

Reference Document

A Practical Guide for Teaching Adults with Learning Difficulties

Literacy, Presecondary and Secondary Education

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A Practical Guide For Teaching Adults with Learning Difficulties

Literacy, Presecondary and Secondary Education

Formation professionnelle et technique
et formation continue

Direction de la formation générale
des adultes

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Design and Development

Jean Patry, consultant with the Direction de la formation générale des adultes

Collaboration

Margot Désilets, consultant with the Direction de la formation générale des adultes

Collaboration related to learning problems experienced by certain secondary school students (Parts IV to XIV)

Louise Laroche, Commission scolaire de l'Énergie (mathematics)

Hélène Dufour, Commission scolaire de la Région-de-Sherbrooke (French)

Correction after linguistic revision

Lise Martel, Commission scolaire Marie-Victorin

English Version

Direction de la production en langue anglaise
Services à la communauté anglophone
Ministère de l'Éducation, du Loisir et du Sport du Québec

Coordinator for the Direction de la formation générale des adultes

Andrée Racine

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Introduction

This document is an adapted version (abridged and modified) of *A Practical Guide for the Teaching of Literacy to Adults With Learning Difficulties*. It is not always easy to summarize a document, especially when it is made up of fourteen parts that are all equally important. We had to make choices, always striving to respect the spirit of the original document while making it easier to use.

This version was produced in response to a desire that has been expressed many times by teachers of adults with learning problems. **Unlike the original version, intended primarily for literacy services, this adapted version can also be used for adults in presecondary and secondary school with learning problems (difficulties or disabilities).** At the very least, this is what we have attempted to make possible, an undertaking that meant the adapted version could not include a large number of situations in which the problems manifested are at a very low level.

The appendixes will be particularly useful since they contain practical information geared towards any education level of the persons with learning problems. Finally, readers will notice that the title of the guide has been slightly modified to reflect the above areas of concern.

This adapted version is made up of **five chapters**.

— **Chapter One** includes:

- a list of the documents contained in the original version of the guide. This list is useful since, as we have just pointed out, the original version remains the main reference in cases in which diagnosis indicates that the adult's competencies are at a very low level
- a summary of the contents of the first three parts of the original version of the guide
- a brief description of *Training Models - How to Use "A Practical Guide for the Teaching of Literacy to Adults With Learning Difficulties"* in its original version
- a presentation of the *Guide d'utilisation du coffret sur les difficultés d'apprentissage* in its original version.

- **Chapter Two** deals with the remedial field (Parts IV to VIII in the original version). Every part is structured as follows: the number and the title, a brief introduction, a list of diagnostic questions, and suggestions for teaching strategies.
- **Chapter Three** deals with the cognitive field (Parts IX to XIV in the original version), using the same structure as chapter two.
- **Chapter Four** is a bibliography.
- Finally, **Chapter Five** is made up of appendixes that are substantial additions to the original version of the guide.

Notes:

- In the adapted version, we have kept only inclusive diagnostic questions, that is, those that are asked after the acquisition of the prerequisites necessary for the mastery of a competency: "Can the adult read or write sentences?" and not "Can the adult read or write letters, syllables or words?" In addition, these diagnostic questions were modified into statements about learning problems. Such a change makes the diagnostic work more effective: the teacher needs only to locate the statements that correspond to the adult's situation. For example, "Can the adult write isolated sentences?" becomes "The adult cannot write isolated sentences." As for teaching strategies, we have kept only those directly related to the statements presented. Finally, the formulation of certain teaching strategies was modified and new teaching strategies are proposed.
- In practice, using the original version of the guide not only remains possible, but is necessary in cases where the adult's level of competencies requires interventions prior to those being proposed. It is the original version, in fact, that contains the teaching strategies that correspond to the vast majority of problems experienced by adults in literacy education.
- Whether it is a question of school subjects or the learning process in general, systematic teaching and learning yield better results than informal teaching and learning.

- **If deficiencies persist even after appropriate teaching strategies have been applied, the problems are likely caused by learning disabilities rather than learning difficulties. However, in order to make a final pronouncement in such a case, a diagnosis has to be made using standardized tests administered by persons who have the competencies to do so** (original version, Part III, p. 12).
- According to the circumstances, the resources available, and the nature of the problems, the intervention will be carried out by a member of the teaching staff or a specialist. In all cases, a joint action approach is essential.

Chapter One: Presentation of the original version of the practical guide, its first three parts, and two related documents

Chapter One includes brief presentations of:

1. the original version of the guide
2. the first three parts of the original version of the guide (general documents)
3. *Training Models - How to Use “A Practical Guide for the Teaching of Literacy to Adults With Learning Difficulties”* (original version)
4. the *Guide d'utilisation du coffret sur les difficultés d'apprentissage* (original version)

1. The original version of the guide

A Practical Guide for the Teaching of Literacy to Adults With Learning Difficulties is made up of fourteen parts:

- three general documents, presented below
- eleven diagnosis and intervention instruments:
 - five for the remedial field (see Chapter Two)
 - six for the cognitive field (see chapter three)

2. The first three parts of the original version of the guide (general documents)

Part I, which introduces the guide, and discusses upgrading (times, forms, content, resources). This document also contains a bibliography and a very detailed table of contents.

Part II deals with the issue of the different learning problems that can be associated with four categories of activities: educational (problems related to cognitive operations); social (problems related to interpersonal relations); personal (problems related to social skills, autonomous functioning); occupational (problems concerning work-related behaviours: job search, observance of job-related requirements, etc.)

This document also explains the difference between learning difficulties and learning disabilities. **Difficulties** are related to external factors and are considered temporary. **Disabilities**, on the other hand, result from internal neurological factors; they are innate or acquired and permanent.

For additional information on this subject, see Appendix I, "Learning and Learning Problems."

Part III presents the nomenclature of learning problems (causes and consequences). Its purpose is not to discuss possible solutions, but to familiarize teachers with the concepts related to learning problems, such as confusion, addition, inversion, omission, substitution, and repetition. This will help them later to recognize these problems in situations of daily life. The concepts are described in relation to three basic subjects: reading, writing and arithmetic, and each subject is discussed from three points of view: how things happen "when it works"; how things happen "when it doesn't work"; if it doesn't work "it might be because..."

3. *Training Models - How to Use "A Practical Guide for the Teaching of Literacy to Adults With Learning Difficulties"* (original version)

Since a minimum level of training is required to use the guide, this document makes it possible for the various literacy groups to provide training on the guide without having to resort to outside resources.

The document presents three possible training models: initial group training, initial self-directed training, and ongoing training. For each of these models, a description of the training procedure is provided. The proposed models are by no means mandatory, rather they are suggestions for discussion and can be applied or not. They can therefore be adapted to the needs of each group.

The document includes a few suggestions on how to conduct an initial group training session. It also lists the minimal competencies required to lead training sessions.

4. *The Guide d'utilisation du coffret sur les difficultés d'apprentissage* (original version)

The *Guide d'utilisation* presents each of the fourteen parts of the guide in the form of an adult education summary sheet that includes the following: the part number, the title, the publication date, the number of pages, the reason for production, the contents, examples of situations in which the part can be used, and where it can be obtained.

Three appendixes complete the document: a bibliography, a set of examples of situations in which the parts can be used (examples given on each sheet), and finally an index in which the subjects are first classified by part and then in chronological order.

Chapter Two: Remedial Field

The content of the remedial field in the original version of the guide is divided here into **five modules** (IV to VIII): English (Reading); English (Writing); Arithmetic (Reading); Arithmetic (Writing) and Graphic Motricity. These parts are presented here in their adapted version.

Each part includes the following headings: introduction, diagnosis (the problem), and possible teaching strategies (what is suggested to help the adult).

2.1 English (Reading)

Adaptation of Part IV of the original version

Introduction

Reading is a prerequisite for the acquisition of a great many declarative (knowledge: what, who), procedural (skills: how) and conditional (attitudes: when and why) competencies. For example, reading environmental print makes it possible to be informed about rules that are pervasive in our society and indispensable for proper functioning in everyday life. This part, the first one in the section on the remedial field, was produced to help teachers identify learning problems related to reading in English, but also to suggest to them avenues for intervention. It is also aimed at helping them develop a systematic, rigorous approach to the obstacles that arise in learning situations.

Problems dealt with in this part

- The adult reads in syllables (ba-na-na.). page 12
- The adult reads hesitantly and without expression. page 12
- The adult does not understand the meaning and use of punctuation. page 12
- The adult does not understand the meaning of certain words. page 13
- The adult deciphers the text being read, but does not understand the meaning. page 14
- The adult has difficulties with certain sounds (confuses, adds, inverts, omits, substitutes or repeats certain ones). page 15
- The adult has difficulties with certain words (confuses, adds, inverts, omits, substitutes or repeats certain ones). page 15
- The adult forgets some segments at the beginning, in the middle, or at the end of sentences. page 16

Diagnosis

The adult reads in syllables (ba-na-na).

Possible teaching strategies

- Check the placement level of the adult and ensure that reading syllable by syllable is not due to an inadequate mastery of the sounds.
- Simplify the material used.
- Explain why the adult's reading needs to be corrected (it hinders understanding for both the reader and the listener).
- Have the adult read short messages out loud.
- Have the adult read the same message several times, with a view to building fluency in the reading of words.

Diagnosis

The adult reads hesitantly and without expression.

Possible teaching strategies

- Make connections between spoken and written language to illustrate the importance of expression.
- Encourage the adult to set aside a time for silent reading every day. The learner can keep rereading the same text, timing him- or herself to attempt to reduce the time required.
- Ask the adult to avoid internal pronunciation, which impedes fluent reading.
- Record the adult reading and have him or her listen to help him or her become aware of his or her reading style.
- Act as a model for the adult. Read to the adult learner out loud or using an audio tape recorder or videotape recorder.

Diagnosis

The adult does not understand the meaning and use of punctuation.

Possible teaching strategies

- Demonstrate reading out loud by showing the difference between a punctuated and an unpunctuated text.
- Ask the adult learner to read the text as well.

- Present the same text to the adult several times, modifying the punctuation, and point out the changes in intonation and meaning. Examples: "I don't want to marry him. I think he's boring. Like you, I find him nice, but that's not enough." / "I don't want to marry him. I think he's boring like you. I find him nice, but that's not enough." "Helen," said Paul, "likes to study." Helen said, "Paul likes to study."
- Suggest that the adult construct similar sentences.
- Suggest that the adult interrupt his or her reading and lightly tap the table every time he or she encounters a punctuation sign: once for a comma, twice for a period. At the beginning, do this exercise out loud.

Diagnosis

The adult does not understand the meaning of certain words.

Possible teaching strategies

- Explain the basic importance of vocabulary and concepts such as enriching one's thoughts and understanding of experiences.
- Check, in the case of immigrant adults, if the problem is not the result of lack of English vocabulary.
- Do exercises to enlarge vocabulary: discuss a movie, talk about current events, play word games, do crossword puzzles or make a collection of new words.
- Strongly encourage dictionary use. Show that this tool can be fun as well as useful.
- Help the adult enrich his or her vocabulary around a certain theme: health, leisure, learning, etc.
- Repeat a new word several times by using it in different contexts.
- Ask the adult to imagine a landscape and describe it with as many details as possible.
- Ask the adult to imagine and recount how the beginning of a story would continue.
- Encourage the adult to make lists of synonyms, antonyms and homonyms.
- Ask if the adult knows similar words (in the same family).
- Ask the adult to read a whole paragraph and find the meaning.
- Ask the adult to identify the root of a word and look up what it means. Repeat the same exercise with prefixes and suffixes.

Diagnosis

The adult deciphers the text being read, but does not understand the meaning.

Possible teaching strategies

- Check the adult's understanding by asking him or her to carry out written instructions.
- Write a message addressed to the adult. Ask the adult, for example, to go to a given place to pick up or return an object (overhead projector, etc.).
- Ask the adult to complete sentences using a selection of words. The length of the sentence and the number of words may vary.
- Ask the adult to rearrange a segment that is out of order in a paragraph.
- Ask the adult to put the sentences of a text back in order.
- Ask the adult to find, in a paragraph, one sentence that is out of place.
- Ask the adult to locate, in a text, the sentence that does not suit the context.
- Ask the adult to summarize short texts.
- Ask the adult to find the main idea in a text.
- Ask the adult to underline key words in a sentence and then retell it in his or her own words, but using the key words. If the adult cannot do this, check if he or she understands the meaning of all the words.
- Ask the adult to formulate simple questions about a text before starting to read. This promotes better understanding.

Diagnosis

The adult has difficulties with certain sounds
(confuses, adds, inverts, omits, substitutes or repeats certain ones).

Possible teaching strategies

- Check the adult learner for a number of parameters: knowledge of letter-sound correspondence, quality of hearing, quality of vision, attention and concentration.
- Encourage the adult to consult one or more specialists if necessary.
- Using exercises, teach the adult about auditory perception and auditory memory: for example, distinguish familiar sounds or noises in an audio recording.
- Play the telephone game: the first person says two words to a second person. That person repeats the words and adds another. That person passes on the three words to a third person and so on and so forth. The exercise can also involve lengthening a sentence from one person to the next. Example: "I'm moving and I buy tables, a sofa, a refrigerator, etc."
- Ask the adult to repeat certain sounds and check the pronunciation. Draw attention to what is happening physically (lips, neck, tongue, etc.) when the adult pronounces them.
- Help the adult make cards for the sounds he or she confuses. Have the adult choose key words that are meaningful to him or her. For the confusion of "p-b," the words "peach" and "pear" could be used for a learner who loves fruit. Another list could be made of words starting with "b" and the two sets of cards could then be compared.
- Record the selected words, then ask the adult to listen to the recording and repeat the words out loud.
- Draw the adult's attention to the meanings of observation and visual discrimination. Give the adult references to help him or her find certain shapes or series.
- If necessary, mark the problem sounds with a specific colour.

Diagnosis

The adult has difficulties with certain words
(confuses, adds, reverses, omits, substitutes or repeats certain ones).

Possible teaching strategies

- Check the adult learner for a number of parameters: quality of hearing, quality of vision, attention and concentration.
- Encourage the adult to consult one or more specialists if necessary.
- Have the adult observe the frequency and type of errors.
- Show the adult the changes in meaning that the errors cause.
- Record the adult reading so he or she can compare the oral production with the written text.
- Have the adult then mark the errors in his or her text. Example: putting an asterisk where a word was added, omitted, substituted, etc. Have the adult reread the text, asking him or her to take the annotations into account.
- Encourage the adult to be vigilant when reading.
- Encourage the adult to look for meaning while reading a text.

Diagnosis

The adult forgets some segments at the beginning, in the middle, or at the end of sentences.

Possible teaching strategies

- Check the adult learner's knowledge of the concept of sentence and the corresponding visual clues: capital letters and periods.
- Check the adult's knowledge of punctuation signs.
- Make the adult learner aware of his or her various omissions. To do this, record the adult reading and ask him or her to compare what was read with the written text.
- Ask the adult to make the necessary corrections to his or her reading.
- Suggest the adult read a short informative or descriptive text, with one sentence per line and the sentences separated by a large space.
- Ask the adult to read while sliding a bookmark along to cover the words that follow those being read. This method can also be used in cases where the adult repeats or omits words.

2.2 English (Writing)

Adaptation of Part V of the original version

Introduction

Writing gives access to a key form of expression. Making it easier to learn how to write is therefore an extremely laudable goal. It was with this intention that this part was produced, especially since mastery of writing often poses a difficult challenge for those registered in literacy programs, as well as for others. In light of the foregoing, this part offers teachers strategies that will help them increase awareness among adult learners with regard to writing, familiarizing them with writing, and encouraging them to write.

Problems dealt with in this part

- The adult cannot write a text of a few sentences when writing freely or from dictation. page 18
- When writing, the adult has difficulties with sounds. page 19
- When writing, the adult has problems with: adding or omitting words; substituting or repeating words in a sentence; or forgetting parts of sentences or complete sentences. page 19
- In a dictation, the adult has spelling problems. Page 20
- In a dictation, the adult has grammar problems. page 21
- When writing freely, the adult has spelling problems. page 21
- When writing freely, the adult has grammar problems. page 21
- When writing freely, the adult has problems summarizing a text. page 22
- When writing freely, the adult has problems with coherence of ideas. page 23
- When writing a text, the adult has problems getting started. page 23

Diagnosis

The adult cannot write a text of a few sentences when writing freely or from dictation.

Possible teaching strategies

- Check whether the adult knows what a text is.
- Drill this concept with various exercises. For example, ask the adult:
 - to place sentences in order to assemble a text logically and chronologically
 - to complete a text respecting the logic and the chronology
 - to place illustrations in their logical order and compose a text related to them
 - to develop a detailed plan
- Familiarize the adult with the different stages in the development of a text by providing a model, doing this several times. Write a text on the chalkboard using the following procedure:
 - write down a list of ideas to use on the chosen subject
 - verbally express the adult's questions on choices of words, rules of grammar and syntax and the semantic organization of the text
 - cross out words or make cross references
 - whenever necessary, look things up using the available reference tools
 - polish the text
- Ask the adult learners to experiment with writing a text in groups of two or three.
- Correct the text, pointing out the mistakes made and what tools can be used to correct them (the learner could be asked to find the mistakes him- or herself, correct them, and explain the new version).
- Explain how to develop and produce a text:
 - make a list of all the ideas that could be used without self-censorship or analysis of their relevance, logic, etc.
 - choose ideas, classify them and construct a plan
 - write a first draft

- review the logical structure and the connection of ideas
- correct the style (repetitions, inversions, connecting words, etc.)
- correct spelling and apply grammar rules using the tools available (if the adult has basic problems with grammar, ask him or her to underline noun phrases and connect the subject and verb with an arrow)
- suggest the adult learners reread their texts the next day before producing the finished versions
- emphasize the importance of reworking texts (by asking the adult learners, for example, to say how many times they think a book was revised and corrected before being published).

Diagnosis

When writing, the adult has difficulties with sounds.

Possible teaching strategies

- Determine the most frequent types of errors.
- Describe the problem precisely.
- Check the adult learner for a number of parameters: quality of hearing and pronunciation, knowledge of the correspondences between graphemes and phonemes, and knowledge of syllabic analysis.
- Encourage the adult to self-correct. For example: I have to write the word "ability." I say the word out loud. I reread the word I wrote (I can look it up in the dictionary): I wrote "ablity." I break down the word into syllables and correct it.
- Encourage the adult to reread his or her writing frequently.
- Ask the adult to type his or her text on the computer and do a spell check.

