Chapter 20

Intervention Program for Brazilian Children with Language Delay

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Additional information is available at the end of the chapter

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Abstract

The acquisition and development of language are primary in a child's life, especially because language is one of the main means of social interaction. Therefore, it is of great importance that good language development has been assured to children and, when necessary, good intervention at their difficulties. Currently, in the field of children's language in Brazil, different therapeutic approaches are arguable, but the necessity of development of structured therapeutic programs is verified, elaborated with technical and scientific quality so that they may stimulate the different abilities of language, aiming at considering the specificities of each child in order to minimize the difficulties. Such intervention programs would guide speech-language pathologists to plan their therapies and provide more effects in the intervention process. The aim of this study is to elaborate a stimulation program for verbal language for children with language delay. For this reason, the stimulation program was judged by peers (experts) after it was designed. The experts verified if the strategies were coherent about (a) the stimulation target and (b) the complexity level. In conclusion, the program reached the goal, since it could give direction and enhance to speech-language pathologists in cases of difficulties in verbal language.

Keywords: speech-language pathology, children, child language, language delay, speech and language rehabilitation

1. Introduction

The importance of language for child development is a well-known factor in the literature, and disabilities in the process of acquisition and development of language can bring a series of social and academic harms. Therefore, it is of utmost importance that children with these

disabilities receive adequate diagnosis and effective treatment as soon as possible, thus improving their quality of life [1, 2].

Language disabilities in childhood have a high prevalence, reaching a frequency of up to 20% [1–3]. In the Brazilian literature, the prevalence for child language disabilities is 3–15% [4, 5]. Overall, the most common are language delay (LD), specific language impairment (SLI), and phonological disorder (PD). Each one of these cases has its respective linguistic manifestations [4, 6].

In view of this, it is of primary importance that professionals in the field of Speech-Language Pathology have good knowledge about the characteristics of the language and its typical development for the identification of children with language disabilities and their differential diagnosis. Such knowledge is not only relevant to the diagnostic area, but also to the intervention one, since a good intervention planning should be based on the patient's linguistic difficulties, and the professional should use strategies that contemplate this planning to provide a correct stimulation of the lagged skills [7, 8].

In the Brazilian literature, there is a lack of interventional studies, especially on language delay [9]. Nevertheless, we have noticed that it is possible to find intervention programs with proven efficacy when the search for the international literature is extended [10–14]. However, as already confirmed by some authors [15], it is not always feasible to adapt or translate such models, firstly because linguistic differences, mainly related to the structure (form) of language, as the interventions are based on these language skills and abilities. Furthermore, adaptations and translations sometimes need a reformulation, because some aspects such as frequency and duration of intervention have different demands depending on the region and target-population where it will be applied, which turn the use of some programs impracticable.

Several studies show that structured programs of speech-language intervention in language bring linguistic gains to those submitted to them [16–18]. Such programs can often help clinical speech pathologists to plan and organize their intervention better and play a key role as a practical guide in developing therapeutic planning.

However, other studies, especially case reports, show that several times these programs are used in an adapted manner, generally including other aspects as an intervention goal, to meet the individual needs of each patient, showing the need for semi-structured intervention programs that could have a previous material structured as well as the flexibility to modify some goals or strategies aiming at considering individualities of each patient [19–21].

Currently in the Child's Language field, there are several Brazilian instruments for the diagnosis of oral language disorders, however, the research and clinical use of models, training, and intervention programs, especially for those in which there is a need to work at different levels of language such as in the cases of SLI and LD are still scarce in the Brazilian literature. There is also great difficulty in finding materials and therapeutic strategies with technical and scientific quality that are available in the literature for speech and language intervention.

Thus, there is a lack of Brazilian models and programs of intervention that encompasses the stimulation of all levels of language, involving theoretical and practical content, including proposing targeted intervention strategies. In addition, the models and programs of therapy currently found are not punctual in the difficulties of each child.

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The proposed program in this chapter is based on strategic planning, to emphasize the stimulation of the difficulties of each child, so that it can be effective. The work was developed with the purpose of ensuring that such intervention brings coherent strategies (both to the therapeutic objective and the age range of the child), attractive and executable by such child, in addition to boosting the desired communicative behaviors and to focus the language levels that are out of balance in order to reach a larger linguistic domain.

2. Intervention program (ELO program)

This section aims at describing the elaboration and the content validation (by jury of experts) of an intervention program for children within 3–6 years old with a diagnosis of language delay. The intervention program is called ELO (Estimulação da Linguagem Oral) in Portuguese and meaning "oral language stimulation" in English. Furthermore, the entire intervention program will be described in detail, and the content validation will show results of coherence of strategies in accordance with the intervention targets.

2.1. Methodology

2.1.1. Pilot study

Prior to this study, a pilot study was carried out. In this study, 24 interventional sessions were performed on 10 children with language delay (LD) who were within 3 and 6 years old. The pilot study had its results presented, and for this, the ELO program was reworked in order to solve its deficits [22].

