

**Original article**

Attention to students with learning difficulties. A Program for English language teachers' trainees

Atención a educandos con dificultades en el aprendizaje. Programa para profesores de inglés en formación

Atendimento a alunos com dificuldades de aprendizagem. Programa para professores de inglês em formação

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ABSTRACT

Attention to students with learning difficulties who study English requires a foreign language teacher prepared with necessary resources and support. The aim of this study was to evaluate the effect of the application of a subject program in the curriculum of the Bachelor of Education in Foreign Languages, English, in the undergraduate training process of these teachers for the attention of primary pupils with Learning Difficulties who study

English. A mixed, experimental type of design was used, from the emerging dialectical-materialist paradigm. The subject program of 22 class hours was taught in face-to-face mode. A non-probabilistic intentional sample was used, made up of 31 pupils to whom the program was applied, 8 teachers and 7 directives. The data was collected through pre-test and post-test interviews and surveys, processed through the methodological triangulation. The application of the t-Student test showed statistically significant differences in the sample after applying the program ($Z_p=18.0545$ e" $Z=2.457$), which demonstrated its effectiveness. The findings reveal the adequate undergraduate training provided to the English teacher is related to the increase of knowledge, skills and positive attitudes towards the attention of these pupils. It is concluded that the design of future subject programs for the undergraduate training of these professionals should promote the use of the academic, labor and research components for these purposes.

Keywords: learning difficulties; foreign languages; teachers; undergraduate training.

RESUMEN

La atención a educandos con dificultades en el aprendizaje que estudian inglés, exige de un profesor de lengua extranjera entendido en recursos y apoyos necesarios. El objetivo del estudio fue evaluar el efecto de la aplicación de un programa de asignatura en el currículo propio de la carrera Licenciatura en Educación Lenguas Extranjeras, Inglés, en el proceso de formación de pregrado de estos profesores para la atención a educandos primarios con dificultades en el aprendizaje que estudian inglés. Se empleó una investigación de enfoque mixto, de tipo experimental, a partir del paradigma emergente dialéctico-materialista. El programa de asignatura de 22 horas clases se impartió en modalidad presencial. Se utilizó una muestra intencional no probabilística, integrada por 31 estudiantes a los que se les aplicó el programa, 8 profesores y 7 directivos. Los

datos se recopilaron mediante entrevistas y encuestas pre-test y post-test, procesadas mediante la triangulación metodológica de fuentes. La aplicación de la prueba t-Student arrojó diferencias estadísticamente significativas en la muestra después de aplicado el programa ($Z_p=18,0545$ e" $Z=2.457$), lo cual demostró su efectividad. Los hallazgos revelan que la adecuada formación de pregrado proveída al profesor de inglés tiene relación con el aumento de conocimientos, habilidades y actitudes positivas hacia la atención a estos educandos. Se concluye que el diseño de programas de asignaturas futuras para el pregrado de estos profesionales debe potenciar el aprovechamiento de los componentes académico, laboral e investigativo con estos fines.

Palabras clave: dificultades en el aprendizaje; lenguas extranjeras; profesores; formación de pregrado.

RESUMO

O atendimento a alunos com dificuldades de aprendizagem que estudam inglês requer um professor de língua estrangeira com conhecimento dos recursos e suportes necessários. O objetivo deste estudo é avaliar o efeito da aplicação de um programa de disciplina no currículo do Curso de Bacharelado em Línguas Estrangeiras, Inglês, no processo de formação inicial desses professores para atender alunos do ensino fundamental com dificuldades. quem estuda ingles Foi utilizada uma investigação de abordagem mista, de tipo experimental, baseada no emergente paradigma dialético-materialista. O programa de curso de 22 horas foi ministrado de forma presencial. Foi utilizada uma amostra intencional não probabilística, composta por 31 alunos aos quais o programa foi aplicado, 8 professores e 7 administradores. Os dados foram coletados por meio de entrevistas e levantamentos pré-teste e pós-teste, tratados por triangulação metodológica de fontes. A aplicação do teste t-Student apresentou diferenças estatisticamente significativas na amostra após a aplicação