Diagnosis

When writing, the adult has problems with: adding or omitting words; substituting or repeating words in a sentence; or forgetting parts of sentences or complete sentences.

Possible teaching strategies

- Have the adult learner observe the frequency and type of errors.
- Have the adult observe the changes in meaning or syntax caused by the errors.

- Check the range of the learner's vocabulary (a poor vocabulary can be the reason for a substitution).
- Check the adult's knowledge of the rules of syntax.
- Suggest that adult learners repeat in their heads the sentences they are writing.
- Have the adult reread his or her text out loud (the same day or the next day) and ask him- or herself the questions on the self-correction card prepared in accordance with the type of problems he or she has.
- When the adult learners repeat words due to lack of vocabulary:
 - ask them to circle the repeated words and to replace them with pronouns. If this is impossible, ask them to find synonyms
 - do exercises in which the learners have to replace the repeated words with pronouns, adjectives or synonyms

Diagnosis

In a dictation, the adult has spelling problems.

See:

- Pépin, M. and M. Loranger. *CO-SKILLS, Cognitive Training Software* (version 4.2). Sainte-Foy: Le Réseau Psychotech inc., 1997.

Possible teaching strategies

- Check the adult learner's pronunciation of the problem words and have him or her pronounce them correctly.
- Give the adult words to study, ensuring that he or she possesses strategies to memorize the spelling (the learner can invent his or her own strategies: mnemonics, analogy, etc.).
- Teach the adult to ask him- or herself questions during the dictation and apply his or her memorization strategies for remembering the spelling of words.
- Encourage the adult to use reference tools to self-correct.
- Ask the learner to rewrite his or her text on the computer and find spelling mistakes.
- Ask the adult to compose three sentences with the problem words (two or three words can be combined in each sentence).

Diagnosis

In a dictation, the adult has grammar problems.

Possible teaching strategies

- Check the adult learner's knowledge of grammar and teach the rules not yet mastered.
- Teach the adult to ask him- or herself questions during the dictation about the relationships among words.
- Give the adult learner sentences to study regularly.
- Ask the adult to summarize the rules that cause problems, to write them down in a notebook and to illustrate them with his or her own examples (not those in the book).

Diagnosis

When writing freely, the adult has spelling problems.

Possible teaching strategies

- Show the adult learner how to get around difficulties by using, for example, a synonym: *doctor* or *physician* rather than *ophthalmologist* or *anaesthetist*.
- Teach the adult to ask him- or herself questions while writing.
- Take advantage of every opportunity to encourage the adult to express him- or herself orally and correct mispronunciations.
- Use every opportunity to encourage the learner to increase his or her vocabulary and reuse the new words in various activities.
- Encourage dictionary use.

Diagnosis

When writing freely, the adult has grammar problems.

Possible teaching strategies

- Work on grammatical analysis, making sure that the rules of grammar are understood.
- Encourage the adult learner to discover grammar rules on his or her own. For example, ask the adult to explain the differences between "an apple" and "the apple," "she goes" and "they go," "she goes" and "she went" and "she is going."
- Present the grammatical concepts in concrete ways. Associate them with everyday situations.

- Teach the adult learners to ask themselves questions about the relationships among words as they are writing. If necessary, ask the adults to indicate these relationships on the sheet, for example, with arrows. They can also ask themselves the questions in the self-correction grid constructed in accordance with their individual difficulties.
- As with for all other difficulties, encourage the adult to use the reference tools available.
- Suggest that the adults read out loud.
- Ask the adult learners to summarize the rules that cause them problems, to write them down in their notebooks and illustrate them with examples.

Diagnosis

When writing freely, the adult has difficulties summarizing a text

Possible teaching strategies

- Encourage the use of a grid at the organization stage and at the stage of the message transmission.

There are examples of grids in the "Grille universelle pour développer les habiletés en écriture." See, "*Répertoire des documents produits en alphabétisation au cours des dernières années par la DFGA*, in the bibliography, under "Ministère de l'Éducation Documents.
- Encourage the adult to do an oral summary. For example, read a text out loud and ask him or her to list the main ideas.
- Ask the adult to compose a text based on a theme or an image.
- Present the adult with sentences containing more words than necessary to express an idea. Have the adult shorten the sentences while retaining the essential meaning.
- Ask the adult to find the unnecessary words inserted into a text.
- Ask the adult to develop a plan before writing his or her text. Suggest he or she write it in short sentences, then remove any that are not on topic.

Diagnosis

When writing freely, the adult has difficulties with the coherence of ideas.

Possible teaching strategies

- Teach the adult to make a plan for his or her composition.
- Suggest strategies for objectivization: reread the text out loud; have the adult read his or her text to another person; ask him- or herself questions following these readings; reread his or her text the next day.
- For comic relief, ask the adult to create a text for a cartoon strip that has blank speech bubbles.

Diagnosis

When writing a text, the adult has problems getting started.

Possible teaching strategies

- Suggest doing a quick research on a given subject using the tools available (encyclopedia, dictionary, Internet, etc.).
- Demonstrate mental warm-up exercises, for example, making a list of all the words that make the adult think of a certain emotion, a certain object or a certain situation.
- Ask the adult to write, without self-censorship, any idea that comes to mind on a given subject.
- Tell the adult not to worry about syntax rules for the first draft.

2.3 Arithmetic (Reading)

Adaptation of Part VI of the original version

Introduction

How can you solve a problem in mathematics without understanding the written formula? Is it possible to have a satisfactory life and be effective without knowing or applying the rule of three?

In order to possess these competencies, it is necessary, as a prerequisite, to master the reading of symbols that make it possible to study the problems being posed. It is also necessary to know and be able to recognize the value of numbers according to their position. This part was produced because the reading and understanding of these symbols are essential competencies for learning mathematics and because the difficulties experienced by adults are frequent in this area.

Problems dealt with in this part

- The adult has problems reading numbers. These problems manifest themselves in hesitations, confusions or inversions. page 26
- The adult does not know the place value of digits in a number in terms of ones, tens or hundreds. page 27
- When solving a written problem, the adult shows that he or she has not mastered the four basic operations: addition, subtraction, multiplication, division. page 28
- The adult deciphers the text being read, but does not understand the meaning. page 28
- The adult has difficulties with certain words (confuses, adds, inverts, omits, substitutes or repeats certain ones). page 29
- The adult has not mastered the concept of the position of a digit in a decimal number. For example, he or she does not know the difference between 4.06 and 4.6. page 29
- The adult has not mastered the four basic operations, in particular multiplication and division. page 30
- The adult cannot make the link between a text and the mathematical language associated with it. page 30

Diagnosis

The adult has problems reading numbers. These problems manifest themselves in hesitations, confusions or inversions.

Possible teaching strategies

- Clearly identify what numbers the adult learner has problems recognizing.
- Eliminate causes related to visual discrimination problems (consultation with specialists).
- Encourage the adult to take advantage of any opportunity in daily life to read numbers: winning lottery numbers, addresses, amounts on a bill, etc.
- Use a number table to do exercises with the numbers that cause problems (locate a number given orally, compare numbers, etc.).
- Ask the adult to train him- or herself to read numbers by using a number table previously recorded on cassette. The adult has to find the correspondences between the numbers in the table and those heard orally.
- Have the adult compare and examine the numbers that are most often confused: resemblances and differences, locating them in the number table, etc.

Number table

0	1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28	29
30	31	32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47	48	49
50	51	52	53	54	55	56	57	58	59
60	61	62	63	64	65	66	67	68	69
70	71	72	73	74	75	76	77	78	79
80	81	82	83	84	85	86	87	88	89
90	91	92	93	94	95	96	97	98	99

- Show a series of numbers that contain common numerals (3, 13, 30, etc.) or numerals that closely resemble each other (30, 80; 61, 91) and have him or her observe the similarities and differences, both graphically and in terms of their value.
- In the case of inversions, show the adult how the numbers are read as words, that is, from left to right, and that, in the same way that different combinations of letters form different words, different combinations of digits form different numbers.

Diagnosis

The adult does not know the place value of digits in a number in terms of ones, tens or hundreds.

Possible teaching strategies

- In cases where the adult's problem is serious, use manipulation activities (with coins or various objects) that will help him or her discover the necessity and usefulness of grouping to count objects.
- Ensure that the adult can find the corresponding number that represents the hundreds, tens and ones. Example: 346.
- Compose a number made up of, for example, 3 hundreds, 4 tens and 7 ones (change the order they are presented in) and ask the adult to write it down.
- Ask the adult to break down a number. Example: $279 = 2$ hundreds, 7 tens and 9 ones.
- Have the adult learners do numerous exercises and use variants of those presented above.

Note:

To clearly understand the concept of place value, the adult needs knowledge, if only intuitive, of addition and multiplication. For example, the equation $472 = 4$ hundreds, 7 tens and 2 ones could be represented by $472 = (4 \times 100) + (7 \times 10) + (2 \times 1)$. Similarly, to understand how to do the four basic operations, it is essential for the adult learner to master the concept of place value, given that they go hand in hand.

Diagnosis

When solving a written problem, the adult shows that he or she has not mastered the four basic operations: addition, subtraction, multiplication, division.

Possible teaching strategies

- Use situations directly related to the adult's everyday experiences. Ask the adult to talk about certain experiences and show him or her how the basic operations can be useful in these situations.
- Ask the adult to explain the operations required to solve certain problems. Examples: In our group, there are 150 students divided into 5 equal groups. How many persons are there in each group? What operation must be carried out to find the answer? There are 80 people in a room; 24 of them leave, and 16 others come in. However, the room can only hold half the people present once they sit down. How many people can it hold? What operations are required to find the answer?

Diagnosis

The adult deciphers the text being read, but does not understand the meaning.

Note:

This problem is very frequent in mathematics among the adults in secondary school who, in their individualized learning, regularly have to read explanations in their texts. Very often they go to see the teacher for clarification, saying, "I can't understand any of this." Yet the text is quite simple most of the time. Once the teacher has "translated" the text in his or her own words, the student is able to carry out the mathematical operation or the suggested procedure quite easily.

Possible teaching strategies

- Avoid explaining the text completely to the adult. Divide it into short sections, then ask the adult to reread them and express them in his or her own words.
- Try to get the adult to make connections between the words being read and mathematical concepts he or she already knows and understands.
- Check if there are words that the adult is not familiar with. In this case, ask the adult to look them up in the dictionary. It is important, however, to understand these words in a mathematical context, since their meaning may be different from the usual sense.
- Illustrate the text as often as possible with "images," simple symbols or easily understood diagrams, which the adult can help to construct from the text.

Diagnosis

The adult has difficulties with certain words (confuses, adds, inverts, omits, substitutes or repeats certain ones).

Note: This kind of problem can arise when an adult decides to "make up" a word to substitute for another word that seems too complicated and meaningless.

Possible teaching strategies

- Ask the adult to read the problem word out loud, repeating it correctly once or twice.
- Give the meaning of the word gradually, clearly explaining its origins, its connections with other familiar words and the meaning of the prefix or suffix used.
- Ask the adult to say the word again in another context and explain it in his or her own way, correcting any errors in meaning or pronunciation as they occur.

Diagnosis

The adult has not mastered the concept of the position of a digit in a decimal number. For example, he or she does not know the difference between 4.06 and 4.6.

Note: In general, at least with respect to whole numbers, the adult in secondary school masters the reading of numbers quite well, as well as the concept of place value.

Possible teaching strategies

- Help the adult understand the connection between 4.06 and 4.60. Give the adult exercises in which he or she will have to choose the greater amount of money (\$4.06 or \$4.60). Repeat this comparison exercise to help the adult understand that the further a digit is to the right of the decimal point, the lower its value is.

Note. What adult learners find easiest to relate to with decimal numbers is no doubt their direct relationship with money and everything connected to it. Do not hesitate to use their competency with money (already acquired in most cases).

- Use a place value table in which the adult will have to place a given decimal number.
- Ask the adults to give several decimal numbers, emphasizing the place value of the digits. For example, ask them to say, "4 wholes and 6 one hundredths" and not "four point zero six." The latter way of citing decimal numbers is a major cause of misunderstanding.

Diagnosis

The adult has not mastered the four basic operations, in particular multiplication and division.

Possible teaching strategies

- Check if the adult learner knows the multiplication tables well. Many students, especially young adults, do not know them because of the excessive use of calculators.
- Ask for oral calculations regularly and frequently.
- Help the adult understand the necessity of "knowing their tables" in order to continue in mathematics.
- Ask the adult to perform several calculation exercises requiring various algorithms, always relating them to concrete situations in life, without using a calculator.

Diagnosis

The adult cannot make the link between a text and the mathematical language associated with it.

Possible teaching strategies

- Use lists of key words that refer to various mathematical operations in a text, such as:

Expression	Operation
Sum	Addition
Difference	Subtraction
Product	Multiplication
Quotient	Division
Remainder	Subtraction
Total	Addition
How many times	Division
...	...

Examples

- Ask the adult to identify the key words in a short text and give their meaning with respect to the operations (without, however, carrying them out).
- Gradually increase the length of the text and the number of operations.
- Help the adult understand that there are sentences that are "useless" mathematically, but which illustrate the context of the problem. Teach the adult to distinguish between these expressions and those that are directly related to the situation to be mathematized.
- Help the adult identify "the question being asked" and provide exercises for the sole purpose of understanding. "What do we want to know?"

2.4 Arithmetic (Writing)

Adaptation of Part VII of the original version

Introduction

This part was produced essentially for the same reason as the previous one. The only difference is that this is a writing competency rather than a reading competency.

Problems dealt with in this part

- The adult has problems writing numbers. These problems manifest themselves in hesitation, confusion, inversions or omissions. page 34
- The adult has not totally mastered the four basic operations. page 35
- The adult has difficulty solving problems related to the activities of daily life. page 35
- The adult has not sufficiently mastered mental calculations. page 36
- The adult has not sufficiently mastered the tables for the basic operations. page 36
- The adult has not mastered the concepts related to fractions. page 37

Diagnosis

The adult has problems writing numbers. These problems manifest themselves in hesitation, confusion, inversions or omissions.

Possible teaching strategies

- Clearly identify the adult's problem areas
 - What numbers does the adult learner have difficulty writing? The numbers composed of the same symbols or symbols that are likely to be confused? The numbers that sound similar? The numbers with zero in the tens place? Examples: 13 and 31, 69 and 96; fourteen and forty; 3,402.
 - In what situations does the adult learner have difficulty writing numbers (in dictations, free writing, etc.)?
- Do manipulation exercises, if necessary.
- Use a number table (see Part VI) in which the numbers that cause problems for the adult are missing and ask him or her to write them in, paying careful attention to the numbers before and after.
- Take advantage of any opportunity that occurs in everyday life to encourage the adult to write numbers (sums of money, telephone numbers, addresses, etc.)
- Show the adult the improbability of the numbers he or she has written to illustrate situations of daily life. Example: "There are 108 people in the training centre," which becomes "There are 18 people in..." Ask the adult to evaluate what he or she has written and make any necessary corrections.
- Teach the adult to break down numbers that are difficult to write. Example: one thousand, two hundred and forty-seven = $1000 + 200 + 40 + 7$.
- Have the adult observe and compare the numbers that are confused. How are they similar or different?
- Show the adult how the numbers can be written as words, that is from left to right, and that, in the same way that different combinations of letters form different words, different combinations of digits form different numbers.
- Have the adult do several discrimination exercises.
- Do not dissociate situations involving writing, reading and place value, which are all closely linked.

Diagnosis

The adult has not totally mastered the four basic operations.

Possible teaching strategies

- Ensure that the adult knows the base 10 number system. If not, use the teaching strategies suggested in the original version of the guide.
- Identify, with the adult, situations in which it is useful to know the basic operations and use these situations to help the adult perfect his or her knowledge. If this process, which should be a revision exercise, reveals too many difficulties, use the teaching strategies suggested in the original version of the guide.

Diagnosis

The adult has difficulty solving problems related to the activities of daily life.

Possible teaching strategies

- Constantly relate the problems presented and the explanations given of everyday situations.
- Regularly present varied oral problems to be solved and ask the adult learners to determine which operations should be performed.
- Act as a model for the adult learners by solving problems in front of them and expressing out loud the internal dialogue that occurs during problem solving.
- Encourage working in groups for the pooling of different strategies for solving a problem.
- If necessary present the learners with activities of manipulation, classification, association, seriation, etc. to help them develop logical reasoning.
- Ask the adult learners to name the rule or rules that were applied to solve a problem.
- Help the learners understand concepts such as increase, decrease, profit, loss, reduction, savings, expense, etc.
- Focus on the reasoning involved in solving problems: selecting relevant information, choosing the operations to be carried out and establishing the order in which the operations must be carried out.
- Use games and puzzles to help the learners develop the ability to make deductions and draw conclusions.
- Use problems proposed by the adult learners and use authentic material such as bills, restaurant menus and pay slips.

- Teach the adult learners to reformulate a problem and process the data: arrange the data in a table, arrange the data in an ordered list, etc.
- Show the learners that the problem can be solved by formulating hypotheses and then testing them.
- Using the same problem, ask several questions so that the adult learners can choose the data and operations relevant to each question.
- Ask the adults to carefully copy the data in a problem. Point out to them that an error in copying will definitely lead to an incorrect answer.
- Teach the adult learners to estimate the result of an operation and come up with an approximate answer by rounding off numbers. Ask the learners to assess the plausibility of their answers.
- Present a series of answers to a given question and ask the learners to identify the most plausible answer on the basis of the data provided in the problem.

Diagnosis

The adult has not sufficiently mastered mental calculations.

Possible teaching strategies

- Identify, with the adult learners, situations in which it would be useful to know how to perform mental calculations, for example, verifying if they have enough money to pay for the articles in their shopping cart before arriving at the cash.
- Promote estimation over exact calculation (when this is not required) when performing mental calculations. Example: rounding off numbers

Diagnosis

The adult has not sufficiently mastered the tables for the basic operations.

Possible teaching strategies

- Provide tables that are clear, well spaced out and easy to read.
- If necessary, post the tables illustrating the basic operations in the room.
- For comic relief, have the learners play numerous games requiring mental calculations.
- Encourage the adult learners to do memorization exercises for the tables, explaining to them that it is essential to master this competency.