The pilot study had three phases: Pre-intervention assessment—when the children were submitted to Brazilian standardize tests [23–27] to assess information about receptive and expressive language in general, auditory working memory, phonology, expressive vocabulary, and auditory discrimination—; intervention application—where are performed 24 sessions of the proposed intervention program—; and, at last, post-intervention assessment—with the same protocol of the pre-intervention assessment. The comparative results, in percentage, of pre and post-intervention assessment are presented in **Figure 1**.

Based on these results, the Wilcoxon statistical test was applied to verify if the difference in pre and post-intervention performance was statistically significant, for this was adopted $P \leq 0.05$. **Table 1** shows the skills tested and whether there was statistical significance when compared to before and after intervention.

In the pilot study, an improvement was found in all skills tested at the time of intervention, so that most of the results were statistically significant, and the only ability that did not have significance was auditory discrimination.

Another important finding obtained by the pilot study was that, even though the sample was quite specific, there were differences in the language level of these children. Then, two different levels were elaborated for each of the proposed programs: level I with less complex strategies and level II with more complex strategies.

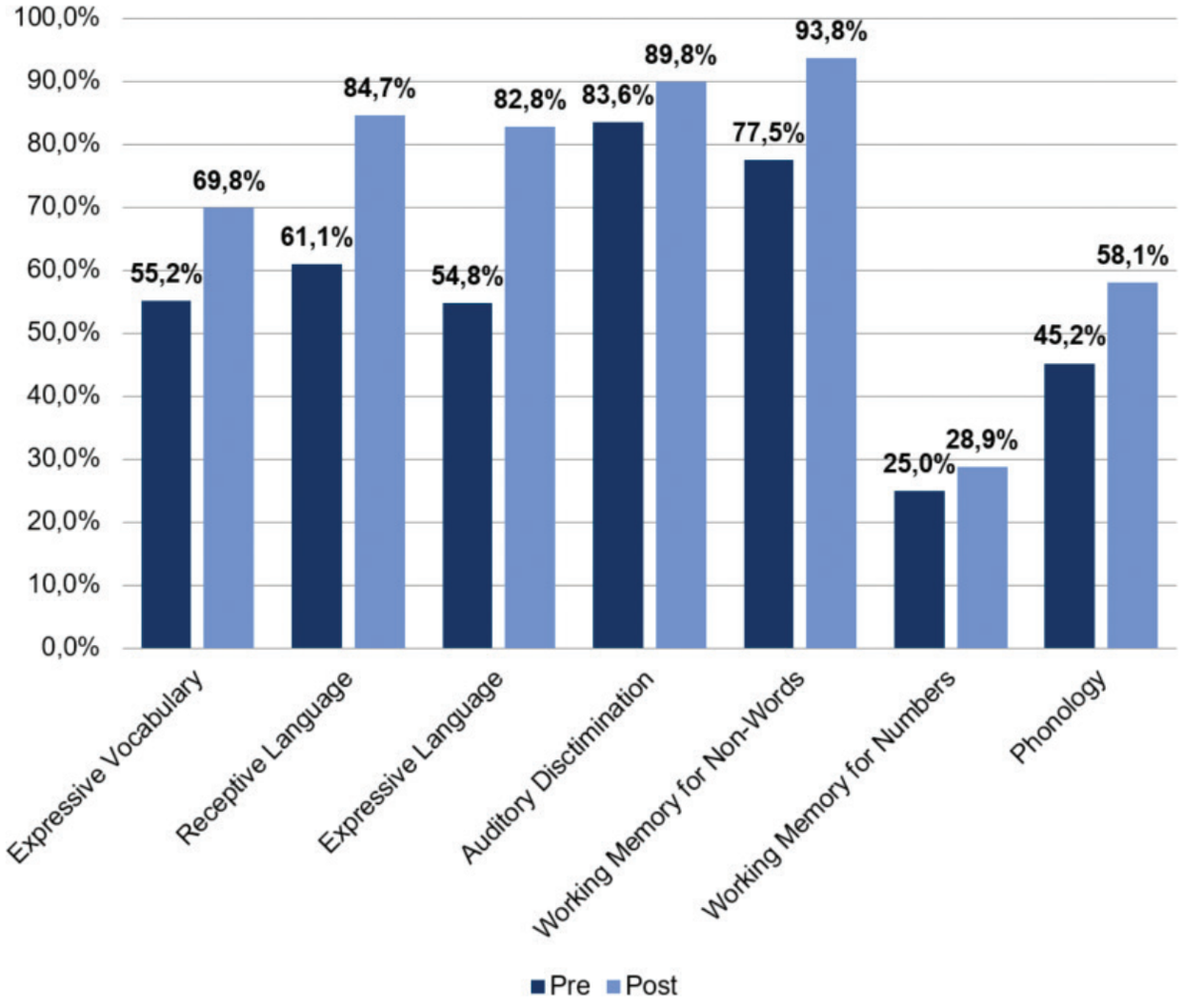

Figure 1. Average results of pre and post assessment of pilot study.

Skills which have statistical significant gain	Skills which do not have statistical significant gain
Expressive vocabulary	Auditory discrimination
Receptive language	
Expressive language	
Working memory for non-words	
Working memory for numbers	
Phonology	

Table 1. Summary of results.

Each child received language therapy with a different therapist—one therapist to each child and all therapists underwent a 6-h training and had 2 h of weekly supervision, one before and one after care. This training and these supervisions were carried out by the authors. All intervention sessions were supervised by them.