do programa ($Z_p=18,0545$ e" $Z=2,457$), o que demonstrou sua eficácia. Os achados revelam que uma formação adequada em nível superior oferecida aos professores de inglês está relacionada a um maior conhecimento, habilidades e atitudes positivas em relação ao atendimento desses alunos. Conclui-se que o desenho de futuros programas de disciplinas para a formação desses profissionais deve promover o uso de componentes acadêmicos, trabalhistas e de pesquisa para esses fins.

Palavras-chave: dificuldades de aprendizagem; línguas estrangeiras; professores; graduação.

INTRODUCTION

The pedagogical trends that have emerged since the end of the 20th century and the beginning of the 21st century towards inclusive education require raising the quality in the undergraduate training (FP) of the education professional, in particular, the foreign language (FL) teacher, in function of adapting to the needs of the student body and the historical-cultural context of each era and nation. (UNESCO, 2022).

For example, the prevalence of neurodevelopmental disorders such as learning difficulties (LD) in schools globally is 3-10% (Francés, Quintero, Fernández, Ruiz, Caules, Fillon, Hervás & Soler, 2022). This indicates the need to adequately train these teachers.

The English Language subject has been part of the Primary Education curriculum since the 2004-2005 school year, where the presence of students with LD is a reality. Even in special schools for these students, the subject also exists. However, teachers are poorly prepared to offer them attention in both contexts.

Although since 2016, the training of education professionals in Cuba governed by the "E Study Plan" (MES, 2016), recognized attention to diversity as a professional task, empirical and theoretical evidence shows insufficiencies in its process. training to graduate English teachers in this regard. (Mendoza, Enríquez and López (2022). Hence, the importance of their adequate training and the completion of this study.

The object of study was determined, becoming a variable to be studied and transformed: *the FP process of the FL teacher for the attention of primary students with LD who study English.*

Students with LD often present persistent problems in learning an FL such as English. Kormos (2017) reports that they have insufficient development of the four communication skills; limitations in extracting patterns and regularities from grammar; poor listening, text comprehension, word-level decoding and memorization of new vocabulary, as well as frequent writing and spelling errors in English. Also, they usually present demotivation, anxiety and negative attitudes towards learning FL.

Sparks & Ganschow (1991) explained this phenomenon by defending the Linguistic Coding Differences Hypothesis (LCDH). They stated that these learners manifest difficulties in one or the linguistic codes (phonological, syntactic and semantic systems), with emphasis on the phonological (poor phonological awareness), which affect the learning of both the L1 and the second language (L2) and there was a translingual transfer and interdependence between the skills of both languages.

Therefore, learning difficulties in L1 are transferred to L2. The specialized literature in the area indicates that the use of the Multisensory Structured Language Approach is the most effective method to teach English to these students (Sparks, 2021). It involves multisensory teaching of

the language and explicit language skills. However, these teachers express little knowledge and concerns about teaching these students with the MSL approach. (Flaten & Tsagari, 2022).

The review of the state of the art on the FP process of FL teachers for the care of primary students with LD who study English is limited in Cuba, however, in the international context, studies from North America and Eurasia mostly. It seems to indicate, on the one hand, a tendency to study attitudes towards inclusion, self-efficacy beliefs and the preparation needs of the FL (English) teacher towards inclusive English teaching practices with dyslexic learners. (Miesera & Gebhardt, 2018; Nijakowska, Tsagari, & Spanoudis, 2019)

These studies reported that in-service English teachers' self-efficacy beliefs are a predictor that influences attitudes toward inclusion, and direct teaching experience with dyslexic students is the strongest predictor of both self-efficacy beliefs and positive attitudes. towards its inclusion in ordinal contexts. (Nijakowska, Tsagari, & Spanoudis, 2019; 2020). However, he did not include the special school modality within the type of teaching experience, an element that is beyond the scope of his study.