Note:

All the problems listed for literacy and presecondary are also experienced in secondary school. It has been shown in practice that many mathematical situations considered complex by adult students become simple when they use whole numbers. For example, a situation in which they have to calculate the cost of 70.83 kilograms of fruit at \$4.43 a kilogram with a discount of 12.7% becomes much simpler for the adult learners if they are asked to calculate the cost of 100 kilograms at \$5.00 a kilogram with a discount of 10%. It is therefore a good idea to check whether it is the "big numbers" that are scaring the adult learners and preventing them from concentrating on the situation. In fact, adult learners often anticipate the complicated calculations they will have to make and get distracted from the problem. This is particularly true with fractions.

Diagnosis

The adult has not mastered the concepts related to fractions.

Possible teaching strategies

- Use different strategies to illustrate a fraction. Cutting up a geometric shape is not the only possible strategy and a "pie cut into slices" is not the only solution.
- Use a sum of money, asking, for example, the adult learners to divide it equally.
- Show the adult learners that a fraction is a relationship between two numbers.
- Clearly explain the meaning and role of each of the two parts of the fraction: numerator and denominator.
- Use simple fractions encountered in the everyday lives of the adult learners.
- Make the adult learners aware of their "natural" abilities with respect to fractions. Put them in a situation of everyday consumption and make them realize the close connections between the operation of calculating fractions and their daily experiences.

2.5 Graphic Motricity

Adaptation of Part VIII of the original version

Introduction

It is because graphic motricity plays an important role in an individual's capacity to complete an assignment that we need to take an interest in it. In addition, the difficulties experienced by adult learners in this area are sufficiently numerous that we need to seek remedies. This is the main reason for Part VIII, the last one for the remedial field.

Intervention with persons who have graphic motricity problems is based on certain requirements that are specifically related to lateral preference and the physical characteristics of the work environment.

Problems dealt with in this part

- The adult learner makes errors orienting in space. page 40
- The adult learner shows signs of hypertonia (muscular rigidity). Page 40
- The adult learner shows signs of hypotonia (muscular weakness). page 41
- The adult learner works too slowly. page 41
- When writing, the adult learner works in a disorganized way with respect to use of space. page 42
- When writing in English and in arithmetic, the adult learner has poor handwriting. page 42
- The adult learner shows evidence of the smudging problems associated with left-handed people. page 43
- The mathematical writing of the adult learner is disorganized and chaotic. page 43
- The adult learner writes mathematical symbols without observing the conventions. page 43

Diagnosis

The adult learner makes errors orienting in space.

Possible teaching strategies

- Verify that the adult learner has the various abilities associated with spatial orientation: above, below, to the right, to the left, in front, behind, etc.

Problems of this type often appear among people who have learning disabilities. See Appendix I “Learning and Learning Problems.”

- Have the adult learners do numerous activities during which they will have to use concepts related to lateral preference and spatial orientation, for example, performing tasks that require following instructions and using competencies related to lateral preference.
- Ask the adult to trace a route. Example: starting from here, you turn at the first street, then go to the end of it and turn left. After, continue on to the second light, where you turn left. The training centre is on the right, at this address.
- Use examples from everyday life to help the adult learners improve their capacity to locate themselves in space and to determine the position of various elements: a building in a certain neighbourhood; an object on the second shelf from the bottom, etc.

Diagnosis

The adult learner shows signs of hypertonia (muscular rigidity).

Note: Hypertonia usually takes the form of extreme muscle tension involving the whole arm, the shoulder and even the back.

Possible teaching strategies

- Make sure the adult learners adopt a proper work posture and explain to them that posture affects how well and how long they can concentrate.
- Suggest that the adult learners have short, regular periods of relaxation (listening to relaxing music, stretching, walks, abdominal respiration, etc.)
- Observe the behaviours of the learner and point out those that cause muscle tension.
- Encourage the adult learners to pay attention to the muscle tension they experience when writing and suggest appropriate behaviours to decrease it.
- Explore with the adult learners the factors that create tension: fear of making mistakes, aversion to the assigned task, problems expressing themselves, etc.
- Encourage the adult learners to think about their diets, sleep and physical exercise and make connections with their school work.

- Suggest the adult learners consult health professionals for medical advice.

Note: The two teaching strategies preceding this question also apply to cases of hypotonia.

Diagnosis

The adult learner shows signs of hypotonia (muscular weakness)

Possible teaching strategies

- Encourage the adult learner to regularly do exercises that improve muscle tone: open and close hands, pick up a heavy object with one hand, etc.
- Suggest that the adult learner do exercises involving fine motor skills: threading a needle, cutting out shapes, etc.

Diagnosis

The adult learner works too slowly.

Possible teaching strategies

- Emphasize the need to finish what has been started in a reasonable amount of time.
- Set, for each writing activity, a maximum time period. Gradually reduce the time allotted until the adult learner writes at the same pace as most of the other students in the group.
- Encourage the adult learners to acquire certain habits. Example: crossing t's, dotting i's and inserting other orthographical signs only after writing the entire word or sentence; reading and understanding the words to be copied before writing them, because writing pace depends on the writer's capacity to anticipate; checking at a glance that the reproduction is faithful to the original.
- Introduce activities that require speed and precision, for example, trace, as quickly as possible, a specific headline in a newspaper, or arrange letters to form a particular word heard.
- Teach the adult learners to focus on the task at hand. Regarding this question, see page 47 of the present document (3.1 Attention).
- Discuss with the adult learners to determine if this slowness is due to stress, to lack of mastery of the subject matter, learning difficulties, poor work methods, etc.

Diagnosis

When writing, the adult learner works in a disorganized way with respect to use of space.

Possible teaching strategies

- Suggest exercises comparing texts (organized or disorganized) and ask questions. Examples: Which presentation is clearer? Which is easier to read? Which one looks most like a page in a book?
- Suggest that the work be done in two stages. Suggest that they first write a draft, then do the final work, making sure that the presentation follows the basic rules regarding use of space: left and right, top and bottom margins; spaces between words; spaces between lines; position of headings, etc.
- Help the adult learners become aware of the influence of the presentation of the text. Word processing can be a useful and pleasant tool for adults to learn to present well-organized work.

Diagnosis

When writing in English and in arithmetic, the adult learner has poor handwriting.

Possible teaching strategies

- Clearly explain which aspects of the adult's handwriting need to be improved.
- Always provide examples of properly written work.
- Encourage the learner to compare and examine letters that have similar shapes and common characteristics and that can be confused: b, d, p, q, etc.; h, k, etc.
- When necessary, suggest the adult learner place a sheet of lined paper beneath the blank page.
- Have the adult do numerous copying exercises (letters and numerals). Make sure that his or her writing respects the proper dimensions.
- Encourage the learner to use an eraser to correct mistakes rather than trying to "reshape" incorrect letters and numbers.
- Encourage the adult learner to use word processing.

Diagnosis

The adult learner shows evidence of the smudging problems associated with left-handed people.

Note: Smudging is not a learning problem in itself, but it causes material difficulties for left-handed people, for example, messy or soiled work sheets.

Possible teaching strategies

- Make the adult learner aware of the necessity of adopting good habits and using good writing instruments that reduce the inconveniences caused by smudging: a well-sharpened pencil, a lead that is not too oily, an eraser that does not leave marks, etc.
- Help the adult experiment with various positions of the forearm and hand when writing. Encourage the use of the most comfortable position that reduces smudging most effectively.

Diagnosis

The mathematical writing of the adult learner is disorganized and chaotic.

Possible teaching strategies

- Always demand orderly work.
- Provide an example of the same solution presented first in a disorganized way and then meticulously and ask the adult to comment on the first presentation without seeing the second one. Make the learner realize that disorder hampers coherence and understanding.
- Refuse to correct disorganized work.

Diagnosis

The adult learner writes mathematical symbols without observing the conventions.

Possible teaching strategies

- Check if a mistake in writing a symbol is caused by ignorance or negligence on the part of the adult.
- Have the adult write a symbol as many times as necessary until the work is acceptable.
- Explain to the adult the international nature of mathematical writing.
- Refuse to understand what the adult "meant to say" and show what he or she actually wrote.

Chapter Three: Cognitive Field

The content of the cognitive field in the original version of the guide is organized here into **six modules** (IX to XIV): attention, memory, receptive language, expressive language, perception, and planning and executing a task. They are presented here in their adapted version.

Each part includes the following headings: introduction, diagnosis (the problem) and possible teaching strategies (what is suggested to help the adult).

3.1 Attention

Adaptation of Part IX of the original version

Introduction

"Attention" is the "overriding competency" of the second mode of the Functional Learning Process. Without it, learning, in the great majority of cases, is impossible (see Appendix II, "The Functional Learning Process as Training Approach"). Learning problems associated with attention deficits are frequent. While it is difficult to determine the precise reasons, it is still useful to attempt to establish cause-and-effect connections and suggest possible solutions. It was with this intention that this adaptation of Part IX was produced.

See:

- Appendix IV "Attention and Motivation."
- Chapter 3 in Boucher, F. and J. Avard. *Réussir ses études*. Boucherville: Éditions de Mortagne, 1984.
- Pépin, M. and M. Loranger. *CO-SKILLS, Cognitive Training Software* (version 4.2). Sainte-Foy: Le Réseau Psychotech inc., 1997.

Problems dealt with in this part

— The adult shows signs of fatigue.	page 48
— The adult has attention problems.	page 48
— The adult has concentration problems.	page 49
— The adult tires mentally in learning situations.	page 50
— Many of the problems listed for literacy and presecondary continue to exist and worsen with certain adults in secondary school.	page 50

Diagnosis

The adult shows signs of fatigue.

Possible teaching strategies

- With the adult learner, try to determine the causes of the fatigue: general health, vision or hearing problems, poor diet, lack of sleep, personal problems, etc.
- Ensure that the physical organization of the room fosters the mental alertness of the whole class: ventilation, lighting, arrangement of furniture, soundproofing, etc.
- Suggest the adult learner choose a seat in the classroom where he or she can see and hear the presentations more easily (if necessary).
- Establish a work schedule that allows for breaks.
- Stimulate the mental alertness of the group by means of visual and auditory discrimination exercises.
- At the beginning of each activity, explain the objective being pursued and the pertinence of the activity (in order to motivate the adult learners).
- From time to time, ask the learners to reformulate something that was just said or to explain instructions that were just given.
- Vary the activities.
- Ask the adult learners to space out study times, taking into account their different levels of energy. Example: save the easier exercises for the end of the period or the end of the week.

Diagnosis

The adult has attention problems.

Possible teaching strategies

- Help the adult learner identify the causes of the attention problems experienced inside or outside the classroom. According to the cause(s) mentioned, encourage the adult to look for support from the appropriate resources.
- If the adult's problems are related to lack of motivation, suggest meetings with an education consultant to better define his or her learning plan.
- Help the adult learners set realistic short- and long-term objectives.
- Provide guidance to learners at the beginning of a task: ask them to explain the nature of the task, to select the tools required to perform it and to determine how long it will take.

- Suggest that the adult learners divide long, complex assignments into several sections and that they schedule breaks.
- Do not disturb the adult learners when they are concentrating on their assignments.
- Avoid covering the classroom walls with too many stimuli that could detract from learning.
- Limit comings and goings and eliminate unnecessary noise.
- Suggest that the adult learners say what they have learned at the end of each study period.
- Ask the adult learners to set a precise, realistic objective for every study period and reward themselves for meeting it.
- Ask the learners to mark an X on a sheet of paper on their work tables every time they realize they are being distracted. (With time, the moments of inattention will decrease because they are more aware of them.)
- Develop as many good study habits as possible (with respect to location, material, schedule, etc.).

Diagnosis

The adult has concentration problems.

Possible teaching strategies

- Try to determine the causes of the adult learner's problems.
- Encourage the adult learner to adopt good work habits. Examples: on his or her work table, the adult should have only the material necessary for the task at hand; eliminate from the field of vision anything that could be a distraction; ensure that the assignment is clearly understood; review regularly, during the work, the instructions related to the task at hand; develop a good work routine.
- Set an example by remaining impervious to unexpected noises that may occur in the course of an activity.
- From time to time, pair an adult learner with another person who can provide coaching through a specific task.
- Train the adult learners to increase the length of time they are able to concentrate by starting with simple, easy activities, such as copying exercises.
- Use teaching strategies that encourage the adult learners to participate actively (work in small groups or as a class, etc.).

- Pay special attention to needs expressed by the adult learners (their capacity for attention and concentration is often related to their level of motivation).
- Suggest work methods that will keep them active.
- Vary the types of stimulations.

Diagnosis

The adult tires mentally in learning situations.

Possible teaching strategies

- Identify, with the adult learner, the causes of his or her fatigue (health problems, poor life habits, difficult personal responsibilities, etc.)
- According to the causes identified, encourage the adult to consult the appropriate resource persons (doctor, psychologist, social worker, etc.), assisting him or her if possible.
- Ensure that the adult learners have the prerequisites for the learning they want to do (their fatigue could be caused by the excessive mental effort required to understand the concepts they are trying to absorb).
- Establish classroom rules of functioning aimed at fostering a calm work environment (requiring the learners to talk quietly and limit their movements, etc.).
- Encourage the adult learners to schedule periods of relaxation outside their classroom time.
- Check the number of hours per week the adult learner studies.
- Check the work methods of the learner (in the classroom and at home).
- Alternate work and relaxation by scheduling short breaks during study periods (abdominal respiration, visualization of restful settings, stretching, etc).

Diagnosis

Many of the problems listed for literacy and presecondary continue to exist and worsen with certain adults in secondary school.

Note:

The attention and concentration problems experienced by adults in secondary school are related to the very nature of their learning situation. Each adult has to deal with a document alone and has to maintain a considerable effort of concentration and attention. Interventions by a team or in partnership with a colleague, let alone with the whole group, are impossible. This is the hard part about individualized learning. This deficiency in attention and concentration will be even greater among the young adults 16 to 20 years of age.

It is very difficult for a secondary school teacher to constantly, regularly monitor the level of attention and concentration of an adult student. In fact, the teacher has to provide explanations to the adult learners who come to him or her to ask questions, and to manage the work climate and the comings and goings in the classroom, as well as the attitudes of the large numbers of students in the group.

Possible teaching strategies

- When a problem of attention and concentration is observed, the teaching strategies suggested above may be useful. Interventions related to circulation in the classroom are also possible, although it is not feasible to stop this movement completely. Since problems of attention and concentration are frequently the cause of dropping out or failures in secondary school, concerted and more effective efforts need to be made in this area. Dividing work into shorter sections that will seem less unpleasant for the adult learners is a common, effective strategy.

3.2 Memory

Adaptation of Part X of the original version

Introduction

Memory, like attention, is a competency that is indispensable to learning. It is therefore quite reasonable to devote a part of this guide to memory, especially given that the problems associated with it are sometimes extremely complex. This part has therefore been developed for the purpose of shedding a little light on the subject, and for suggesting some effective teaching strategies.

See:

- Appendix V, "Memory."
- Rùph, F. *Le fonctionnement de la mémoire et les stratégies de mémorisation*, in collaboration with the Service d'éducation des adultes de la Commission scolaire du Lac-Témiscamingue, January 1993.
- Chapter 9 in Myers, D. G. *Psychology*. New York: Worth Publishers, 2004.
- Pèpin, M. and M. Loranger. *CO-SKILLS, Cognitive Training Software* (version 4.2). Sainte-Foy: Le Réseau Psychotech inc., 1997.

Problems dealt with in this part

- | | |
|--|---------|
| — The adult learner has memory problems (visual, auditory or kinesthetic). | page 54 |
| — The adult learner has problems with short-term memory. | page 54 |
| — The adult learner has problems with long-term memory. | page 55 |
| — The adult learner has problems with the encoding and retention of information (associating information with what is familiar and conserving that information). | page 56 |
| — The adult learner has problems related to recalling information (retrieving the information stored in memory). | page 56 |
| — The most serious problems for secondary school students are those related to the encoding, retention and recall of information. | page 57 |

Diagnosis

The adult learner has memory problems (visual, auditory or kinesthetic).

Possible teaching strategies

- Explain how memory functions, its various components, and how it can be trained and stimulated at any age and in any circumstances (unless the person suffers from a serious neurological disorder).
- Ask the adult to use everyday situations to develop visual memory: describe a room in his or her apartment; list the stores on a familiar route; describe the house across the street from his or her home; recall the cafeteria menu; list the names of the other adults in the group; recite his or her shopping list, etc.
- Suggest performing a task in which the adult learners will have to obtain information, such as making a query, listening to a message or answering questions.
- Read a story aloud, emphasizing the elements you want the adult learners to find, then ask questions about them.
- Develop with the adult learners procedures for organizing or classifying objects, colours, etc.
- Develop the habit of using illustrations that make it easier to understand and remember a narrative.
- Allow the adult learners to use recordings as often as necessary.
- Suggest amusing or memorably absurd mnemonic devices.
- Encourage the adult learner to use various educational games to develop memory.

Diagnosis

The adult learner has problems with short-term memory.

Possible teaching strategies

- Explain how short-term memory functions:
 - it functions automatically
 - it is easily disturbed by interference, unless this interference is related to current mental activity
 - it requires exercise to develop and improve
 - it is aided by concentration, grouping, associations and meaning

- Suggest exercises that can help the adult learners improve their visual memory:
 - have them repeat a series of numbers or words
 - have them repeat, a few moments after you say them, a telephone number, a name or an address
- Check the adult learners' motivation. If necessary, stimulate their interest by reminding them of their objectives.
- Check if the learners understand what they are studying. For example, ask them to repeat in their own words the explanation presented in the learning guide.

Diagnosis

The adult learner has problems with long-term memory.

Possible teaching strategies

- Explain how long-term memory functions, in that it:
 - is unlimited
 - is aided by repetition and overlearning
 - requires organization, detailed information and links between various elements
 - is influenced by emotions
- Encourage the adult learners to do exercises that promote long-term memory: repetition, overlearning, organization, attaching meaning.
- Create a learning atmosphere that eliminates, as much as possible, the emergence of negative emotions that interfere with long-term memory.
- Make the adult learner aware of the importance of sleep in the memorization process.
- Try to concentrate more complex learning at the beginning of the week. In this regard, the adult learner will be able to identify what he or she finds the most difficult to learn.

Diagnosis

The adult learner has problems with the encoding and retention of information (associating information with what is familiar and conserving that information).

Possible teaching strategies

- Emphasize the conditions necessary for information to be stored:
 - create situations that foster motivation, attention, generalization and application (see Appendix II "The Functional Learning Process as Training Approach")
 - use strategies for the encoding and retention of information: creation of connections with what is familiar, repetition, associations, oppositions, classification, groupings, mnemonic devices, mental images, etc.
- Teach the adult learners to:
 - verify their understanding of the information and, in case of doubt, to request that the information be clarified
 - create links between various elements by grouping them into families
 - associate the information with more familiar concepts
 - attempt to make the information as concrete as possible

Diagnosis

The adult learner has problems related to recalling information (retrieving the information stored in memory).