2.1.2. Elaboration and content validation

According to the identified needs on the pilot study, a review of the literature was undertaken once more aimed at improving the program, which was adjusted based on these studies.

After the revisions, the program was presented to two examiners (who have a master degree in speech-language pathology and experience in Child's Language).

2.2. Results

The ELO program was specifically designed for children with LD, with two levels: Level I and Level II. These levels differ by the levels of complexity of the strategies, as it is known that this should vary accordingly to the general and development level of each child.

It was then elaborated that the Language Level Verification Protocol (LLVP) generally checks items such as receptive vocabulary, expressive vocabulary, phonological organization, narrative-pragmatic skills, and comprehension. This protocol has a global score (GS) and specific scores (comprehensive score (CS), narrative-pragmatic score (NPS), syntactic and semantic-lexical score (SSLS), and phonetic-phonological score (PPS)). All values are represented by absolute numbers and percentages.

Based on LLVP, the child's level of language was classified in I or II, and, for this, the global percentage score was adopted, with scores less than or equal to 50%, corresponding to level I and above this value at level II. This classification ends up reflecting the linguistic level of the child, that is, children of level I are smaller children and/or have more difficulties, and children of level II are older children and/or with fewer difficulties.

The ELO program is also divided into subprograms (Program A, Program B, Program C, and Program D) that vary according to the higher focus skills. Thus, the subprogram was chosen accordingly to the child's greatest difficulties by selecting the specific percentage scores of PVNL. In addition, the program had a greater focus on the ability to obtain a lower percentage score (greater number of errors). Moreover, program A has a greater focus on phonetic-phonological issues, program B on comprehension, program C on syntax and semantics, and program D on pragmatics.

The ELO program is composed of 20 sessions of direct and individual intervention, with a frequency of three times a week with an average duration of 60 min per session.

Each child fits into one of them, regarding language stimulation goals that need to be more focused (more committed) for each case. The types of program are described in **Table 2**.

For the psycholinguistic abilities, the following were addressed: auditory memory, logical-temporal sequence, auditory processing skills, perceptual-auditory abilities (discrimination of verbal sounds), and phonological awareness, distributed accordingly to **Table 3**.

Each of these programs has level I and level II, with each level encompasses 20 individual and direct therapeutic sessions.

Figure 2 briefly summarizes the strategies used, in general, in all subprograms at level I.

Figure 3 briefly summarizes the strategies used, in general, in all subprograms at level II.

Intervention goal	Program A	Program B	Program C	Program D
Morphosyntax and semantics	3 sessions	4 sessions	4 sessions	6 sessions
Narrative and pragmatics	3 sessions	3 sessions	6 sessions	4 sessions
Phonetic and phonology	6 sessions	3 sessions	3 sessions	3 sessions
Psycholinguistic skills	7 sessions	6 sessions	6 sessions	6 sessions
Comprehension	1 session	4 sessions	1 session	1 session

Table 2. Distribution of the number of therapeutic sessions focusing on each of the language stimulation goals.

Psycholinguistic skills	Program A	Program B	Program C	Program D
Memory	1	1	1	1
Logic-temporal sequence	1	1	1	1
Auditory processing	2	2	2	2
Auditory discrimination	2	1	1	1
Phonological awareness	1	1	1	1

Table 3. Distribution of the number of therapeutic sessions focusing on psycholinguistic skills in each of the subprograms.

Target sounds and words used in the auditory perception sessions were the same ones used in the phonology sessions. These were chosen according to the phonological processes performed by the child, prioritizing the work on the sounds to be acquired first in the typical language development.

When vocabulary is targeted, a survey of the familiar vocabulary must be done, using the follow protocol—specifically developed for this purpose, to carry out the lexical expansion, initially by the words that the child is most exposed to. The protocol questions are about properly names such as teachers', family, pets, and classmates; which foods the child prefer or have the habit to eat; which toys, games, or cartoons the child likes; and colors of teeth brush, pajamas, school cloths, tower, pillow, blankets etc. At the end of the protocol, there is space for the family to describe the child routine in detail.

In the next pages are described all the strategies used in the ELO program.

2.2.1. List of detailed strategies

2.2.1.1. Strategies Level 1

The strategies described in **Table 4** were designed for children with the following linguistic profile.