On the other hand, preparation actions for FL teachers have been identified in international contexts, mostly verifying the influence of training on their attitudes towards inclusion, self-efficacy beliefs and concerns about teaching English to students with SEN.

For example, in Europe, open online courses are results of the *Dyslexia project for Teachers of English as a Foreign Language (DysTEFL1 in 2011 and DysTEFL 2 in 2015.* (Nijakowska, Kormos, Hanusova, Jaroszewicz, Kálmos, Sarkadi & Pižorn (2015). These courses were a novelty in the area, offering massive online preparation opportunities on teaching English as a FL for dyslexics.

Researchers Kormos & Nijakowska (2017) applied a massive online course and demonstrated that teachers' self-efficacy beliefs in teaching dyslexics were higher, attitudes towards more positive inclusive practices and their concerns decreased, highlighting insufficient initial training received as possible causes. However, these studies did not delve into the FP process of the FL teacher to care for primary students with LD.

Recently Nijakowska (2022) studied how the participation of pre-service English teachers in an online course on SEN and English learning increased their positive attitudes, self-efficacy beliefs, and knowledge of inclusion and SEN. However, they reported increased concerns about implementing inclusive teaching practices, due to insufficient direct experience with these students. However, their studies did not address the vocational training process of these professionals to achieve adequate training in this regard.

In Cuba, Mendoza, Enríquez and López (2022) carried out a study on 50 practicing English teachers to describe their attitudes towards inclusive teaching of English to learners with LD in both primary and special schools. They revealed indecisive attitudes in their three components due to insufficient preparation in their vocational training and limited teaching experience in primary and special schools.

However, there are still insufficient studies in Cuba that address the FP process of the FL teacher for the attention of primary students with LD who study English, based on and the application of subject programs in the curriculum of the Bachelor's degree in Foreign Language Education. English, where curricular activities that integrate the academic, work and research components of the university are applied. In this sense, the empirical and theoretical investigation carried out has allowed us to identify deficiencies in the vocational training process of this professional related to:

1. Insufficient knowledge of the student body related to the adjustment of the educational response to primary students with LD who study English as a FL.

2. Insufficient response from the curriculum to content on Special Pedagogy and attention to these students and

3. Poor use of the academic, work and research components through curricular activities that enhance their integration, to offer treatment to the content related to the care of primary students with LD.

These limitations require innovative solutions that respond to the characteristics of the FL teacher's vocational training process, the Professional Model and the curriculum. The academic, labor, research and university extension components, which include the relationship between the university and the environment through extracurricular activities, make up the curricular conception of the FP of the education professional in Cuba, which is flexible and disciplinary. It is expressed in three types of curriculums: base, own and optional/elective, which, as a whole, articulate with the study plans and needs of the country, the territory, the faculty and the students.

The research that is developed is distinguished in that it assumes as an object of study the FP process of the FL teacher to care for primary students with LD who study English. The objective of the article is: to evaluate the effect of applying a subject program as the curriculum of the Bachelor's Degree in Foreign Language Education. English, in the FP process of these teachers to care for primary students with LD who study English.

MATERIALS AND METHODS

An experimental type of research was carried out, with a mixed approach. The emerging dialectical-materialist paradigm was assumed as a general methodological conception. Theoretical level methods were used, such as analytical-synthetic and documentary analysis for the literature review, modeling and systemic-structural for the representation of the object of study and preparation of the proposal, establishing systemic relationships between its components.

The empirical level methods were the interview, the survey to collect information and the methodological triangulation of sources to contrast the information collected. Consultation with experts was used for the theoretical evaluation of the program. The experimental method, in its variant of pedagogical pre-experiment, was used to verify the results obtained after its application and assess its relevance.