Possible teaching strategies

- Review, with the adult learners, information recall clues:
 - pay attention to associations that come to mind when attempting to recall information
 - pay attention to mental images that emerge when attempting to recall information
 - evoke colours, shapes, familiar situations and landscapes
- Have the adult learner describe his or her thoughts when using a clue to retrieve a particular piece of information.

Diagnosis

The most serious problems for secondary school students are those related to the encoding, retention, and recall of information.

Possible teaching strategies

- Associate as often as possible mathematical concepts and formulas with situations familiar to the adult learners.
- Use mnemonic strategies, word games, associations of ideas and eye-catching shapes.
- Check if the adult learners have a complete, real understanding of a concept. Memory often refuses to retain what seems meaningless.

3.3 Receptive language

Adaptation of Part XI of the original version

Introduction

Understanding verbal messages addressed to us is also one of the unavoidable prerequisites to learning in most situations. However, this competency is quite often lacking among adult learners. This part of the guide was therefore created for the purpose of improving these students' understanding of verbal messages. The aim is not only to suggest strategies for diagnosis and teaching, but also to make teachers aware of a problem that, while not all that obvious, is nonetheless significant.

See:

- Chapter 10 in Myers, D. G. *Psychology*. New York: Worth Publishers, 2004.
- Pépin, M. and M. Loranger. *CO-SKILLS, Cognitive Training Software* (version 4.2). Sainte-Foy: Le Réseau Psychotech inc., 1997.

Problems dealt with in this part

- The adult learner has a limited vocabulary. page 60
- The adult learner has problems distinguishing certain sounds and certain words. page 61
- The adult learner has difficulty following instructions. page 61
- The adult learner has difficulty following and understanding a conversation or a presentation. page 62
- The adult learner has difficulties distinguishing between a serious message and a joke. page 63
- The adult learner cannot decipher nonverbal language (gestures, facial expressions, etc.). page 63
- During a presentation, the adult learner cannot distinguish between the main ideas and secondary ideas, examples or useless details. page 64

Diagnosis

The adult learner has a limited vocabulary.

Possible teaching strategies

- Expand the adult learner's vocabulary through various activities:
 - set aside a period every day for a group discussion on current events
 - ask the adult to improvise using everyday situations
 - use recorded messages accompanied by printed text
- Regularly check the understanding of the adult learners by asking them to reformulate what was said in their own words.
- Take advantage of everyday opportunities to encourage learners to identify elements, to pinpoint similarities and differences, and to name them.
- Encourage the adult learners to ask questions about words they do not understand when they are given explanations.
- Act as a model for the adult by using:
 - correct pronunciation and speaking at a normal speed
 - clear and simple language
 - synonyms and drawing the attention of the adult learners to them
 - word games, crossword puzzles, etc.
- Set aside reading periods with a view to enriching vocabulary. Help the adult understand that reading enriches vocabulary and, inversely, a rich vocabulary facilitates reading and makes it more pleasant.
- When they are reading, draw the adult learners' attention to certain words essential to the understanding of the text, for example, words that provide nuances, and could completely alter the meaning of a sentence.
- Encourage dictionary use.

Diagnosis

The adult learner has problems distinguishing certain sounds and certain words.

Possible teaching strategies

- As a first step, make sure that none of the adult learners is hearing impaired. When in doubt, suggest they consult a specialist.
- Identify the sounds the adult learners have trouble distinguishing and the words they confuse. Focus your teaching strategies on the problem areas.
- Have the adult learners do numerous exercises involving auditory discrimination:
 - have the adult learners listen to several sounds and ask them to identify the sound that is different from the others
 - ask the learners to associate words that contain the same sounds
 - work with recorded material, radio or television
 - point out that the context can help in identifying confused words or sounds (example: a teacher, not a preacher, works in a school)
 - show that nonverbal language can help with better understanding of a message
 - ask questions and have the learners repeat them
- In group situations, insist that one person talks at a time, that each person be given an opportunity to speak, etc.
- If necessary, use written material.
- As much as possible, avoid conversations in a noisy environment.

Diagnosis

The adult learner has difficulty following instructions.

Possible teaching strategies

- Take advantage of everyday opportunities to give instructions to the learners in the group and check their understanding.
- Have the learner restate the instruction before carrying it out.
- Use reinforcement if the instruction was carried out correctly.

- Help the learners acquire habits that will enable them to understand an instruction the first time. For example, observing the nonverbal language of the speaker (gestures, facial expressions, etc.); making a mental representation for themselves of the task to be carried out; pinpointing the key words in the instruction; restating the instruction mentally; and writing down key elements of what they have to do.
- Ask the adult learners to show their work regularly to the teacher, especially when the instruction is new.

Diagnosis

The adult learner has difficulty following and understanding a conversation or a presentation.

Possible teaching strategies

- First make sure that the adult learners are able to focus their attention.
- Expand the adult learners' vocabulary through various activities: conversation, reformulation, imitation, role playing, improvisation, etc.
- Stimulate listening skills during group discussions by asking each person to repeat what was said by the preceding person before they speak.
- Regularly hold effective listening activities, for example, activities during which the learner has to pay attention to a message or text read out loud and retain the main themes.
- Make the learners aware of the various aspects of a verbal exchange: gestures, facial expressions, intonation (depending on the speaker's feelings, whether the speaker is asking a question, making an assertion, trying to convince, etc.)
- Teach the adult learners that context and their personal experience can help them determine the meaning of a message. Example, "My son has the flu and the doctor prescribed antibiotics for him." By using the context or their personal experience, the adult learners who do not know the meaning of the word "antibiotics" can assume that it refers to medicine.
- Encourage the adult learners to reformulate in their own words what has just been said: "If I understood correctly..."
- Help the adult learners acquire effective listening skills through various activities that require them to listen to information and process it to understand what has been said.
- Encourage the adult learners to participate as much as possible in the conversations that take place around them.

- Make the adult learner aware of the prejudices that can hinder communication (about the subject, the speaker, the type of presentation, etc.).
- Encourage the adult to take notes during the presentation, using symbols and abbreviations.

Diagnosis

The adult learner has difficulties distinguishing between a serious message and a joke.

Note:

This type of problem is often related to cognitive factors (inadequate deciphering of the information, poor sense of humour, etc.), but certain types of emotional interference can also scramble a message. For example, a joke about the crazy way someone reacted to losing a job could be interpreted differently by someone who has a close friend who has just lost his or her job. This problem also occurs with allophones with limited fluency in the language of their adopted country or who have inadequate knowledge of its cultural characteristics.

Possible teaching strategies

- Ask the adult to describe what is happening in a comic strip.
- Ask the adult to explain what is funny about a comic strip (word play, an unexpected ending, characters who are funny because of their physical appearance or their manner).
- Provide the adult learners with the beginning of a story and ask them to create a funny ending.
- Ask the adult to identify what is improbable or funny in an illustration.
- Draw the learners' attention to elements which cause laughter in a situation (in class, in the training centre, in the cafeteria, etc.).

Diagnosis

The adult learner cannot decipher nonverbal language (gestures, facial expressions, etc.).

Note: This problem is very often related to cultural differences.

Possible teaching strategies

- With the adult learners, draw up a list of everyday gestures that convey messages. For example: waving a hand to say "hello" or "goodbye," nodding one's head, pointing a finger to draw attention to an object or person, pointing an index finger upward to indicate "wait a minute," etc.

- Show the learners photographs of people's faces expressing a variety of emotions and ask the learners to describe these emotions.
- Use mime that involves the whole body to express feelings (joy, pain, impatience).
- Show a short silent film (or a film without sound) and ask the adults to reconstruct the story (feelings, words, etc.).
- Recite short dialogues, first using nonverbal language that corresponds to the words and then nonverbal language that contradicts the content of the message. For example, a person says he or she is happy but looks depressed. This type of exercise underlines the importance of nonverbal language in relation to words.

Note:

In individualized learning, it is very easy to let the adult continue in the wrong direction, since the teacher is constantly being asked for help by other students who need explanations on the subject matter. It is therefore important to pay close attention to adults who are having difficulties.

Diagnosis

During a presentation, the adult learner cannot distinguish between the main ideas and secondary ideas, examples or useless details.

Possible teaching strategies

- Question the adult learners in order to help them identify the principal idea and its components. Ask them which questions helped them with this task.
- Begin by working with written texts.
- Make the adult learner aware of cues such as intonation and connecting words.

3.4 Expressive Language

Adaptation of Part XII of the original version

To name things wrongly is to add to the misfortune of the world. Camus

Introduction

Having a large, varied vocabulary not only favours learning, but also enriches thought and contributes to critical thinking, as well as being a tool that helps to better understand personal experiences and social phenomena. This competency is unfortunately fragile in many people with learning problems. This part of the guide was designed for the purpose of developing concepts, and detecting and correcting, if possible, deficiencies among adult learners in the area of motor skills.

See:

- Chapter 10 in Myers, D. G. *Psychology*. New York: Worth Publishers, 2004.
- Pépin, M. and M. Loranger. *CO-SKILLS, Cognitive Training Software* (version 4.2). Sainte-Foy: Le Réseau Psychotech inc., 1997.

Problems dealt with in this part

- In terms of motor skills, the adult learners have problems with pronunciation, articulation or stuttering. page 66
- The adult learner has difficulty formulating a coherent message. page 66
- The adult learner has difficulty participating actively and logically in a conversation. page 67
- The adult learner lacks vocabulary. page 68
- The adult learner makes errors in syntax. page 69
- The adult learner has not mastered nonverbal language. page 70
- The adult learner uses incorrect borrowings from another language. page 71
- The adult learner has not learned the basics of doing an oral presentation in class. page 71

Diagnosis

In terms of motor skills, the adult learners have problems with pronunciation, articulation or stuttering.

Possible teaching strategies

- Ensure that the learner's motor problems are not caused by a physiological (dentition, vocal or cerebral problem) or psychological disorder. When in doubt, suggest that he or she consult the appropriate specialists.
- Determine if the learner's problems are constant or if they only occur under certain circumstances (when the learner is speaking in front of several people or is taking an exam). Help the learner become aware of these contexts and provide the necessary support.
- Suggest that the adult learners do exercises involving pronunciation, articulation and auditory discrimination. Prepare series of words that contain sounds that pose difficulties; record them, listen to them, pronounce them, correct them, repeat them, etc.
- Point out the importance of listening attentively in order to acquire the correct pronunciation of certain words.
- Encourage the learners to participate during group discussions. Ask them to use short, simple utterances at first, then gradually increase the level of difficulty (length and complexity of their contributions).
- In private, ask the adult to repeat the words he or she has trouble pronouncing. Explain to the adult that this request is strictly aimed at improving his or her language skills.
- Act as a model for the adult: pronounce correctly; speak at a normal speed; use clear and simple language.
- Explain the importance of proper breathing when speaking.

Diagnosis

The adult learner has difficulty formulating a coherent message.

Possible teaching strategies

- Make sure the learner has a good vocabulary.
- Take advantage of everyday situations to encourage learners to express themselves: express their needs; articulate their opinions; request or communicate information; carry on a conversation; explain an absence; talk about a film or weekend; give directions (more or less complex) to go to a certain place, etc.

- Place the adult learner in a real communication situation and thus encourage the transfer of learning: ask him or her to go get something from the office, to request information, to pass along an order or make an appointment by telephone, etc.
- Encourage the adult learners to express themselves in role-playing or fictitious situations where they will not only have to formulate a message clearly, but also use their imagination: ask them to improvise based on familiar situations, to describe an object or person that the other learners must identify on the basis of the clues provided, etc.
- Ask the adult learners questions to help them clarify their thoughts.
- Ask the adult learners to classify written ideas according to importance and explain the classification.
- Ask the adult learners to identify contradictory ideas in a list, to group together similar ideas, etc.
- Ask the adult learners to use cards with key words written on them to structure their presentations.
- Encourage the adult learners to rehearse out loud using their key words.
- Suggest that the adult learners use a visual medium (for example, a map or a diagram).

Diagnosis

The adult learner has difficulty participating actively and logically in a conversation.

Possible teaching strategies

- Make the learners aware of the various aspects of a verbal exchange: words, gestures, facial expressions, tone of voice according to the feelings expressed, intonation depending on whether the speaker is asking a question or making an assertion, trying to convince, etc.
- Make sure that the learner is able to focus on his or her conversation partner and on the content of the verbal exchange. (Is he or she motivated? Is he or she attentive?)
- Help the adult learners understand the meaning of a conversation: use the context and their personal experience; observe nonverbal language; ask questions, ask the other speaker to repeat, reformulate in their own words what has just been said, etc.
- Expand the learners' active vocabulary through activities in which they listen to information, process it and comment logically on it.
- Set aside a few minutes every day for a group discussion or improvisation activities using everyday situations.

- Help the learners develop the skills needed to express an opinion and justify with logical reasoning. This skill can be developed during discussions on current events. For example, each party has to try to convince the other of the merits of his or her position or convince a jury by explaining his or her position using closely reasoned arguments.
- Make the adult learner aware of the importance, during a conversation, of expressing ideas clearly and completely, with the nuances required to avoid errors of interpretation by listeners.
- Ask the adult to identify the opinions and arguments in a written dialogue.
- Ask the adult to read dialogues from plays in which actions and reactions are key elements.

Diagnosis

The adult learner lacks vocabulary.

Note:

This problem can be manifested in various ways. The adult learner never uses the right word or resorts to description, i.e., several words to describe the object in question rather than the exact word: "The big car in front that pulls" rather than "the locomotive."

Possible teaching strategies

- Explain the fundamental importance of vocabulary and concepts such as enriching ideas and a critical mind, and show how it is a tool for better understanding personal experiences and social phenomena.
- Help the adult learners understand that a good vocabulary will enable them not only to communicate with greater ease and effectiveness, but also give them real pleasure in being able to express themselves about things and experiences. Also explain that a large vocabulary will enable them to better understand reality and act on it in accordance with their goals.
- Take advantage of every opportunity to encourage the adult learners to express themselves, to identify objects, to observe similarities and differences and to communicate them.
- With the adult learner, develop a reference tool containing vocabulary related to the themes covered in the course.
- Provide various exercises to improve vocabulary, emphasizing the need to be clear and accurate. For example, ask the adults to:
 - match words with illustrations
 - identify as many elements as possible in an illustration or a photograph

- identify a famous person on the basis of the verbal clues provided
 - describe an object based on its characteristics
 - list as many elements as possible from a given category identified by a generic term, for example: *family, table, house, car*
 - use synonyms and antonyms
 - replace expressions such as "you know," "kind of," "the thing," "whatever," with words that express more precisely what is being talked about
- Using examples, show the importance of properly naming things in order to avoid conflicts caused by misunderstandings.
 - Make the adult learners aware that people with rich, precise vocabularies have more credibility.
 - Set aside the last fifteen minutes of the class for reading.
 - Ask the adult to look up a new word in the dictionary every day, write down its definition in a notebook and use the word in a sentence.
 - Decide on a discussion theme and ask the adult learners to make a card with several nouns, verbs and adjectives related to this theme.

Diagnosis

The adult learner makes errors in syntax.

Possible teaching strategies

- Make the adult learners aware of (or acquaint them with) basic sentence structure (subject + verb + complement) through oral and written exercises that teach them to use grammatical structures.

The Canadian Adult Reading Assessment can be a helpful resource. Another useful document is the *Grille universelle pour développer les habiletés en écriture*. (See *Répertoire des documents produits en alphabétisation au cours des dernières années par la DFGA* in the bibliography, under "Ministère de l'Éducation Documents.")

- Help learners to express their ideas clearly and precisely by:
 - encouraging them to complete sentences, if necessary
 - asking them questions when there are ambiguities
 - correctly reformulating sentences containing errors in syntax

- correcting frequent errors
 - serving as a role model at all times
- Encourage the adult learners to express themselves orally or in writing using exercises based on everyday situations.
 - In private, ask the adult to correct a syntax error by asking him or her for the correct form.
 - Have the adult learners do numerous oral or written exercises:
 - transform sentences by replacing a word with a synonym or a word from the same grammatical category
 - provide the opposite of a sentence, by using the negative form
 - formulate a question based on a given sentence

Diagnosis

The adult learner has not mastered nonverbal language.

Possible teaching strategies

- With the adult learners, list the gestures that convey messages in everyday life, for example: nodding to say "yes," shaking the head to say "no," pointing a finger in order to draw attention, pointing the index finger upwards to convey "just a minute."
- Present activities that demonstrate the importance of nonverbal language:
 - show photographs of people's faces and have them describe the vast range of emotions
 - observe in comic strips or in mime the gestures, the mimicry, the feelings expressed, the messages conveyed without words, etc.
 - have the learners listen to recorded sounds: laughter, sighs, crying, groaning, etc., and ask them to identify the various emotions
 - show a film with the sound muted and ask the adult learners to reconstruct the sequence of events from the nonverbal language they observe
- Ask the adult to read a text and suggest different possible meanings according to the nonverbal expressions observed.
- Take advantage of everyday opportunities to draw the learners' attention to facial expressions and gestures that almost always accompany verbal exchanges

Diagnosis

The adult learner uses incorrect borrowings from another language.

Possible teaching strategies

- Show the adult learner a list of incorrect borrowings he or she has used and ask him or her to correct them.
- Use written exercises containing various types of incorrect borrowings to be identified and corrected.
- Make the adult learners aware of the importance of speaking correctly (one language at a time).

Diagnosis

The adult has not learned the basics of doing an oral presentation in class.

Possible teaching strategies

- Ask the adult to rehearse his or her presentation several times out loud, using crib notes.
- Suggest that the adult learners do a few diction and relaxation exercises before starting their presentations.
- Suggest that the adult learners vary the form of their sentences (interrogative, exclamatory, etc.), the rhythm of their discourse (short and long sentences) and their tone of voice (calm, passionate or intrigued), and to speak loud enough (as if they were directly addressing the person sitting at the back of the room).
- Suggest to the adult learners that they begin their presentations by introducing themselves, then outlining the subject and plan of their presentations.
- Suggest to the adult learners to ask their audience questions to stimulate their interest (questions requiring short answers).
- Make the adult learners aware of their body language (bearing, gestures, movements, looks, mannerisms, etc).
- If necessary, ask the adult to use a visual medium.
- If necessary, remind the adult learners of the need to define the technical terms they use.
- Remind the adult learners that the conclusion of a presentation should be used to summarize the main points and stimulate reflection.