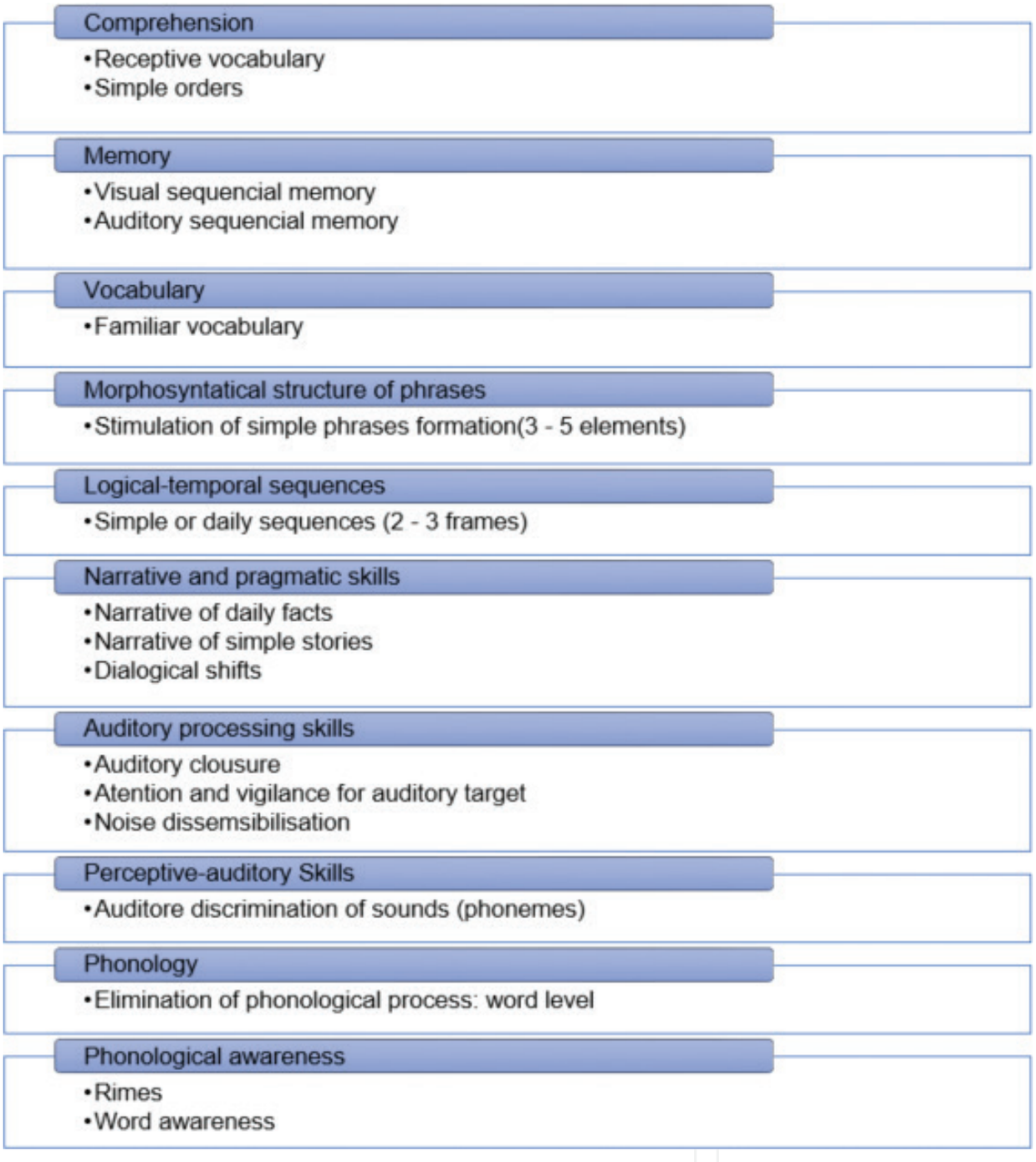

Figure 2. Specific objectives for Level I language stimulation goals of the ELO program.

Children with difficult to understand orders, mainly complex and segmented, presenting lack of oral or speech intelligibility, quite compromised (speech garbled, several phonological processes), presenting deficits in receptive vocabulary, and pragmatic abilities.

2.2.1.2. Strategies Level 2

The strategies described in **Table 5** were designed for children with the following language profile.

