a new situation (possible blocking point)**
The trainer proposes another exercise by changing the situation. The learner may be stuck at this stage and be unable to solve this new case.
- **Identifying the common and different elements between the 2 situations**
The trainer leads the learner to point out what is identical and what is different in both situations. This explanation should help the learner to identify constants and rules.
- **Summary of the reasoning and rules followed**
The trainer invites the learner to write a summary sheet to describe the general method, the constants and the general rules to memorize. This summary is the learner's production and can be validated by the trainer.
- **Transfer to another situation**
The trainer asks the learner to solve another case, a new situation by applying the method, the rules that the learner has just formalized. The trainer may possibly lead the learner to correctly identify the elements of the situation within the rule.
- **Memorization**
The trainer invites the learner to review his/her summary sheet from time to time to ensure that the method used is memorized and that the knowledge is anchored. Reviewing a summary sheet several times after it has been written ensures good re-use of knowledge when new situations are encountered.

Synthesis of the module

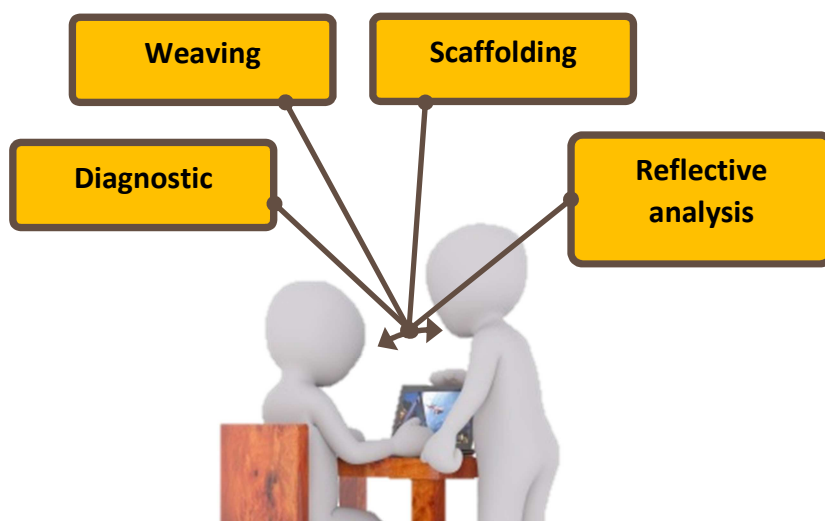
E6. Support learning

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The learning support function

The learning support function is strategic for any trainer. It jointly articulates 4 complementary dimensions: diagnosis, weaving, scaffolding and reflective analysis

The 4 dimensions of learning support

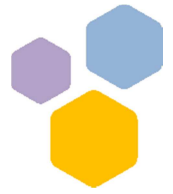


■ The diagnostic function

The diagnostic dimension allows the trainer to identify each trainee from a clinical point of view by identifying their initial skills in different areas, their level of commitment to training, the dynamics and potential heterogeneity of the group. It is from this starting point, as accurate and precise as possible, that the trainer can consider his action, rather than from the pre-representations he may have on a particular audience. A diagnosis may involve positioning tests but also a dialogue with the trainees (co-diagnosis).

■ The weaving function

The weaving dimension (D. Bucheton and Y. Soulé) refers to the question of the meaning for the trainees, of the targeted learning. To encourage and maintain the commitment of the trainees, to enable them to mobilize the knowledge at their disposal, it is necessary to clearly indicate the goals to be achieved, the path to be followed and to build on existing achievements.



■ **The scaffolding function**

The notion of scaffolding (J. S. Bruner) concerns the assistance that the trainer can provide to the trainee by being located in his "zone of proximal development" (ZPD): by securing learning (socio-psychological dimension), by reinforcing self-esteem, by pointing out the determining characteristics of a task, or even by proposing an adapted demonstration, the trainer allows the trainee to progress in learning.

■ **Reflective analysis**

Reflective analysis is a posture that allows the trainer not to engage in a routine or automatisms to "do the program" and to remain vigilant to the singularity of each learner's rhythms and learning modalities. In this way, the trainer increases his skills and ensures a learning environment that is both caring and demanding.