3.5 Perception

Adaptation of Part XIII of the original version

Introduction

Perception means first and foremost recognizing objects using the five senses. A broader definition would include the interpretation of the stimuli found in the environment. This part of the guide, however, deals only with perception through the senses, with the emphasis on sight, hearing and touch. As with the other documents, the objective is to help teachers diagnose the problems with perception, and then intervene appropriately.

See:

- Appendix II "The Functional Learning Process as Training Approach." Second mode.
- Patry, J. *A Guide to Customized Literacy Training: The Functional Learning Process (FLP)*. Québec: Ministère de l'Éducation, Direction de la formation générale des adultes (DFGA), 41-1066A, 2002. Also available in PDF format on the DFGA site. Second mode.
- Chapter 6 in Myers, D. G. *Psychology*. New York: Worth Publishers, 2004.
- Pépin, M. and M. Loranger. *CO-SKILLS, Cognitive Training Software* (version 4.2). Sainte-Foy: Le Réseau Psychotech inc., 1997.

Problems dealt with in this part

- The adult learner has problems with perception (visual, auditory or tactile). page 74
- The adult learner has problems with discrimination (visual, auditory or tactile). page 74

Diagnosis

The adult learner has problems with perception (visual, auditory or tactile).

Possible teaching strategies

- Suggest some spatial orientation exercises for the adult learners.
- Ask the learners to find the differences between two almost identical drawings. Use various drawings with increasingly subtle differences.
- Show the adult learners a series of drawings, one of which is incomplete, and ask them to finish it.
- Have the adult learners listen to recorded sounds and ask them to identify them.
- Ask the learners to listen to or learn a poem or song with a rhythmic structure.
- Ask the adult to write a rhyming poem.
- Help the adult learners to enhance their perception by asking them to trace the spelling of a word or a shape in the air.

Diagnosis

The adult learner has problems with discrimination (visual, auditory or tactile).

Possible teaching strategies

- Ask the adults to isolate a figure or a particular shape within a group of figures.
- Ask the adult learners to handle objects with their eyes closed, describing their characteristics and finally naming the objects (orange, chili pepper, apple, tomato, pencil, pen, etc.).
- Have the adult learners recognize differences between high and low pitched sounds.
- Pronounce a series of words having the same consonance, and ask the adult learners to say what each one represents, for example *man, pan, fan; sea, pea, tea*.
- Show the adult learners a two-column chart with about fifteen words in each column. Ask them to match words that have the same phonetic endings, for example, *feed and read, wood and hood, tree and bee, mango and tango*. Two words in the series could have different endings, for example *bus* and *locomotive*. Once the exercise is done, the adult learners should be able to identify those two words.
- Explain how sensory memory is also a source of learning.

3.6 Planning and Executing a Task

Adaptation of Part XIV of the original version

Introduction

This last part, though no less important, deals with planning and executing a task, competencies that are important to the successful completion of a task, but which many adult students have not mastered. This part of the guide therefore focuses on these essential competencies, providing teachers with various ways of evaluating the competencies of the adult learners in this area, in addition to helping them realize that there are many possible teaching strategies that can be very effective.

See:

- Boucher, F and J. Avar. *Réussir ses études*. Boucherville: Éditions de Mortagne, 1984.

Problems dealt with in this part

- | | |
|---|---------|
| — The adult learner has problems organizing him- or herself with respect to learning (planning his or her work in order to execute a task). | page 76 |
| — The adult learner has not mastered problem-solving strategies that could help him or her with learning. | page 76 |
| — The adult learner has difficulty checking the work he or she has done. | page 77 |
| — The adult learner has to make a great deal of effort to correct his or her work. | page 77 |
| — The adult learner has trouble putting into practice the recommendations received. | page 78 |
| — The adult learner has not adopted the internalized language needed to regulate his or her conduct. | page 78 |
| — The adult learner is impulsive. | page 79 |
| — The adult learner is apathetic. | page 79 |
| — The adult learner lacks problem-solving strategies. This situation is the cause of many failures. | page 81 |
| — The adult learner is not capable of correcting his or her own work using a self-correction grid. | page 81 |

Diagnosis

The adult learner has problems organizing him- or herself with respect to learning (planning his or her work in order to execute a task).

Note:

Problems related to methodology are very frequent. Structured teaching strategies have been established in certain institutions, for example, offering classes on the methodology of intellectual work or on study strategies. Usually offered as part of initiation to training activities, these classes are very effective and give both teachers and adult learners a great deal of satisfaction.

Possible teaching strategies

- Give detailed instructions to the adult learners on how to execute the task: what exactly they should do, the steps to be followed, the order to do them in, etc.
- Check if the adult learners have understood these instructions. Ask that they reformulate them.
- Suggest studying using the PAR³ formula: Peruse the material to be studied; Ask oneself how best to proceed; Read underlining key words and look up unfamiliar words; Recite the text or repeat it in one's own words using the key words to verify understanding; Review or go over the notes from the day at the end of the study session.

Diagnosis

The adult learner has not mastered problem-solving strategies that could help him or her with learning.

Possible teaching strategies

- Explain to the adult learners what a learning strategy is.

See:

- Tardif, J. *Pour un enseignement stratégique : l'apport de la psychologie cognitive*. Montréal: Logiques, 1992 (Collection Écoles).

- Help the adult learners discover their dominant learning style.

See:

- Appendix II "The Functional Learning Process as Training Approach."
 - Patry, J. *A Guide to Customized Literacy Training: The Functional Learning Process (FLP)*. Québec: Ministère de l'Éducation, Direction de la formation générale des adultes (DFGA), 41-1066A, 2002. Also available in PDF format on the DFGA site.
 - Marchand, L. *L'apprentissage à vie, La pratique de l'éducation des adultes et de l'andragogie*. Montréal/Toronto: Chenelière/McGraw-Hill, 1997 (particularly Part II).
- Discuss possible strategies to execute a given task and help them identify and apply those that suit them best.

Diagnosis

The adult learner has difficulty checking the work he or she has done.

Possible teaching strategies

- Remind learners that checking constitutes an essential step in the planning of any task.
- Propose a self-correction grid adapted to the situation.
- Teach the adult learners how to check their own work: ask themselves questions, use a self-correction grid, etc.
- Based on the weaknesses identified, suggest exercises to strengthen self-checking.
- Ask the adult learners to review their corrected work 24 hours later and note the differences (where applicable).

Diagnosis

The adult learner has to make a great deal of effort to correct his or her work

Possible teaching strategies

- Teach the adult learners how to find their errors using self-correction grids.
- Show the adult learners how to self-correct, by:
 - asking themselves the following questions: Is this word a verb or a noun? Where are the adjectives and the verbs in the sentence? What is the subject of the verb? What is the complement? What do I know about spelling? About grammar?

- using a dictionary, a grammar reference, etc.
 - looking for the essence of words
 - identifying the infinitive of a given verb in order to use a conjugation reference source, etc.
- Based on the weaknesses identified, suggest exercises to strengthen self-checking.
 - Show the adult learners the number and types of errors made (spelling, grammar, syntax). Ask them to correct the errors and explain the corrections.

Diagnosis

The adult learner has trouble putting into practice the recommendations received.

Possible teaching strategies

- Ensure that the recommendations correspond to the problem experienced and expressed by the adult learner.
- Ensure that the recommendations are presented in a structured, clear and logical way.
- Ensure that the recommendations are understood by the adult by asking him or her to reformulate them.
- If necessary, provide the adult learner with a sheet on which the recommendations are written.
- Check if the adult learners have put into practice the recommendations made and intervene accordingly.
- Check whether the problem is related to an emotional blockage, a lack of interest, or a problem with understanding in order to adjust the recommendations accordingly.

Diagnosis

The adult learner has not adopted the internalized language needed to regulate his or her conduct.

Possible teaching strategies

- Teach the adult learners what internalized language is by providing examples: a little voice inside one's head, a radio playing inside one's head, a movie inside one's head, etc.
- Suggest that the adult learners choose a name for their internalized language.
- Verify if the adult learners have already used internalized language in everyday situations by asking them:
 - the circumstances in which the "little voice" was used
 - the content of the message
 - the impact of the "little voice" on their behaviour
- Act as a model for the adult by expressing out loud your internal dialogue during the execution of a task: analysis of this task, checking the work, self-correction, encouragement, shifting strategies, congratulations, etc.
- Show the adult learners how internalized language can help learning, for example, by changing their self-image, neutralizing impulsive behaviour, etc.

Diagnosis

The adult learner is impulsive.

Possible teaching strategies

- Ask the adult to wait for a question to be asked completely before giving an answer. Point out that haste often results in a wrong answer.
- Encourage the adult to reflect and mentally envisage several ways to solve a problem before giving an answer.
- Have the learners solve puzzles, insisting they check all of the clues before giving their answer.
- Encourage the adult learners to observe their own behaviour so that they get into the habit of waiting their turn before taking any action.

- In private, point out to the adult that he or she often interrupts others or imposes him- or herself, for example, by breaking into conversations or games. Help the learner find solutions to these inappropriate behaviours.

Diagnosis

The adult learner is apathetic.

Possible teaching strategies

- Provide the adult learners with a well-defined work structure and instructions to follow in their learning activities.
- Suggest to the adult learners concrete tasks that meet their needs and are directly transferable to their daily lives.
- Encourage the adult to use a day planner to take note of:
 - regular activities and special activities
 - class days and holidays
 - personal projects
 - deadlines
- Give the adult instructions that require using documents provided or that are available from the library.
- Have the adult learners take part in group activities in which they will have to organize themselves, take risks, initiatives and responsibilities (decorating a room, organizing a party, a community dinner, an outing, etc.)
- Give the adult learners a series of problems and ask them to take several days to find solutions. Then ask them how they went about solving the problems and what efforts were required. Finally, ask them to evaluate how much satisfaction they got from the experience.
- In private, point out to the adult learner that he or she lacks energy and motivation to accomplish a task and that he or she only acts when prompted. Explore with the learner the reasons for this attitude and try to correct the situation.
- Suggest that the adult learner use a computer for his or her exercises and assignments.
- Ask the adult to set a short-term objective and reward him- or herself when it is attained.
- Ask the adult to set a deadline and check if he or she keeps it. If not, identify the learner's problems.

Notes:

It is in planning and executing tasks that adults in secondary school most often have problems. In most cases, these problems have been there since childhood or adolescence and have never been corrected, since they have not been diagnosed. The problems related to the planning and execution of a task are, for the most part, the same as those listed for literacy and presecondary education.

With respect to the organization of work, few interventions have been systematically applied. Certain centres offer, during initiation to training, courses or training on the subject, but this practice is not very widespread.

Diagnosis

The adult learner lacks problem-solving strategies.
This situation is the cause of many failures.

Note:

Problem-solving strategies could in themselves be the subject for a course in secondary school, but this is not the case. In fact, many failures in mathematics are directly related to this problem. Teachers must therefore make considerable efforts with each adult.

Possible teaching strategies

- Organize clinics or workshops for specialized intervention in the area of problem-solving.

Diagnosis

The adult learner is not capable of correcting his or her own work using a self-correction grid.

Possible teaching strategies

- Check regularly whether the adult learners are using the self-correction grid properly.
- Require that the adult learners hand in their corrections to the teacher (especially at the beginning of the program).
- Ask the adult learners to correct their work as often as possible. If they accumulate large numbers of pages to correct they will usually abandon everything. Most often, the errors are major, but the adult learners no longer feel like going over so many pages.

Part Four: Bibliography

Many of the following bibliographic references can be found in the accompanying document distributed at the training sessions on learning problems, that have been held in several regions of Québec.

We have, however, added a few more documents we also consider useful or because we discovered them recently and found that they were of interest for those concerned with learning problems.

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<<http://www.aqeta.qc.ca/>>
- Learning Disabilities Association of Canada
<<http://www.ldac-taac.ca/>>
- Centre de recherche et de traitement de Montréal pour les habiletés et les troubles d'apprentissage
<<http://www.mrtc.qc.ca/introduction.htm>>
- Multiple Intelligences Quiz
http://www.carriereccc.org/products/cp_99_e/section1/quiz.cfm

- Logiciel Zigzag, outil d'apprentissage informatisé permettant d'évaluer la compréhension et la vitesse en lecture.
<<http://www.unites.uqam.ca/zigzag/>>
- Logiciel Assimo
<www.assimo.com>
- Interesting bibliography
<<http://www.csdeschenes.qc.ca/snaps/Bibliographie/bibliographie.htm>>

Part Five: Appendixes

The content of a number of the following appendixes has been the subject of presentations at training sessions on learning problems held in various regions in Québec. This content has been restructured and modified for the sake of conformity with the nature of this guide.

Appendix I: Learning and Learning Problems	page 95
Appendix II: The Functional Learning Process as Training Approach	page 105
Appendix III: Definitions	page 113
Appendix IV: Attention and Motivation	page 123
Appendix V: Memory	page 127
Appendix VI: Reflective Practice and the <i>Reflective Practice Notebook</i>	page 131
Appendix VII: Functional Analysis Grid	page 135
Appendix VIII: Means of Intervention	page 143
Appendix IX: Desirable Andragogical Framework	page 147

Introduction to the Appendixes

The following nine appendixes provide supplementary material not in the original version of the guide.

Appendix I provides a definition of learning and a few related concepts. It also contains additional information on learning problems, be they difficulties or disabilities.

Appendix II is an abridged version of the document entitled *A Guide to Customized Literacy Training: The Functional Learning Process (FLP)* (see bibliography). It also suggests a simple way to find out how adult learners manage their learning process.

Appendix III gives a definition of a few concepts closely related to behaviour and discusses their significance in different contexts. Understanding these concepts, for the most part born directly out of reflective practice, can make a valuable contribution during functional analysis (see Appendix VII, "Functional Analysis Grid").

Appendix IV is an excerpt from the document entitled *A Guide to Customized Literacy Training: The Functional Learning Process (FLP)* (see bibliography). This excerpt deals in particular with attention (the "overriding competency" of the second mode of the process). It also presents the close connections between attention and motivation (the "overriding competency" of the first mode).

Appendix V deals with memory. The information in it is taken partly from the above-mentioned document.

Appendix VI presents a few characteristics of reflective practice. It also contains the *Reflective Practice Notebook*, which can be used once the functional analysis is completed.

Appendix VII suggests a Functional Analysis Grid, that is, a description of the main variables that characterize a person and convey the information on his or her functioning. This grid can be used to learn more about the adult learners in the course of the support-for-learning relationship. It is particularly useful in cases where the individual has learning problems.

Appendix VIII suggests various means of intervention, the most important being *A Practical Guide for the Teaching of Literacy to Adults With Learning Difficulties* (this document), which is an adapted version of the original guide.

Appendix IX presents the characteristics of an andragogical framework that favours diagnosis and treatment of learning problems.

Appendix I: Learning and Learning Problems

Definition of learning (Malcuit et al., 1977, 1995)

Learning (speaking, thinking, reading, writing, calculating, interacting socially, moving, etc.) is:

- an inferred process, not directly observable,
- including more or less lasting changes in behaviour,
- that are attributable to experience, practice, or both of these two elements.

Learning can be observed as follows.

- Performance is measured at two or more points in time: point X and point X + Y.
- If a difference in performance is observed between these two points in time and if this difference can be explained:
 - by experience or practice, or both,
 - and not by motivation, maturation, fatigue or surgical or chemical effects,
 - then one can say that learning has occurred.

Notes:

- Learning exists independently of external performance.
- It is essential for circumstances to permit the manifestation of learning.
- Except in certain special cases, learning requires effort, determination, practice (sustained by motivation), and aptitude **with respect to what one wishes to learn.**

- Arthur Staats (Forget et al., 1988) explains learning using the Attitude-Reinforcer-Discriminative system (ARD system).

Example: If school is an Attitudinal stimulus (positive or negative) for one person, it will become a synonym of pleasure or displeasure (**R**einforcement or punishment) for this person. The motivation or lack of motivation of this person will be expressed through approaching behaviours or avoidance or escape behaviours (**D**iscriminative stimulus). His or her motivation to adopt these behaviours will depend on whether he or she is in a condition of privation or satisfaction. Thus, we can see here the importance of the first contacts with school and the different contexts in which they take place.

Note:

The value that a situation takes on is determined by the variables that make up the personality of the individual (see Appendix VII, "Functional Analysis Grid").

Learning problems

This general term includes learning difficulties and learning disabilities.

Note. The information below is extracted and adapted from texts from the Learning Disabilities Association of Quebec (LDAQ), the Learning Disabilities Association of Canada (LDAC), and the original version of the guide.

Causes of learning problems

Four main causes of learning problems have been recognized:

1. the way of learning, the state of the learning process (see Appendix II, "The Functional Learning Process as Training Approach")
2. pedagogy or andragogy:
 - diagnostic errors
 - objectives formulated in general and mentalist terms (training of the mind, preparation for life, development, role as citizen, etc.) rather than according to observable, measurable, assessable and quantifiable competencies or behaviours
 - teaching that is not suited to the specific characteristics of the person (visual, auditory, introvert, extravert, etc.)
 - methods that contravene the fundamental laws of learning (cognitive associations, reinforcement, systematic training, etc.)
3. an environment (family, community, social, school, work place) that leaves little room for the exploration of behaviours to be learned or the application of behaviours already learned
4. problems experienced by learners who:
 - have inadequate mastery of various concepts (prerequisites)
 - psychological problems (abnormally high stress, anxiety, social or academic phobias, depression, etc.)
 - cognitive problems, either innate (biological causes) or acquired (developmental or traumatic causes)

Note: Whatever the cause of the learning problem, it is important to identify, as precisely as possible, the predisposing factors, the trigger factors and the maintenance factors.

Learning difficulties

Learning difficulties are:

1. related to external factors: familial, cultural, social, academic, economic or work-related
2. considered "temporary" since it is possible, when the environment is suitable, to correct them using appropriate measures

Severe learning difficulties

Certain difficulties that have a significant emotional (severe trauma experienced in the past) or metacognitive (absence of organization and self-regulation during learning) component can have consequences almost as harmful as learning disabilities. These are referred to as **severe difficulties**.

Learning disabilities

Learning disabilities are:

1. the result of internal neurological factors
2. innate or acquired
3. much more resistant to corrective measures than learning difficulties, particularly those that are acquired
4. permanent in nature

Notes:

- If the adult learner has no intellectual (impairment) or sensory (sight, hearing, smell, taste, touch) problems and still cannot master the subject matter, he or she probably has a learning disability: dyslexia, dysorthography, dyscalculia, etc.