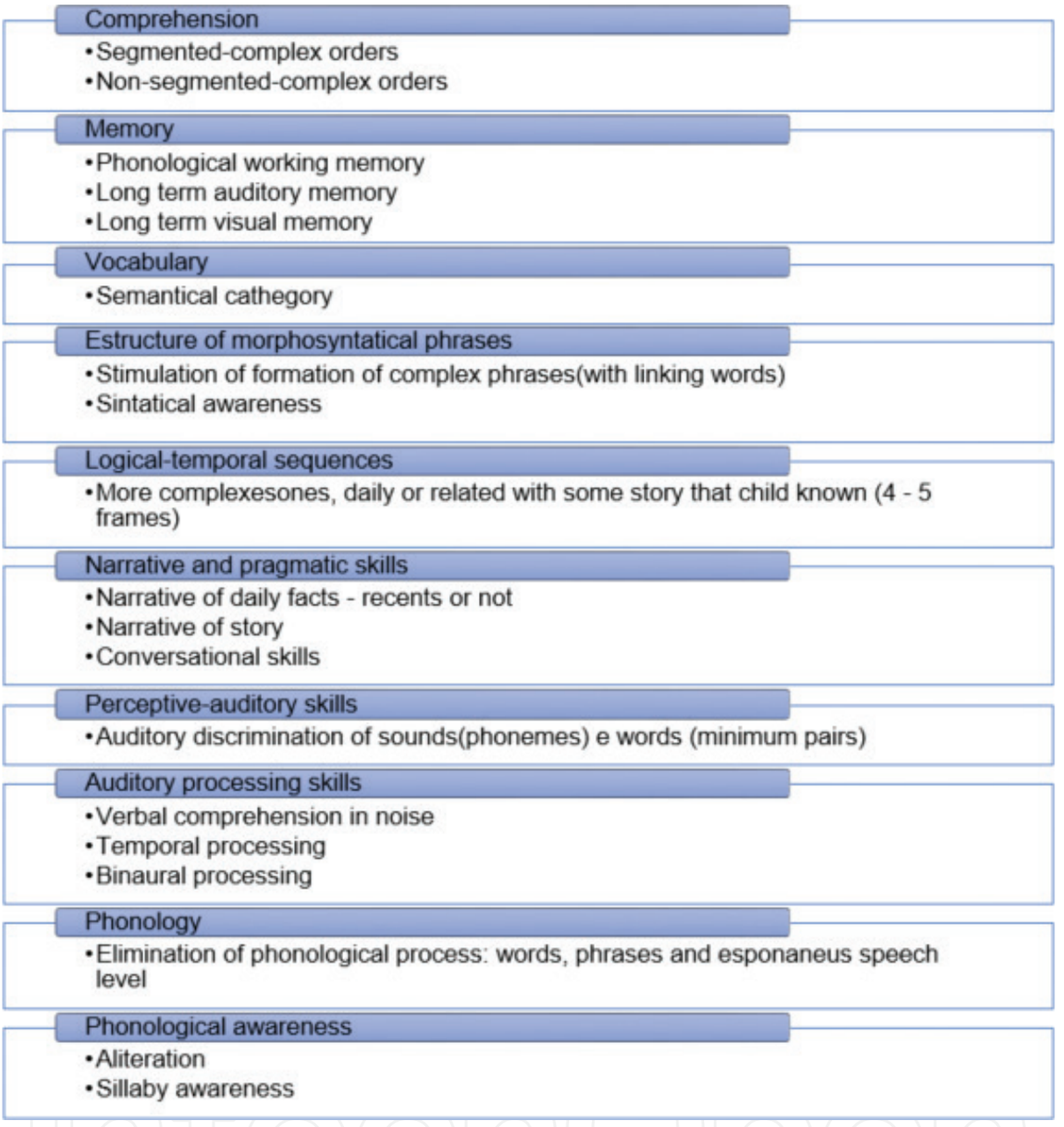

Figure 3. Specific objectives for Level II language stimulation goals of the program.

Children without comprehension difficulties, with deficits in expressive vocabulary, being composed mainly by nouns and verbs (little use of adverbs, adjectives and linking elements), make short sentences (up to 5 elements) and in general do not use binding elements. They are between the periods of proto-narrative and primitive narrative, and they have few phonological exchanges (generally they do not have impaired speech intelligibility).

2.2.2. Examiner analysis

In order to verify the coherence of the ELO Program and its strategies, it was submitted to the analysis of two examiners (speech-language pathologists with experience in language intervention).

Strategy 1: Playing with simple orders

Goal: Understanding and executing simple orders

Description: The child will play a game where he or she will fulfill a series of simple commands ("touch your nose", "clap your hands", "jump on one foot", "pretend to be sleeping", "imitate a dog", "Show how old you are", "show the tongue", "shake your head", "imitate a plane" and "open your mouth wide"). If the child does not execute the proposed instructions, the therapist will, at first, repeat the order, secondly rephrase the order, in a third try, give a gestural clue and if the child still cannot comply, the therapist will show the child what should be done by explaining the order and requesting that the child reproduced the movement.

Strategy 2: Memory game with sounds and figures

Goal: Work on short-term visual and auditory memory

Description: The child and the therapist will play a digital memory game where one of the pairs is an image and its corresponding sound is emitted by such an image. The therapist will be able to avail the game with the theme "Animals," "Means of Transport," "Sounds of Nature," and "Sounds of the City." At first, the therapist will present the sound and the image to the child. As the game begins, if the child shows difficulties, the therapist will reduce the number of pairs (initially four pairs will be presented) and as the child is showing more ease in the task, the therapist will increase the number of pairs contained in the game until reaching 10 pairs).

Strategy 3: Working with memory on the market

Goal: Work on the sequential auditory memory

Description: The therapist will set up a "mini market" to play with the child, they will work in alternating shifts of roles; sometimes, the therapist is the salesperson and the child the consumer and vice versa. Then, the consumer will order, and only after the order is complete, the seller must pick up the requested items. At first, the therapist will request only one item and then gradually increase the number of requested items. If the child shows difficulties, the therapist will repeat the request, and if the child still cannot follow, the therapist will segment the requested sequence and decrease the number of elements for the next time.

Strategy 4: Exploring the familiar vocabulary

Goal: Performing lexical expansion

Description: After raising the family vocabulary, the therapist will organize activities of symbolic play involving such a lexical repertoire. In these activities, the therapist will name such objects (only concrete objects will be used at first) and explore their function. When the child shows mastery over the name and function of the target words, the therapist will begin to match the concrete object to the image.

Strategy 5: Naming game

Goal: Performing lexical expansion

Description: Using target words contained in the child's vocabulary, the therapist and the child will carry out activities where the child should name the corresponding figures (e.g. "bowling", "Don't let the marbles fall", "pop-up pirate" and "don't break the ice"). If the child cannot name the picture, the therapist will give the function and characteristics of the object, even then if the child is not able to do it, the therapist will use prompt articulatory hints.