- A learning disability affects the capacity to interpret what is perceived by the senses. It is not necessarily related to intelligence, but is rather a deficiency in the **processing of information**.
- Learning disabilities affect about 10% of the population.

Categories of learning disabilities

Learning disabilities are manifested in problems of:

1. sensory memory
2. motricity (coordination)
3. organization
4. orientation
5. interpersonal relationships (interpretation of verbal and nonverbal language)

Principles that should guide intervention

Before selecting and applying particular strategies with respect to problems that have been defined, it is essential to specify the principles that will guide intervention. The most important are the following:

1. recognize the presence of a learning disability
2. build on the competencies of the adult learner
3. take the learner's needs into account (motivation)
4. establish realistic objectives based on the actual competencies of the adult learner
5. plan the intervention methodically (see Appendix VI, "Reflective Practice and the *Reflective Practice Notebook*")

Possible academic success

Success depends on several factors, in particular:

1. the severity of the disability
2. early diagnosis
3. social support (family, school, job, etc.), which is one of the most significant factors for improving a difficult situation experienced by a person

Mini-Guide to the
Diagnosis of
Learning Disabilities

Causes

1. A learning disability is not attributable to an intellectual impairment or a sensory deficiency (sight, hearing, smell, taste, touch). Such a deficiency can, however, aggravate the situation.
2. A learning disability is caused by a dysfunction of the **information processing system** [acquisition, organization, conceptualization, understanding, memorization (encoding, retention, recall)].

Effects

1. A learning disability AFFECTS — to varying degrees of severity — **learning and use** of the following skills:
 - receptive and expressive language (vocabulary, expression of ideas, reception of messages and mastery of nonverbal language)
 - writing (spelling, grammar and syntax)
 - reading (speed, deciphering and understanding of information)
 - arithmetic (calculation, logical reasoning and problem-solving)

The presence of additions, inversions, omissions, substitutions, repetitions (of sounds, syllables, words, sentences, digits or numbers) are also observed.



2. The learning disability CAN ALSO INVOLVE deficiencies in the following areas:

- spatial orientation and management of space (left, right, front, back, high, low; little, big, narrow, wide; position of limbs, arrangement of objects, etc. the creation of mental images; reading of maps, diagrams, etc.
- time management: before, during, after; time of day; the calendar (days of the week or the month, months of the year, years, seasons); scheduling the time required to perform a task, etc.
- the capacity to understand and follow a series of oral and written instructions
- sensorimotor coordination (writing clearly, riding a bicycle, driving a car, using tools, etc.
- organization and planning of work
- attention, concentration, hyperactivity, hypoactivity
- the capacity to express one's thoughts in an ordered and logical way
- impulsiveness (answering a question before it has been completely formulated, not thinking enough before arriving at a conclusion, etc.)
- the assessment of the consequences of one's behaviour and the capacity to accept them (emotional maturity)
- making a budget and managing money
- looking for and keeping a job
- the adoption of appropriate social behaviours (communication, sociability, problems accepting the points of view of others, etc.)
- the mastery of problem-solving strategies

★★★★★

3. The learning disability CAN BE ASSOCIATED with the following situations:

- The person may manifest one or more of the following symptoms: anxiety, depression, discouragement, stress, aggressiveness, low self-esteem (self-deprecation, fear of taking risks or making mistakes). When these symptoms are present, they are accompanied by considerable suffering and make rehabilitation work more difficult.
- The person may have a tendency to avoid the learning activities that can be strongly aversion-inducing for him or her. The person favours activities in which he or she can show off his or her competencies, for example, a sports activity, organizing parties, sitting on committees. **Such behaviours are often mistakenly attributed to an absence of motivation.**

★★★★★

4. Academically a learning disability LEADS TO the following consequences:

- the person obtains lower grades than expected
- these grades are obtained through **effort** and the assistance of **support** that significantly goes beyond what is usually necessary

These consequences vary according to the severity of the disability.

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Appendix II: The Functional Learning Process as Training Approach

It is frequently observed that people experience learning problems because they do not have the basic competencies for learning. Indeed, these competencies are themselves the focus of learning. These basic competencies take the form of learning strategies. The Functional Learning Process, which uses the basic modes of learning, helps learners develop learning strategies. It is therefore proposed as a model for teaching and learning (see *A Guide to Customized Literacy Training: The Functional Learning Process* in the bibliography).

The Functional Learning Process is learned through conditioning on the basis of predispositions. It is more or less effective according to what extent these predispositions were developed during past learning. It may be restored through EDUCATION, which consists in teaching the process (learning how to learn) and the use of the process (helping others to learn). The Functional Learning Process corresponds to the spontaneous manner (whether appropriate or inappropriate) by which people learn, when they interact with the environment to meet their needs (achieve their goals and solve problems). It uses the four basic modes of interaction with the environment. These modes are distinctive; they follow one after another, so that the fourth one (action) becomes a kind of "concentrate" of the preceding ones. The action that characterizes it is therefore more or less effective, satisfactory and unifying, according to how well the previous modes proceeded.

The first mode is characterized by feeling and emphasis on the emotions, with avoidance being the main problem encountered. This mode is described in terms of four basic competencies (emotional competencies): the ability to focus on the present, to be open to the learning experience, to become emotionally involved, and to trust one's intuition. The determining factor, or overriding competency, is MOTIVATION, which makes it possible to anticipate what will be achieved in the fourth mode (reinforcement). In addition, in the first mode, one determines what is to be learned and desensitizes anxious learners (being upset is an impediment to cognition). Extroverts tend to prefer the first mode.

Remember: Being upset is an impediment to cognition.

The second mode is characterized by exploration and by emphasis on perception (intentional use and organization of sensations coming from the five senses). The main problem at this stage is repetition. The second mode may be described with respect to four basic competencies

(perceptual competencies), namely, the ability to gather, select, organize and describe information. Its determining or overriding competency is ATTENTION. In the second mode, one proceeds to passive (being informed) and active (informing oneself) exploration of the content to be assimilated. Introverts tend to favour the second mode.

Remember: To inform is to confer power. To be informed is to have power.

The third mode is characterized by understanding and by emphasis on cognition. The main problem at this stage is rationalization. The third mode may be described with respect to four basic competencies (rational competencies), namely, the ability to use concepts, make judgments, reason and make decisions and plan actions. Its determining or overriding competency is GENERALIZATION. In the third mode, one verifies comprehension and attributes meaning (this mode is "making sense of"), in addition to listing and planning situations in which learning will be applied in daily life. Introverts tend to favour the third mode.

Remember: I think with the words available to me. (A person's thoughts are determined by his or her words, vocabulary, concepts; his or her mental images.)

The fourth mode is characterized by doing, by an emphasis on actions (the transfer of learning). The main problem at this stage is compensation. The third mode may be described with respect to four basic competencies (operational competencies), namely, the ability to take risks, show initiative, assume responsibility and evaluate one's effectiveness and degree of satisfaction. Its determining or overriding competency is APPLICATION. In this mode, what was planned in the third mode is carried out and evaluated. What happens here determines how the learning process will begin during an experience similar to the one that is ending: success will produce motivation (overriding competency of the first mode), while failure will cause avoidance (main problem of the first mode). Extroverts tend to favour the fourth mode.

Remember: Without transfer of learning, living conditions remain unchanged.

The document entitled *A Guide to Customized Literacy Training: The Functional Learning Process* (see bibliography) is divided into eight sections: the major aspects; the introduction to the basic modes of the functional learning process; the usefulness of the process; the rules of intervention that take into account the Functional Learning Process (to teach in accordance with the process: to help others learn ; to teach the process: to learn how to learn); a protocol for doing the test; a test to check the knowledge acquired from reading the document or taking a training course; developing competencies associated with the process; the theoretical and empirical bases.

For each mode, behavioural indicators have been given to observe the sixteen competencies

along with exercises suggested for developing them. The document also includes several tables and a bibliography.

Various means (tests and questionnaires) are suggested for determining a person's progress in the Functional Learning Process. However, a simpler way is proposed here. Use the table below and check what importance the adult learners give to each of the sixteen competencies on a scale from 0 (0%) = not at all to 10 (100%) = complete. The learner enters his or her answers between the parentheses and adds up the total for **each mode**, for example 3 (30%) + 6 (60 %) + 5 (50%) + 4 (40%) = 18 out of a possible total of 40 = 45%. This percentage is entered in the "overriding competency" space and gives a "percentage interest and competency" for each mode.

The average percentage for the four modes can also be calculated. For example, if the first mode is 45%, the second mode, 75%, the third mode, 35% and the fourth mode, 85%, the average for the four modes is therefore 60%, which represents the overall functioning of the process.

The above exercise can contribute to functional analysis (see Appendix VII, "Functional Analysis Grid"). It makes it possible to see the strengths and weaknesses the adult learners attribute to themselves **with respect to the modes** and, therefore, to the four elements that describe them: the characteristics, the main problem, the four basic competencies and the overriding competency. The table below, a copy of which is given to the adult learner, can then be used to improve his or her learning by building on the strengths (which can be circled in green) and correcting the weaknesses (which can be circled in red).

Notes:

- The first information the answers give us is the adult learners' capacity to evaluate themselves. The evaluation can be positive/realistic, positive/unrealistic (overevaluation), negative/realistic or negative/unrealistic (under-evaluation). It is not a question of interpreting the results obtained, but of examining them with the adult learner to understand them and act accordingly. In cases where the adult learner has obvious difficulties evaluating his or her competencies adequately, guidance can be provided on the basis of the competencies that he or she actually demonstrates through behaviour.

- The following examples can be used to help the adult learners determine the importance they give to each of the sixteen competencies:

First mode

1. I find more interest and pleasure in what I am doing now than what I did in the past or what I might experience in the future.
2. I show interest when opportunities for new experiences are proposed to me (studies, travel, new foods, leisure activities, etc.).
3. I'm capable of living with my emotions, whether they are good or bad (joy, pain, anger, fear, etc.).
4. I trust my intuition or my feelings, whether they are good or bad, about a given situation (first time meeting someone, the atmosphere in a group of people, arriving in a new place, etc.). I take the time to see if they are accurate.

Second mode

5. I can gather the right information when I need it to achieve an objective (studies, travel, a purchase, a job, voting in an election, etc.). This information can come from a person, newspapers, books, the Internet, etc.
6. I'm able to recognize which information is really useful to me to meet my need (one brochure rather than another, the information on one Internet site rather than another, etc.).
7. I can organize the information I get from various sources to make it clear and easy to use (summarizing, classifying, etc.).
8. I can easily explain to someone the information I've obtained, provide clarifications and answer questions.

Third mode

9. I have the words I need to express myself (a varied vocabulary, synonyms, etc.).
10. I'm able to give my opinion confidently on various subjects (politics, religion, health, education, war, etc.).
11. I can express myself in a well-ordered and logical way. I have good arguments when I defend my point of view.
12. I can make decisions when I need to and plan what will result from the decisions I make (with respect to family, work, politics, purchases, etc.).

Fourth mode

13. I'm able to take risks and dare to do things without knowing all the consequences (studies, travel, new job, new relationships, new restaurants, etc.).
14. I'm able to take the initiative (be the first one to suggest or undertake something).
15. I can assume my personal, family, relational and occupational responsibilities. I can feel responsible for my behaviour without necessarily feeling guilty.
16. I'm capable of evaluating if I have been effective following an action I've taken and of measuring my level of satisfaction or pleasure with respect to the results.

Table - The Functional Learning Process: A System

1st learning mode	2nd learning mode	3rd learning mode	4th learning mode
CHARACTERISTICS: EMOTIONS	CHARACTERISTICS: PERCEPTIONS	CHARACTERISTICS: COGNITIONS	CHARACTERISTICS: ACTIONS
→ FEEL I feel	→ EXPLORE ↑ I explore ↓ I feel	→ UNDERSTAND ↑ I understand ↓ I explore ↓ I feel	→ ACT ↑ I act ↓ I understand ↓ I explore ↓ I feel
Main difficulty: Avoidance	Main difficulty: Repetition	Main difficulty: Rationalization	Main difficulty: Compensation
Basic competencies: 1. I can live in the present (). 2. I can be open to experience (). 3. I can commit emotionally (). 4. I can trust my impressions and my intuition* ().	Basic competencies: 5. I can collect information (). 6. I can select information (). 7. I can organize information (). 8. I can describe information* ().	Basic competencies: 9. I can use words and concepts (). 10. I can make judgments (). 11. I can reason by presenting arguments (). 12. I can make decisions and plan my actions* ().	Basic competencies: 13. I can take risks (). 14. I can take the initiative (). 15. I can assume responsibility (). 16. I can assess my effectiveness and my satisfaction* ().
Overriding competency: Motivation	Overriding competency: Attention	Overriding competency: Generalization	Overriding competency: Application

*key competencies

The Functional Learning Process is learned through conditioning,
which gives rise to respondent behaviours (S2-(S1) → R ±) operant behaviours (R → S ±), which are always linked.

S = Stimulus R = Response

Appendix III: Definitions

Intensive andragogy

Intensive andragogy, which keeps adult learners in a failure situation and weakens educators' motivation, consists of pursuing a support for learning relationship with an adult who does not sufficiently possess the competencies **necessary to carry out the learning plan he or she is pursuing**. This inadequacy can involve one or more of the following competencies:

- declarative (knowledge: what, who)
- procedural (skills: how; one situation, several actions)
- conditional (attitudes: when and why; several situations, one action)

Andragogy

Etymology

Pedagogy: paido- (παιδο): child; agôgos (αγωγος): leader, guide

Andragogy: andras (ανδρας): man (maturity); agôgos (αγωγος): leader, guide

Andragogy consists of a support-for-learning relationship maintained with adults engaged in a training process. Different characteristics are mentioned by the researchers and the practitioners regarding andragogy and the adult student. The most important are listed below:

- Andragogy focuses on learning and the learner, while pedagogy focuses on teaching and the teacher.
- Usually, children memorize then understand, while adult learners understand then memorize.
- A request made by an adult is different from one made by a young person. Teaching strategies therefore need to be adjusted accordingly.
- The level of autonomy shown by adults is different from that shown by youth. The supervision and control exercised therefore need to be adjusted accordingly.
- The characteristics of the adult student involve (in comparison with young people) motivation, perception of time, self-concept (main difference between adult learners and young people) and experience.

Functional andragogy

The term "functional andragogy" should be understood in the sense of functional pedagogy and psychology that are based on the functionalist school of thought. In the pursuit of purposes, goals and objectives, a functional type andragogy leaves a great deal of room for individuals and what characterizes them: their needs, motivation, opportunities for pleasure and displeasure, goals, the meaning they give to events and their level of adjustment.

A functional type andragogy is aimed at the consolidation of learning (functional consolidation) and promotes, in a realistic, practical way, the harmonization of the characteristics of an individual with his or her external and internal behaviour and the possibilities provided by his or her external and internal environment.

Functional andragogy is a framework favoured for the implementation of learning through projects, through problem-solving or for the demonstration of the usefulness of the abstract through the concrete, which are all opportunities to develop and use the declarative (knowledge), procedural (skills) and conditional (attitudes) competencies.

Behaviour

A person can produce, adopt, show, execute and manifest external and internal behaviours.

- **External behaviour** is directly observable and involves moving around spatially. Examples: talking, walking and touching.
- **Internal behaviour** is not directly observable and does not involve moving around spatially. Examples: reflecting, calculating, imagining, anticipating, recollecting, talking to oneself (interior monologues, inner verbalizations: instructions, congratulations, reproaches, support, accusations, etc.), interior dialogue, taking action in one's mind, etc.

A distinction is made between respondent behaviour, activated by the environment, and operant behaviour, which acts on the environment.

Self-knowledge

Self-knowledge is, in a way, a fundamental prerequisite for self-esteem and for a realistic self-image. Self-knowledge is also one of the foundations of self-confidence; it makes a person capable of adopting behaviours of self-affirmation, rather than of submission, aggression or manipulation.

Self-knowledge, the motto of Socrates,¹ requires long work and makes extraordinary demands. It means knowing what characterizes individual existence: strengths and weaknesses, aspirations and disappointments, successes and failures, qualities and faults, anxieties and certainties, competencies and shortcomings, etc.

Self-knowledge makes it possible for the person to decipher and understand the behaviours he or she adopts and to modify them, if necessary, according to goals. Self-knowledge is a good predictor regarding the choices the person makes in his or her life and his or her management of the consequences of these choices.

One can imagine the importance of self-knowledge for a person who has learning problems and who wants to work to improve his or her situation (see Appendix VII, "Functional Analysis Grid").

Desensitization (extinction of emotional responses)

The phenomenon of aversion to the school environment is so widespread (and often concealed) among persons with learning problems that it is important to study the phenomenon to understand it and attempt to eliminate it before proceeding with any other intervention. Aversion is a spontaneous negative reaction (response), innate or learned, to a given situation (stimulus). To counteract it, desensitization is required, which can take place in the course of a support for learning relationship. Everyday situations (in the training centre, in the classroom, etc.) are used to demonstrate to the person that these situations can be opportunities for pleasure rather than displeasure. Encouraging the adult, reassuring him or her and reinforcing his or her behaviour **in a relaxed atmosphere** is usually sufficient to curtail reactions so that the learner can work to

¹ Socrates, Greek philosopher (470-399 B.C.E.):
"Know thyself": Γνωθι σεαυτον (Gnôthi seauton).

overcome his or her learning problems and pursue his or her learning plan (see Malcuit et al., 1995).

Andragogical diagnosis

Etymology

Diagnosis (διαγνωστικός): dia (δια): through; gnostikos (γνωστικός): able to recognize.

In this context, andragogical diagnosis makes it possible to evaluate the situation for the purpose of identifying the nature of a dysfunction. It is aimed at determining if a person is dealing with a learning difficulty, a severe learning difficulty, or a learning disability.

Andragogical diagnosis can be descriptive (say what is happening) or explanatory (identify the causes of what is occurring). This is done as **joint action** and can involve the participation of several people who contribute in accordance with their level of expertise (student, family, teacher, consultant, special education teacher, psychologist, medical practitioner).

See the "Three-Stage Model" in Appendix IX, "Desirable Andragogical Framework."

Environment

A distinction is made between the external environment and the internal environment.

The **external environment** includes people and their status, ideas that are circulating, events, places and things.

- The **internal environment** includes physiological (sensations) and psychological phenomena (certain internal behaviours that produce the same effects as the external environment).