Strategy 6: Building phrases

Goal: Work on phrase construction

Description: The therapist will use action pictures ("A pig eating corn", "man milking a cow", "children playing on the beach", "A boy crying", "A dog drinking water", "A woman making a cake") as visual stimulus for sentence construction. First, the therapist will work on the elements used in the picture (without showing it) by naming them, giving functions and characteristics of each element and then presenting the action picture for the child to elaborate the sentence. If the child shows difficulties, the therapist will retake the elements in the action picture again.

Strategy 7: Right or wrong?

Goal: Stimulate syntactic awareness

Description: The therapist will present the child with several phrases ("I love bananas," "My house was wet," "Today I went to school," "The cake is overdone," "My toy has broken," "Yesterday I went to the movies," "The water I had was cold") and the child will have a red sign, which he/she will raise when the sentence is wrong, and a green one, for correct sentences.

Strategy 8.: Ordering logical-temporal sequences

Goal: Work with logical-temporal sequence

Description: The therapist will take every day logical-temporal sequences, and the child will put them in order and then narrate what happened.

Strategy 9: Experience Booklet

Goal: Work on narrative-pragmatic skills

Description: The child will draw/make collages in a notebook about the events that happened outside the therapeutic environment, so that in the therapeutic session, the child narrates such events with the support of the notebook. The therapist will always give the correct model if the child shows phonetic-phonological and/or morphosyntax changes, however without correcting the child directly.

Strategy 10: Playing with Puppets

Goal: Work on narrative-pragmatic skills

Description: The child and therapist will stage various situations using puppets, the therapist will allow the child to guide the script with easier subjects, yet always modeling the proper shift, role reversal, and narrative coherence.

Strategy 11: Attention to sounds!

Goal: Work on Auditory attention

Description: A series of syllables will be presented to the child (for example: PA PA PA PA PA PA GA PA PA GA), and every time the child hears the less frequent syllable (which will be indicated by the therapist at the beginning of the session), the child will raise a small sign. It is emphasized that the activity will be carried out with headphones to control the sound intensity and to soften competitive noises.

Strategy 12: Finding the sound

Goal: Work on the auditory localization

Description: The child will be blindfolded, and the therapist will use sound sources of different frequencies (rattle, "Agogo," bell, and drum), and the child should locate, track, and find the object related to the sound source.

Strategy 13: Phoneme pyramid

Goal: increase the auditory perception for the phonemes worked

Description: The therapist will choose a minimal opposing phoneme to the target phoneme (preferably by some phoneme that the patient performs the process to be worked on) and associate the sound with some picture. Then she will use two pyramids and a "reward," each of the pyramids will contain the previously associated picture, and then, the child closes the eyes, and the therapist hides the "reward" in one of the pyramids. When the child opens the eyes, the therapist shows the sounds again and says that he or she will give a clue to the child, then he gives the auditory clue (the "reward" phoneme), and the child using that clue discovers where the prize/reward is.

Strategy 14: Auditory bombarding

Goal: Working on Phonological Aspects

Description: It is read to the child, twice (beginning and end) a list of 20 words (mono and disyllables) that start with the target phoneme. The same list is used at home, and caregivers are asked to read 3 times a day.

Strategy 15: Naming game

Goal: Work on Phonological Aspects

Description: Using the target words (5 of the bombardment words that the child uses the most), the therapist and the child will perform activities where the child should name the corresponding pictures (e.g. bowling, "don't let the marbles fall", "don't let the ice break"). If the child cannot name the pictures correctly, the therapist will give the function and characteristics of the object, even then if the child is not able to do it, the therapist will use prompt articulatory hints.

Strategy 16: Playing with rimes

Goal: Stimulate Phonological Awareness

Description: The therapist will tell stories and songs with rhymes to the child to increase the exposure to that ability.

Table 4. List of strategies on Level 1.

Strategy 1: Playing with segmented and complex instructions

Goal: Work understanding and executing complex and segmented instructions

Description: A game will be done with the child where one must fulfill a series of instructions, at first, segmented ("Take the blue car, now put the blue car in the garage of the orange house," "Take the blonde girl sitting on the bench," "pick up the banana, put the banana on the plate," "pretend you are asleep, now pretend you are sleeping and snoring," "pick up the cat." "Put one hand on the blue ball and the other one on the red ball," "put your foot on the flower and your hand in the sun," "put your hand on the green square and then on the white square," "put your foot in the sea and then on the star," "put both feet in the cloud and then jump on the white square"). If the child does not execute the proposed instruction, the therapist will, at first, repeat the instruction; secondly rephrase it; in a third try, give a gestural clue; and if the child still cannot fulfill the task, the therapist will show the child what is supposed to be done by explaining the drill and requesting that the child reproduce the movement.

Strategy 2: Auditory and visual sequential memory game

Goal: Stimulate both auditory and visual sequential memory.

Description: By means of digital resources, the child will be presented to series of sequences involving colors and sounds (first, color associated to the sound, then only the sound) and the child must repeat the sequence, as the child is showing more ease to the sequence, it will gradually increase.

Strategy 3: Keep a secret

Goal: Short and long-term auditory memory

Description: The therapist will tell a secret to the child at the beginning of the session (e.g. "my father is bald", "my favorite food is chicken drumstick", "I'm afraid of frogs" etc.), then the therapist will ask for information at the end of the same session and the next one.

Strategy 4: Exploring vocabulary by categories

Goal: Performing lexical expansion

Description: It will be chosen a vocabulary category that the child has difficulty and the therapist will organize activities, such as stories and games, involving such a lexical repertoire, in these activities the therapist will name such objects and explore their function.

Strategy 5: Building phrases II

Goal: work on phrases construction

Description: The therapist will use pictures to explore children's prior knowledge and encourage them to organize sentences accordingly to the theme chosen. Every time the child uses a syntactically inappropriate phrase, the therapist will provide the correct model.

Strategy 6: Right or wrong?

Goal: stimulate syntactic awareness

Description: The therapist will present several sentences to the child ("I love bananas," "My house was wet," "Today I went to school," "The cake is overdone," "My toy has broken," "Yesterday I went to the movies," and "The water I had was cold"), and the child will have to repeat the sentence correctly.

Strategy 7: Ordering logical-time sequences

Goal: logical-temporal sequence

Description: The therapist will take logical-temporal sequences about stories previously known to the child ("The Three Little Pigs", "Little Red Riding Hood", "Beauty and the Beast", "Cinderella" and "Pinocchio", etc.), and the child will put them in order and then recount what happened.

Strategy 8: Experiences Booklet

Goal: Work on narrative-pragmatic skills

Description: The child will draw/make collages in a notebook about the events that happened outside the therapeutic environment, so that in the therapeutic session, the child narrates such events with the support of the notebook. The therapist will always give the correct model if the child shows phonetic-phonological and/or morphosyntax changes, though not correcting the child directly.

Strategy 9: Interview

Goal: Work on narrative-pragmatic skills

Description: The child and therapist will be a reporter and interview (sometimes themselves, sometimes some famous character) for turnaround and narrative skills.

Strategy 10: Playing with prosody and supra-segmental speech traits.

Goal: Workout prosody, supra-segmental traits and pragmatic skills

Description: The therapist will record several phrases with different intonations/emotions, then the child should reproduce the speech and intonation of the recording, identify which facial expression (therapist will show printed pictures) corresponds to speech and finally name the emotion expressed in that speech. If the child presents difficulty, the therapist will give another example with the same intonation, first with little facial and body expression, in a second moment with facial expression but without body expression and in a third moment with facial and body expression. If even with all help the child is unable to perform accordingly, the therapist will give the model and explain it.

Strategy 11: Playing with minimal pairs

Goal: Work on auditory discrimination

Description: There will be activities that request the discrimination of minimum pairs (e.g. bingo of the minimum pairs). In the choice of the minimum pairs, it will be prioritized the phonemes that the child presents phonological exchange.

Strategy 12: Completing the information—competitive noise

Goal: Picture-background auditory

Description: The child will be presented with excerpts of dialogs and routine stories with missing information, previously known to the children, this presentation will be performed with a background noise, so the child should verbally complete the omitted information (if the child does not achieve the auditory stimulus, it will be repeated with the same signal-to-noise ratio, if the difficulty persists the signal-to-noise ratio will be increased)

Table 5. List of strategies on Level 2.

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The examiners received a survey for the strategy evaluation where they classified the strategy as adequate, partially adequate and inadequate in relation to the intervention goal and also the level of difficulty for children with such profiles, as well as criticizing, comments and suggestions on them. **Table 6** shows the examiners' responses.

The concordance of the examiner was then calculated to check for disagreements and the need to use a third examiner. For this, the formula described by [28] was used where the percentage of agreement between the answers is obtained according to Eq. (1).

$$\text{Concordance} = \frac{\text{Number of agreements}}{(\text{Number of agreements} + \text{Number of disagreements})} \times 100 \quad (1)$$

Evaluation in relation to the intervention goal	**Examiners**	
	A	B
Strategy 1—Level 1	2	2
Strategy 2—Level 1	2	2
Strategy 3—Level 1	2	2
Strategy 4—Level 1	2	2
Strategy 5—Level 1	2	2
Strategy 6—Level 1	2	2
Strategy 7—Level 1	2	2
Strategy 8—Level 1	2	2
Strategy 9—Level 1	2	2
Strategy 10—Level 1	2	2
Strategy 11—Level 1	2	2
Strategy 12—Level 1	2	2
Strategy 13—Level 1	1	1
Strategy 14—Level 1	2	2
Strategy 15—Level 1	2	2
Strategy 16—Level 1	2	2
Strategy 1—Level 2	2	2
Strategy 2—Level 2	2	2
Strategy 3—Level 2	2	2
Strategy 4—Level 2	2	2
Strategy 5—Level 2	2	2
Strategy 6—Level 2	2	2