The environment includes stimuli (situations, stimulation) that can activate external and internal responses (behaviours, reactions). For example, the school (stimulus) induces positive or negative responses or reactions, which are manifested in approaching behaviours or avoidance or escape behaviours.

Extroversion and introversion

There are few, if any, examples of purely extroverted or introverted personality types. Although they differ, each represents a healthy way of seeing life. Each type is a "disposition" that may evolve in ways that take the environment into account. For some authors, these dispositions are genetically determined properties of the central nervous system. The table on the next page gives the main characteristics of each type. Knowledge of these characteristics can be useful in guiding the choice of actions to take with persons with learning problems.

Extroversion and introversion

The "typical" extroverted personality (first mode of the FLP*: extroverted-emotive; fourth mode of the FLP: extroverted-active)	The "typical" introverted personality (second mode of the FLP*: introverted-perceptive; third mode of the FLP: introverted-cognitive)
<ol style="list-style-type: none"> 1. Is sociable 2. Likes taking risks 3. Is impulsive 4. Is expressive 5. Is quick-tempered 6. Is more or less organized 7. Is optimistic 8. Is supportive of others 9. Is objective 10. Attributes the control of his or her life to external factors 11. Has rather superficial relationships 12. Is bold 13. Functions more effectively under stress 14. Is absentminded 15. Adapts easily 16. Tends to be dependent 	<ol style="list-style-type: none"> 1. Is retiring 2. Is cautious 3. Is thoughtful 4. Is discreet 5. Is level-headed 6. Is organized 7. Tends to worry 8. Is solitary 9. Is subjective 10. Attributes the control of his or her life to internal factors 11. Has intense relationships 12. Is timid 13. Functions less effectively under stress 14. Is attentive 15. Has difficulty adapting 16. Tends to be independent

* Functional Learning Process

"Law" of Primacy (balance, the weight of areas of interest, attraction)

The "law" of primacy illustrates the fact that **motivation** swings constantly between two situations (imaginary or experienced). Either both situations are agreeable (pleasure/pleasure), or both situations are disagreeable (displeasure/displeasure), or one situation is agreeable and the other, disagreeable (pleasure/displeasure). This state of affairs can lead to intense stress.

Of the two situations, it is the one that has the most "weight" for the individual that dominates and takes precedence as long as that primacy is maintained. The process can, however, be reversed if the attraction shifts in favour of the other situation. This observation provides avenues for exploration toward the understanding of behaviours of perseverance, abandonment, etc.

Examples of two agreeable situations: going on vacation or buying new living room furniture. Examples of two disagreeable situations: staying in a job one hates or being deprived of financial resources by quitting it. Examples of an agreeable situation and a disagreeable situation: going to school and feeling better about oneself, but having to work very hard.

"Law" of Equilibrium (fluctuation)

The "law" of balance illustrates the fact that, in the interactions between an individual and his or her environment (**adjustment process**), there is constant pressure from the environment on the individual and constant pressure from the individual on the environment. The balance between these pressures must, however, be maintained, or else the individual becomes dysfunctional (**adjustment problem**). In certain circumstances, the environment (a group of persons) can also become dysfunctional under pressure from one individual (an authoritarian boss, etc.). The adjustment efforts frequently required can lead to exhaustion. It should be noted that pressure can also be manifested in insufficient stimulation.

For example, an adult who has to carry out a training plan can respond to the requirements of the environment (Ministère de l'Éducation, training centre, teachers, etc.). However, if the capacities of the adult learner are weakened or the requirements of the environment increase inordinately, an imbalance occurs, which leads to an adjustment problem. The resulting stress can have various ill effects or lead to dropping out if it goes beyond what the adult learner can tolerate.

Metacognition (Bouffard-Bouchard, 1988)

Metacognition focuses on, among other things, the relationship between an individual's knowledge with respect to his or her cognitive functioning and the control (self-regulation) he or she exercises over this functioning.

With respect to metacognition, the factors that influence the learning strategies are: (1) the individual's conception of learning (self-directed process or a process established in advance over which one has no power; (2) The individual's feeling of personal competency with respect to the task at hand.

To foster learning, metacognition suggests: (1) helping adult learners to take into account the knowledge and skills they possess and to use them in learning situations; (2) encouraging adult learners to modify their negative beliefs, which are incompatible with autonomy; (3) teaching the adult learners to self-evaluate correctly by giving them feedback that provides information on their successes and failures, on the factors that determine them, and on ways to improve their learning strategies.

Note: Metacognition provides some interesting food for thought on the specificity of learning in adult learners. For example, what would change in the adult learners (in comparison with young students) are their metacognitive abilities, that is their capacity to:

- become more familiar with their cognitive functioning
- control it themselves and direct it if the circumstances require
- given the above, make up for certain deficiencies in the areas of memory, concentration and understanding

Stress

Stress is the body's response to positive or negative situations that are manifested in the environment. Poorly managed, it can have regrettable consequences, among other things on memory, the immune system and responses to treatment (diminishing or cancelling the effectiveness of an intervention). To achieve adequate stress management, it is important to consider, first of all, the sources and signals of stress, and the management tools.

The main sources of stress are happy or unhappy events, irritants, boredom, work, financial concerns, inadequate control over one's own life, and perfectionist tendencies. Stress signals can be physical (backaches, etc.), behavioural (increasing consumption, etc.) or psychological (worrying, etc.).

Management tools affect how one reacts to various situations, how one communicates and how one organizes time. A good balance between these tools and the level of stress is a desirable objective. In fact, the more effective the tools, the better the stress is managed and the balance preserved.

In this regard, see Gagnon, L. et al., *Acti-menu, Programme Santé. Test « Êtes-vous stressé? »* (Montréal, 2002) in the bibliography.

Transfer

Transfer is defined as the use of declarative, procedural, and conditional knowledge (knowledge, skills and attitudes) in a new situation.

In this document, transfer refers to the use, in various everyday situations, of declarative, procedural, and conditional knowledge acquired through training.

This transfer of learning is what gives meaning to the training process and, as well, to the efforts of those who help or are being helped. It therefore takes shape at the beginning of the training process. Being able to envisage what the learning will be used for constitutes a determining factor for motivation.

However, certain rules have to be respected if one wishes to maximize the chances of transfer of learning. The learning situations can be identical or similar to those in daily life or completely different. The same is true for the behaviours that will be adopted. The research shows that when the two situations are similar (learning and life) and when the response (behaviour) is identical in the two situations that transfer is most favoured. This is what is called the "law of similarity."

In this regard, see Québec. *Frame of reference. The Transfer of Learning in the Context of Literacy Training*, Québec: Ministère de l'Éducation, Direction de la formation générale des adultes, 1999.

Appendix IV: Attention and Motivation

Attention is a selective phenomenon that operates according to one's expectations. For example, one is eager to know the results of an exam that one took; something is therefore expected. Attention consists in a sustained intellectual effort aimed at a specific set of circumstances; this is what makes it an essential and, indeed, the determining factor in the second mode of the Functional Learning Process. See Appendix II "The Functional Learning Process as Training Approach."

Although attention is necessary throughout the Functional Learning Process, it plays its key role in the second mode, since it enables one to be aware of (perceive) the content that is presented. In addition, attention is absolutely necessary for learning that draws upon observation and imitation. It is known that this type of learning plays a decisive role in a person's development.

Attention may be **spontaneous** or **voluntary**. Spontaneous attention does not require effort since it is determined by one's interests (spontaneous motivation). Voluntary attention, however, requires an effort to concentrate on something that does not necessarily stimulate one's interest. Usually people pay attention only to those stimuli that affect their most important needs.

Attention-deficit problems, which may be related to neurological abnormalities, to damage to the sense organs (sight, hearing, smell, taste or touch) or to a disorganized environment, often show up when attention is required. Major attention-deficit disorders are often accompanied by **hyperactivity**. It has been shown that anxiety considerably reduces attention and, consequently, the ability to encode, retain and recall information (see Appendix V, "Memory"). It goes without saying that lack of sleep, overwork, undernourishment, emotional insecurity, family problems and other factors are also elements that adversely affect one's attention span, hence the importance that must be given to the first mode of the Functional Learning Process (the emotions mode) in order to reduce anxiety.

Teaching strategies that foster attention

- Develop the four basic competencies of the second mode of the Functional Learning Process.
- Arrange the environment to make it as attractive as possible (see Appendix III "Definitions"). It is a question of eliminating competing stimuli or distractions, providing frequent reinforcement, varying learning situations and assigning the adults precise tasks that require them to draw extensively upon their senses.
- Take into account the adults' needs and facilitate their participation (the satisfaction of needs takes into account motivation, which promotes attentiveness).
- Present the adult learners with all the data related to learning with a concern for promoting **earnest** exploration, and a review and enrichment of the information.
- Help the adult learners to become organized and organize the content they are dealing with (working methodology in the learning situation).
- Frequently remind the adults of the goals they are pursuing in the learning project, which will be attained during the transfer of learning.
- Defuse anxiety-producing situations (desensitize) and reinforce adaptive behaviour (see "desensitization" in Appendix III "Definitions").

Close relation between attention and motivation

Motivation, which has a direct effect on learning, is the determining and essential factor of the first mode of the Functional Learning Process. While it is necessary throughout the process, it is in the first mode that it plays its main role, since it "jump starts" the learning process.

Motivation may be defined as a tendency to satisfy a need. It encourages one to act, to adopt certain behaviours with a view to satisfying a need, which represents the discrepancy between the present situation and the desired situation. Thus motivation generates **anticipation**, which is to a greater or lesser degree confirmed by a reward (or punishment) during the fourth mode of the learning process.

For example, some individuals want to practise a certain trade. For the moment, however, they possess very little knowledge or skill related to this trade. However, they are highly motivated to take a training course that will enable them to reach their goal. At the end of the training course they will, to a greater or lesser degree, be reinforced (or penalized) to the extent that they are able to practise their trade successfully.

Motivation, which is influenced by one's feeling of personal competency, is generally classified in the following manner: **primary motivation**, relating to physiological needs that must be satisfied for the person to function properly (a person who hasn't had enough to eat will find it very difficult to learn); **secondary motivation**, relating to needs that are specific to each individual (to practise a specific trade, for example); **intrinsic motivation**, which causes people to learn for the sheer pleasure of learning; and **extrinsic motivation**, which compels people to satisfy needs that go beyond the pleasure of learning for its own sake. Too high a degree of motivation usually generates anxiety, which impedes learning.

Teaching strategies that promote motivation

- Develop the four basic competencies of the first mode of the Functional Learning Process.
- Show the adult learners the advantages to be derived from learning by:
 - describing in lively ways the advantages of learning
 - asking them to imagine the advantages they will derive from learning
 - making connections with past learning that brought about significant changes in their living conditions

Notes:

- A loss of motivation can be a direct result of successive failures. Such a situation is predictable when the behaviour adopted did not produce the expected reinforcers (rewards). In other words, when the "functional pleasure"² resulting from a behaviour is not felt, this behaviour diminishes and finally disappears. Following behaviours then become avoidance or escape behaviours.

- The transfer of learning, which takes place in the fourth mode, is one outcome of the Functional Learning Process. This transfer is what gives meaning to the training process and, as well, to the efforts of those who help or are helped. It begins to take shape during the first mode. The degree of motivation of the adult learners in the first mode is therefore a good indicator of how well the process is functioning, and of whether there is a transfer of learning.

² Functional pleasure corresponds to what is felt after effective and satisfying behaviour. It draws attention to the ability to reinforce oneself. It derives from the person who feels it. It belongs to that person. The experience of functional pleasure and effectiveness is especially significant in the fourth mode of the Functional Learning Process.

Appendix V: Memory

Memory includes the following capacities: **encoding** declarative knowledge (knowledge: what, who); procedural knowledge (skills: how) and conditional knowledge (attitudes: when, why), as well as **retention** and **recall** of this knowledge.

Information-processing theory (Dubé, 1986; Forget et al., 1988) distinguishes between episodic memory, which is autobiographical in nature (events experienced by one person) and semantic memory (knowledge of words, symbols, rules, and so on). According to this theory, memory is made up of three interrelated systems:

- The register of sensory information (RSI), which registers information received by the senses and keeps it for a few tenths of a second. Here, **attention** plays a key role (see the second mode of the Functional Learning Process).
- Short-term memory (STM), or immediate memory, which is more complex than RSI, ensures that information is used immediately after it is perceived. Short-term memory does not have the capacity to retain much information at a time, and what it does retain is retained for only a few seconds. The operation used to retain information in short-term memory consists in continuously and silently repeating the information that one wants to memorize.

For example, a person repeats a telephone number he or she wants to dial for the time it takes to go from one room to another.

- Long-term memory (LTM) enables one to reproduce, reconstruct and recognize information acquired over a number of hours, days or years. This type of memory retains hundreds of billions of bits of information. The operation that facilitates the retention of information in LTM consists in organizing or structuring the information that one wants to memorize, or relating it to knowledge already acquired. This is what happens in the second and third modes of functional learning.

The following tables summarize useful information. The first one deals with the length of time between presentation and recall as well as the nature of what is recalled, while the second makes a few suggestions for intervention.

The length of time between presentation and recall	Nature of what is recalled
<p>1. The register of sensory information (RSI): less than a second (attention plays a fundamental role)</p> <ul style="list-style-type: none"> • A memory for each sense <ul style="list-style-type: none"> - Iconic (visual) - Echoic (auditory) - Tactile, olfactory, gustatory - Spatial - Eidetic or photographic (visualize and remember again scenes seen long before) 	<p>1. Declarative (propositional)</p> <ul style="list-style-type: none"> • Knowledge: what, who <ul style="list-style-type: none"> - Episodic or autobiographical <p>Episodes experienced at a given time and in a context of verbal units (personal history, knowledge)</p> - Semantic <p>Meaning of words, verbal symbols, concepts, idioms, functional aspects of grammar</p>
<p>2. Short-term memory (STM) of an immediate task: a few seconds</p> <ul style="list-style-type: none"> • Recall capacity: 5 to 9 items • Facilitation: repetition, mnemonic procedures • Effect of primacy and recency • Similarity: learning related to context or physiological and psychological state 	<p>2. Procedural</p> <ul style="list-style-type: none"> • Skills: how <ul style="list-style-type: none"> - Perceptual-motor skills - Can occur without verbal or iconic support (e.g., skating) - It is "learning how to learn"
<p>3. Long-term memory (LTM): hours, days or years</p> <ul style="list-style-type: none"> • Theoretically unlimited storage and recall capacity • Facilitation: organizing, relating information • In case of problems = access or interference • Contains the declarative, procedural, and conditional knowledge 	<p>3. Conditional</p> <ul style="list-style-type: none"> • Attitudes (when, why) <ul style="list-style-type: none"> - Recognition of situations - Knowledge necessary for the transfer of learning - Knowing when a behaviour should be adopted and the reasons why

Some Memory Enhancement Techniques

- Repetition: This consists in increasing the number of learning sessions. It is considered a reactivation of information and not a mechanical repetition.
- Review: This consists in (1) going back over what was learned as quickly as possible; (2) beginning a study period with a review of the notes from the previous class; (3) ending each study period with a review of the notes of the day.
- Overlearning: This consists in continuing to study an area in which one already meets the generally accepted criteria for knowing the subject.
- The simultaneous use of several senses to develop attention and facilitate assimilation. It is thought that one retains:
 - 10 percent of what is read
 - 20 percent of what is read and heard
 - 30 percent of what is seen
 - 50 percent of what is heard and seen
 - 70 percent of what is said
 - 90 percent of what is done
(fourth mode of the Functional Learning Process: transfer).
- Recitation: This consists in saying out loud something one already knows from memory. It is better to spend 80 percent of one's time reciting whatever is to be learned, rather than reading it.
- Structuring: This consists in (1) creating acronyms with the first or last letter of several words; (2) making up a phrase or story with absurd combinations of information. As strange as it may seem, studies show that human memory tends to retain associations linked to the ridiculous and absurd.
- Mnemotechnical devices such as associating places, using rhythm (singing what one wants to learn) and rhyme, and constructing a sentence with the first letters of the words one wants to memorize. For example, to remember the names of the planets in the solar system, one could construct a sentence such as the following: "Man Very Early Made Jars Stand Up Nearly Perpendicularly" (i.e., Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, and Pluto).
- Understanding: This consists in ensuring that a sentence is well understood by repeating it in one's own words.
- Action: This consists in, among other things, (1) constructing one's own questions on the subject being studied; (2) making plans, diagrams, summaries; (3) dividing long lists (of formulas, concepts, etc.) into sections to avoid confusion; (4) grouping similar elements together or marking them with a single colour.

Appendix VI: Reflective Practice and the *Reflective Practice Notebook*

The objective of reflective practice (St-Arnaud, 1992) is to make the practitioners more effective, more autonomous, more aware and more satisfied. In addition, it makes it possible for them to analyze their actions and practices and adjust them to their objectives, that is, to do what is appropriate with respect to what they want to do. According to the notion of reflective practice, ineffectiveness can be explained by three causes:

- the intention (objective), more or less clearly conceptualized, of the practitioner is not realistic (errors of intention)
- the practitioner does not use the appropriate means to produce the desired effects or to attain the objective being pursued (strategic or technical error)
- certain factors that are totally beyond the control of the practitioner

In reflective practice, the **personal effectiveness test**, which takes the practitioner from reflecting on action to reflecting in action, makes it possible to recognize and correct strategic errors and errors of intention in the following ways:

- When, following an intervention, the reaction of the subject (person or group) causes dissatisfaction or displeasure **for the practitioner**, this indicates that the intervention was not effective. A strategic error was committed, and the strategy must be changed. This is a first-level self-regulation loop.
- An error of intention occurs when, after three first-level self-regulation loops, the practitioner **persists** with the intervention without modifying the initial intention (reformulation of the situation and the objective). An escalation occurs and the ineffectiveness and dissatisfaction are aggravated. A review of the initial intention and objective, in accordance with the redefined situation, is a second-level self-regulation loop. It is this reframing that permits the practitioner to learn.



Notes:

- According to St-Arnaud, the problem of the ineffective practitioner is less one of lack of self-regulation regarding strategy than of doggedly persisting in trying to produce an unrealizable effect.

- The following page contains a "*Reflective Practice Notebook*," which suggests a simple method of reflecting on action and in action. It is used to record, in writing, the main events that occur when one intervenes in a given situation. The information gathered using the notebook can be shared at meetings of adult teachers, which can be transformed into "reflective practice workshops."