Evaluation in relation to the intervention goal	Examiners	
Strategy 7—Level 2	2	2
Strategy 8—Level 2	2	2
Strategy 9—Level 2	2	2
Strategy 10—Level 2	2	2
Strategy 11—Level 2	2	2
Strategy 12—Level 2	2	2
Strategy 13—Level 2	1	1
Strategy 14—Level 2	1	1
Strategy 15—Level 2	2	2
Strategy 16—Level 2	2	2
Strategy 17—Level 2	2	2
Evaluation in relation to difficulty level		
Strategy 1—Level 1	2	2
Strategy 2—Level 1	1	1
Strategy 3—Level 1	2	2
Strategy 4—Level 1	2	2
Strategy 5—Level 1	2	2
Strategy 6—Level 1	2	2
Strategy 7—Level 1	2	2
Strategy 8—Level 1	1	2
Strategy 9—Level 1	1	1
Strategy 10—Level 1	2	2
Strategy 11—Level 1	2	2
Strategy 12—Level 1	2	2
Strategy 13—Level 1	2	2
Strategy 14—Level 1	2	2
Strategy 15—Level 1	2	2
Strategy 16—Level 1	2	2
Strategy 1—Level 2	2	2
Strategy 2—Level 2	2	2
Strategy 3—Level 2	2	2
Strategy 4—Level 2	2	2
Strategy 5—Level 2	1	1
Strategy 6—Level 2	2	2

Evaluation in relation to the intervention goal	Examiners	
Strategy 7—Level 2	2	2
Strategy 8—Level 2	2	2
Strategy 9—Level 2	2	2
Strategy 10—Level 2	2	2
Strategy 11—Level 2	2	2
Strategy 12—Level 2	2	2
Strategy 13—Level 2	2	2
Strategy 14—Level 2	2	2
Strategy 15—Level 2	2	2
Strategy 16—Level 2	2	2
Strategy 17—Level 2	2	2

0, inadequate; 1, partially adequate; and 2, adequate.

Table 6. ELO program evaluation by examiners.

If the results were considered to be reliable, there was a need for the concordance rate to be greater than or equal to 75%. In the above case, the concordance rate among the examiners was 98.48%, and—when the responses to the objective and the level of difficulty were compared by themselves—the agreement rate was 100% and regarding the level of difficulty of 96.97%, showing consistency in the answers of the examiners.

It was observed that there was no strategy classified as inadequate for both questions. The strategies considered as partially adequate were three (9.09%) in relation to the objective and four (12.12%) in relation to the level of difficulty. Most of these strategies were considered partially adequate due to the lack of some information in their description, so the strategies were rewritten in order to solve the doubts caused by the examiners. There were also two suggestions for the strategies: one regarding the auditory bombardment so that it was carried out in an acoustic booth; however, due to the difficulties in accessing such equipment at the required frequency, the same cannot be done, but all the words of the bombardment were recorded and presented in a speaker with adequate levels (but with material without technical calibration).

The majority of the examiners' answers (90.91% in relation to the objective and 87.88% in relation to the level of difficulty) were that the strategies were adequate, which showed consistency of the ELO program and gave indications that it is adequate to be used in experimental studies.

3. Final considerations

Unfortunately, interventional studies are not always published with sufficient information to be replicated [29] and were found that 72.12% of clinical trials published about child language

interventions are randomized. Hence publications showing intervention program effectiveness are not replicable, neither scientifically nor clinically, due to the lack of detail in the methodology, and even seeking such data in complementary sources (literature and questionnaires to speech-language pathologists), such descriptions were not found. This information highlights the need for greater systematic approaches for publications in the mentioned area, which justifies the effort done in this study.

Programs found in the literature usually have a specific focus on only one aspect of language (usually vocabulary, phonology, or narrative), since having more focus on the results which show greater gain in focused ability. However, it is known that several language disabilities, including LD, bring losses in more than one aspect of language [3]; this feature does not disable the programs mentioned above, but [30] states that up to 48 months, the child has greater neuronal plasticity, so it is interesting that they receive the greatest number of adequate stimuli possible. Following this reasoning, programs that stimulate all aspects of language can be a great ally in the intervention process of children with difficulties in different levels of language, such as LD.

The number of ELO sessions as well as their distribution and frequency were selected based on the researcher's empirical knowledge based on the analysis of the pilot project. The pilot project was designed to fulfill a 3-month intervention, following the other intervention programs cited in this chapter.

Psycholinguistic skills were also focused on ELO for two reasons: children with school-aged AL (even after they overcome their difficulties) perform worse than their peers in PA, PWM, and APS tasks [13, 31]; hence, such skills are important for the development of language, if they receive adequate stimulation, it may help working with language levels [32].

In addition to developing an intervention program or model for children with LD, one must propose something coherent and applicable to the population. A literature study was carried out to verify the methodology for the elaboration of interventional programs or models, but only descriptions and efficacy (clinical trials or case studies) were found. In view of the above, the researcher outlined her methodology for verifying the applicability of ELO based on the characteristics of a good intervention described by [33]: choosing appropriate intervention goals, choosing strategies coherent to such goals, and pertinent complexity for each task.

The analysis by the examiners on ELO indicated that it is consistent because the strategies are appropriate according to the objectives of stimulation and also the level of complexity for such children. In addition, the high concordance rate among the examiners further reinforces this consistency. It is important to emphasize that the examiners made observations that contributed to the work, mainly on the question of how to describe the strategies, without doubts.

In conclusion, we observed that the study presented a program of stimulation judged as consistent by pairs, reaching its goal, having a language stimulation program as the main result applicable both clinically and academically.

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