Reflective Practice Notebook

Before the intervention

1. Describe the situation: stick to the reality of the facts.
Appendix VII "Functional Analysis Grid."
2. Formulate the target objective according to observable, measurable behaviours. The objective is determined from the result of functional analysis (andragogical diagnosis).
3. Choose the means that will be used to attain the target objective.
Appendix VIII, "Means of Intervention."
4. Plan the intervention methodically. The intervention takes place according to a precise plan with respect to the **nature** of the activities, their **duration**, **criteria** for success **and actions that will be undertaken according to whether or not the objective is attained**: continuation in general education or in vocational education; entry into the job market; personal, family, social autonomy, etc.

Note: The intervention calls on three types of competencies possessed by the practitioner: declarative (knowledge: what, who); procedural (skills: how); and conditional (attitudes: when, why).

During the intervention

1. Implement the chosen means.
2. Make the necessary adjustments (ongoing evaluation on the **effectiveness of the intervention**, **satisfaction with regard to the intervention**, its **necessity** and the **responsibility** of the persons involved).
3. Note the essential events by numbering and dating them.
Example: 1. 2004-06-11.

After the intervention

Evaluate the *results* obtained and identify the *causes*.

Were the expected results attained?	The results are due to (causes) or explained by (causes).
Completely ()	The adequate or inadequate description of the situation ()
Largely ()	The realism of the target objective ()
To some extent ()	The means used ()
Almost not ()	The adjustments made (ongoing evaluation) ()
	Factors beyond the control of the practitioner ()

Comments that explain the results

Appendix VII: Functional Analysis Grid

The Functional Analysis Grid includes seven interacting variables: the predispositions of the person (innate sensitivity); the history of the person's learning and development; the person's physical and mental health; the person's motivation; the person's behaviour (external and internal); the person's competencies; and the environment (external and internal). Not only does this instrument contribute to better **self-knowledge** (see Appendix III, "Definitions"), but it can be very useful for understanding the functioning of an adult with a view to formulating an andragogical diagnosis (see "diagnosis" in Appendix III "Definitions").

Andragogical diagnosis, the **cornerstone** of educational intervention with adults who have learning problems, is often also the **stumbling block**. When it is done poorly, it can lead to inappropriate intervention and, as a result, inefficiency and dissatisfaction both for the teachers and the adult learners. Common errors are, for example, confusing effect with cause, treating the effect rather than the cause, and forgetting to eliminate the cause in order to eliminate the effect.

It should be noted that a diagnosis is never completely certain. In fact, a large part of the work is done experimentally. Often it is necessary to **explain the explanation**. Most of the time, the process of understanding progresses from hypothesis to hypothesis. Such an approach has a lot in common with reflective practice (see Appendix "Reflective Practice and the *Reflective Practice Notebook*").

This being said, there are different means of carrying out a functional analysis in order to make an andragogical diagnosis. These are the three main ones:

1. Interview (the support for learning relationship)
2. Observation (in different contexts):
 - Indirect: done by a third person
 - Direct: done by oneself

3. The measurement involving:

— Grades:

- Receptive language: (1) discrimination; (2) observation of instructions; (3) participation in a conversation; (4) understanding of a presentation; (5) deciphering nonverbal language
 - Expressive language: (1) pronunciation; (2) coherence, logic; (3) vocabulary; (4) syntax; (5) appropriate use of nonverbal language; (6) incorrect borrowings from another language
 - Reading: (1) alphabet, sounds; (2) speed, deciphering and understanding of words (syllables), sentences and paragraphs; (3) mastery of punctuation; (4) presence of additions, inversions, omissions, substitutions, repetitions of sounds, syllables, words, lines and sentences
 - Writing: (1) letters, words, sentences, paragraphs in a dictation and writing freely; (2) spelling, grammar, syntax; (3) substance: analysis, summary and coherence of ideas; (4) form: presentation; (5) presence of additions, inversions, omissions, substitutions, repetitions of sounds, syllables, words, lines and sentences
 - Arithmetic: (1) reading and writing numbers; (2) performance of the four basic operations (addition, subtraction, multiplication and division); (3) solving written problems (related or not to everyday activities); (4) reasoning: application of concepts to the problems formulated; (5) calculation
- The effectiveness of the learning process (see Appendix II, "The Functional Learning Process as Training Approach").
- The level of stress and stress management in the course of the learning process (Gagnon, 2002).

Notes:

- **A complete functional analysis ends with the evaluation of aptitudes using standardized tests.**
- The use of the same measurement (the same test, the same questionnaire, etc.) at different times makes it possible to observe if progress has been made with respect to grades, the learning process and the level of stress. We then refer to pretests and post-tests.
- The adult learner should be involved in the functional analysis as closely as possible. Getting the facts right is a necessity, an obligation and a duty.

Functional Analysis Grid: Profile of Pierre, Cécile, and others

<p>1. Predispositions (innate sensibilities: temperament)</p> <p>Extraversion (talkative, is sociable, functions well under stress)</p> <p>Introversion (not talkative, is reserved, does not function well under stress)</p> <p>To evaluate: interviews, observation and Appendix III, "Definitions"</p>	<p>Observations</p>
<p>2. History in terms of learning, of development (past learning: character).</p> <p>Sensitive period for development (for the acquisition of certain competencies).</p> <p>ARD System (Appendix I): significant events. Early indicators of future problems.</p> <p>Upward spiral: successive successes, frequent reinforcement (winners).</p> <p>Downward spiral: successive failures, rare reinforcement (losers).</p> <p>Age, sex, years of schooling and grades.</p> <p>To evaluate: interviews and Appendix I, "Learning and Learning Problems."</p>	<p>Observations</p>
<p>3. Health (medication possibly being taken)</p> <p>Physical health: surgeries, chronic pain, etc.</p> <p>Mental health: stress, anxiety, phobias, depression, etc.</p> <p>To evaluate: interviews and test: "Êtes-vous stressé" (Gagnon, 2002)</p>	<p>Observations</p>

<p>4. Motivation (approaching, avoidance, escape behaviours)</p> <p>Extrinsic: mobilization for the purpose of external reinforcement (reward, pleasure). Instability because, when the reward is gone, the motivation disappears as well.</p> <p>Intrinsic: mobilization for the purpose of internal reinforcement (reward, pleasure). Greater stability because the reward is equivalent to adopted behaviour.</p> <p>To evaluate: estimate of the level of motivation [poor (1) to strong (10)] through interviews and the observation of behaviours.</p>	<p>Observations</p>
<p>5. Behaviours</p> <p>External: regular attendance, punctuality, responsibility, commitment, sociability, etc.; submissiveness, aggressiveness, manipulation, affirmation.</p> <p>Internal: reflection, reasoning, etc.</p> <p>To evaluate: interviews and observation.</p>	<p>Observations</p>

<p>6. Competencies</p> <ul style="list-style-type: none"> — Knowledge (what, who); skills (how); attitudes (when, why): <ul style="list-style-type: none"> • in oral communication (vocabulary, expression of ideas, reception of messages, mastery of nonverbal language) • in reading (speed, deciphering and understanding) • in writing (spelling, grammar, syntax) • in arithmetic (calculation, logical reasoning, problem-solving) — Motricity, attention, memory, perception, planning and execution of a task — Learning process: feel, explore, understand, act <p>To evaluate: grades, standardized tests; Appendix II "The Functional Learning Process as Training Approach"</p>	<p>Observations</p>
<p>7. Environment:</p> <p>External: ascendant family (parents, brothers, sisters, etc.); descendant family (spouse, children, etc.); friends, colleagues, employers, etc.</p> <p>Encouragement, support, confidence, reinforcement, etc.</p> <p>Internal: physiological phenomena; positive or negative inner verbalizations (talking to oneself in constructive or destructive ways); action in thought.</p> <p>To evaluate: interviews.</p>	<p>Observations</p>

Appendix VIII: Means of Intervention

Introduction

Intervention with people who have learning problems must be carried out methodically (see Appendix VI, "Reflective Practice and the *Reflective Practice Notebook*"). It calls on three types of competencies possessed by the practitioner: knowledge, skills and attitudes. This intervention can be defined as an action undertaken in order to support progress in a situation.

In this context, intervention should be done from a realistic perspective. This means that THE EXPECTATIONS regarding its effectiveness should correspond to the potential demonstrated through functional analysis (see Appendix VII "Functional Analysis Grid"). Those who ignore this requirement set themselves up for great disappointment, be they the educators or the adult learners.

The QUALITY OF THE RELATIONSHIP between the teacher and the student is an essential condition for the effectiveness of the intervention. A warm, open relationship ensures a balance between the emotional and cognitive aspects and can be a form of "corrective experience for emotions and relationships" that "corrects" past negative experiences, which have frequently been experienced by adult learners in the education system.

Means of intervention

The following pages present various means of carrying out the intervention. Each is accompanied by a brief introduction and a bibliography, if applicable. Means should be chosen according to the objective being pursued.

1. The customized training process

The customized training process ensures the participation of the adult learner in the determination of needs, learning objectives, teaching methods used and applications in daily life. It is one of the most powerful means of ensuring the effectiveness of training and the resulting satisfaction.

Ref.: Québec. *A Guide to Customized Literacy Training*, Third edition, Québec: Ministère de l'Éducation, Direction de la formation générale des adultes, 1998. Also available in PDF format on the DFGA Web site.

2. The Functional Learning Process

The learning process is of fundamental importance in learning, even more important when the learning problems are related to either temporary difficulties or permanent disabilities. It is therefore advisable to take it into consideration in the course of the training in order to attempt to make it as effective as possible.

Ref.: Patry, J. *A Guide to Customized Literacy Training: The Functional Learning Process (FLP)*. Québec: Ministère de l'Éducation, Direction de la formation générale des adultes (DFGA), 41-1066A, 2002. Also available in PDF format on the DFGA Web site.

3. The CO-SKILLS cognitive training software

Version 4.2 of CO-SKILLS includes 25 programs, each aimed at improving a particular competency. Certain competencies, however, are targeted in most of the exercises, for example, attention, concentration and immediate memory. The programs are divided into eight categories of cognitive variables: attention, memory, language, reasoning, arithmetic, hand-eye coordination, visual-spatial skills and problem-solving. For each category, the exercises usually go from easy to more demanding.

In version 4.2, most of the programs include tests to evaluate how well the student has mastered the content of the software. They can be used for two main purposes: first of all, to evaluate how useful it is for a student to use a particular program; then, to evaluate the progress of the student after training.

The test results are in the form of a percentage in relation to mastery of the content. Each test can be used and repeated several times (pretest or post-test).

Once a file has been opened for an adult learner, his or her test results and progress can be saved for consultation at any time.

Ref.: Pépin, M. and M. Loranger. *CO-SKILLS, Cognitive Training Software* (version 4.2). Sainte-Foy: Le Réseau Psychotech inc., 1997.

4. *A Practical Guide for the Teaching of Literacy to Adults With Learning Difficulties*

Ref.: Québec. *A Practical Guide for the Teaching of Literacy to Adults With Learning Difficulties*. Québec: Ministère de l'Éducation, Direction de la formation générale des adultes, 1997.

Ref.: Québec. *Training Models - How to Use "A Practical Guide for the Teaching of Literacy to Adults With Learning Difficulties."* Québec: Ministère de l'Éducation, Direction de la formation générale des adultes, 1997.

Ref.: Québec. *Guide d'utilisation du coffret sur les difficultés d'apprentissage*. Québec: Ministère de l'Éducation, Direction de la formation générale des adultes, 2003.

5. *A Practical Guide for Teaching Adults With Learning Difficulties: Literacy, Presecondary and Secondary Education*

This refers to the present document, which is an adapted version of the previous one, namely *A Practical Guide for the Teaching of Literacy to Adults With Learning Difficulties*.

Ref.: Québec. *A Practical Guide for Teaching Adults With Learning Difficulties: Literacy, Presecondary and Secondary Education*. Québec: Ministère de l'Éducation, Direction de la formation générale des adultes, forthcoming.

Appendix IX: Desirable Andragogical Framework

Intervention with people experiencing learning problems can benefit considerably from andragogical management with the following characteristics:

- The establishment of a three-level model of functioning (see "The three-level model" below).
- Initial and continuing training (reflective practice, etc.) on the learning problems for educators at the three levels.
- JOINT ACTION among the educators at the three levels and, where applicable, the members of the administration. It should be noted that the adult learner is involved as much as possible throughout the process.
- The implementation of support measures that permit an adult with a learning disability, diagnosed following a standardized assessment, to carry out his or her learning plan. These measures, which are not a matter of giving an advantage to the adult learners but of compensating for a disadvantage that is NOT DUE TO AN INTELLECTUAL IMPAIRMENT, can be applied to the learning of all types of knowledge.

Examples of support measures

- Presence of specialized adult education resources for examinations, tests, etc.
- Extending the time allocated for the activity.
- Retreating to an empty room.
- Repetition or reformulation of comments, questions, and instructions; use of a tape recorder.
- Reading the text for the adult learner.
- Listening to a text again (more than what was planned in the program).
- Taking a break after each portion of text listened to.
- Replacing the oral presentation in front of the class with a presentation in front of a smaller group or in front of the teacher alone.

The Three-Level Model

First Level: Teaching staff

1. Teaching-learning situation: manifestation of a learning problem.
2. Andragogical diagnosis using the Functional Analysis Grid: **first level functional analysis**. Means: interviews, observation in different contexts, measurement.
3. Formulation of the target objective.
4. Choice of means of intervention (**first level of intervention**).
5. Intervention (method, rigor, etc.).
6. Evaluation.
7. If the problem is not resolved, a request is made for the second level of intervention. This request is accompanied by **a summary** of the problems experienced by the adult, the teaching strategies used, the results obtained and examples of the adult's work.

Second level: The specialized adult education resource

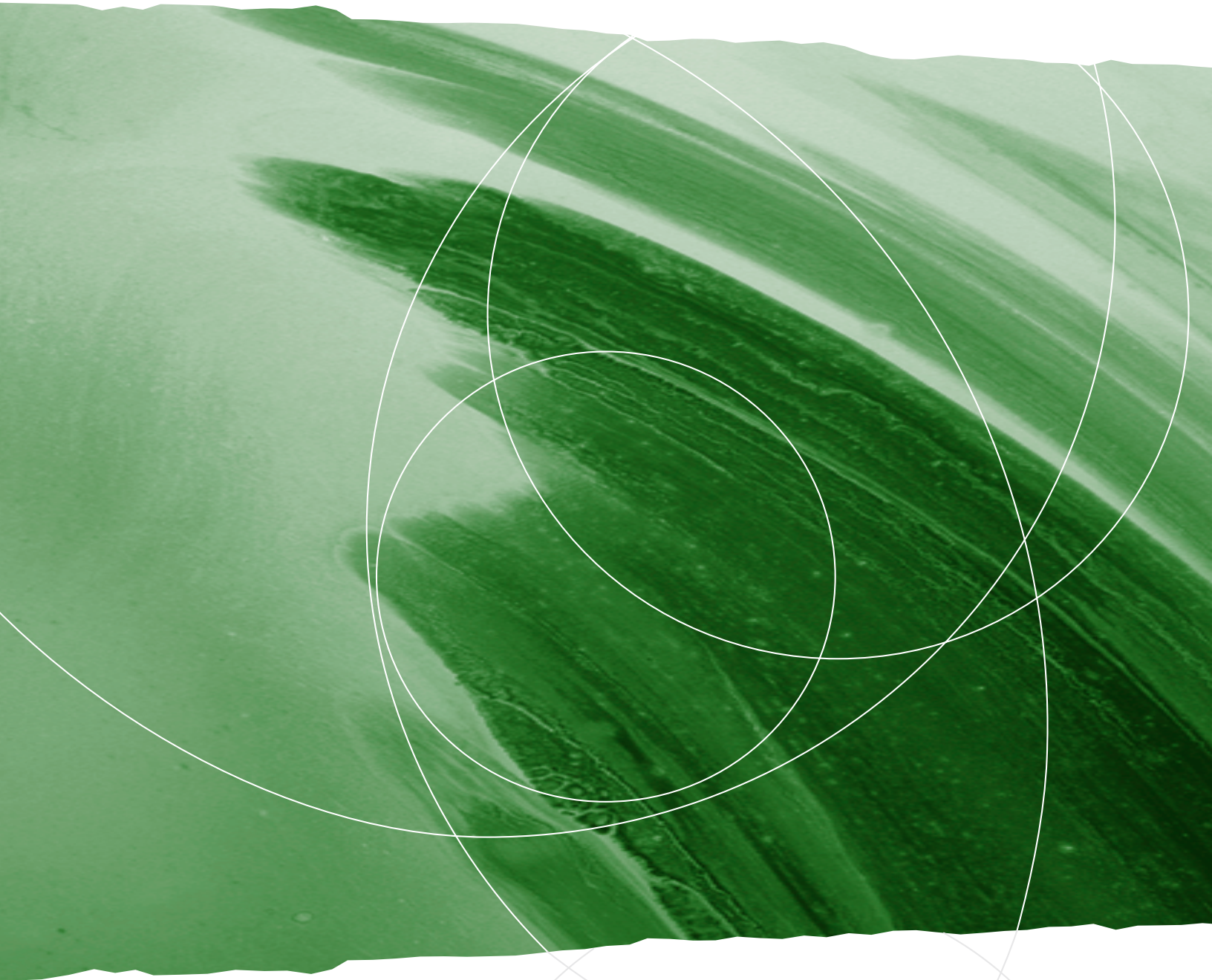
A member of the teaching staff who receives special training on learning problems and whose task in part is working with adults who have learning problems.

1. More detailed andragogical diagnosis using the Functional Analysis Grid: **second level functional analysis**. Means: interviews, observation in different contexts, measurement.
 2. Formulation of the target objective.
 3. Choice of means of intervention (**second level of intervention**).
 4. Intervention (method, rigor, etc.) in joint action with the teaching staff.
 5. Evaluation.
 6. If the problem is not resolved, a request is made for the third level for intervention. This request is accompanied by **a summary** of the problems experienced by the adult, the teaching strategies used, the results obtained, and examples of the adult's work.
- If there is no third-level resource available, JOINT ACTION is taken to study the case at this level.

Third level: The standardized assessment resource

A person authorized to do an assessment using standardized tests. This assessment is necessary to determine the nature of the learning problem (difficulty or disability) and decide if support measures can be implemented.

1. More detailed andragogical diagnosis using the Functional Analysis Grid: **third level functional analysis**. Means: interviews, observation in different contexts, measurement.
2. JOINT ACTION is taken to study the case and decide whether or not to implement support measures.



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