The research was carried out in the 2023 academic year at the Faculty of Education in Foreign Languages (FELEX) of the Enrique José Varona University of Pedagogical Sciences (UCPEJV) and worked with three sample groups, made up of 31 2nd year students. the career, between 19-20 years of age; 8 teachers, of them, 5 from the Didactics of Foreign Languages (DLE) discipline and 3 from the General Pedagogical Training (FPG) discipline and 7 managers, between 35-65 years of age. The sample was selected using the multilevel strategy, intentionally and non-probabilistically in each case.

The selection criteria according to each case were: being a 2nd year student of the Bachelor's Degree in Foreign Language Education. English, because in this year they acquire the basic psycho-pedagogical and didactic knowledge for educational attention to students at the primary educational level; be a 2nd year teacher of Psychology, Pedagogy and Didactics and be a 2nd year teacher of the DLE discipline or the

FPG discipline respectively and be a director of the faculty.

The pre-experiment was developed in three stages:

1- Pre-test. (Diagnosis of the current state of the variable. Application of interviews and pre-test surveys.

2- Treatment. (Program implementation).

Before applying the program, it was subjected to evaluation by expert criteria, using the Delphi method. 30 experts were selected as a result of determining their competence coefficient (K) following the formula: $K = (K_c + K_a) / 2$. A self-assessment questionnaire was used as an instrument. Of them, 25 located in the high category with values between 0.8 d" K d" 1 and the remaining 5, with a medium category of values between 0.5 d" K < 0.8.

The composition was 15 (50%) Doctors in Educational Sciences and 15 (50%) Master's degrees. All university professors at UCPEJV with work experience of between 5 and 35 years. Of them 14 (46%) are professors. of DEL from FELEX; 8 (26%) are specialists in Special Education; 5 (16%) in Primary Education at the Faculty of Early Childhood Education and 3 (10%) are psychopedagogues, professors at the Faculty of Educational Sciences. .

For the theoretical evaluation of the program, the following questionnaire (Table 1) was applied to the experts, with their prior consent.

Table 1 - Aspects valued by the experts

Aspects to evaluate the developed program	Categories				
	M.A.	B.A.	TO	PA	Yo
1. Relevance and importance.					
2. Theoretical foundation					
3. Structure.					
4. Adjustment of the contents to the needs of the student body.					
5. General contribution to the FP of the FL teacher for the care of primary students with LD who study English.					
6. Particular contribution to the direction of the educational process in primary and special education, in particular the teaching-learning process of English to students with LD.					

3- Post-test. (Control and conclusions on the hypothetical approaches provided). The instruments used for diagnosis were applied again. The pre-test and post-test interview was administered in person and the questionnaire was administered online, created in the *SurveyHeart application*, and managed via WhatsApp.

The variable to be studied and transformed was defined as: *a set of successive and interrelated phases, which allow the appropriation of knowledge, skills, values and attitudes that prepare the undergraduate foreign language teacher for the specialized intervention specified in the use of resources and/or supports for adjusting the educational response to primary students with learning difficulties who study English in any educational context, through the integration of academic, work and research components.* It was operationalized in three dimensions with indicators. See table 2.

Table 2- Operationalization of the variable.

Dimension I. (DI). Cognitive. Theoretical-methodological knowledge.
Indicators (I)
I-1.1. Level of knowledge about LD and English learning in the school, family and community context.
I-1.2. Level of knowledge about school diagnosis and development of care strategies for students with LD who study English.
I-1.3. Level of knowledge about resources and/or supports based on the Multisensory Structured Approach for the adjustment of the educational response in teaching English to learners with LD who study English.

I-1.4. Level of knowledge about inclusive practices in the care of students with LD who study English.

Dimension II. (D-II). Procedural. Level of application of theoretical-methodological knowledge.

Indicators (I)

I-2.1. Level of application of knowledge about school diagnosis and development of care strategies for students with LD who study English.

I-2.2. Level of application of knowledge about resources and/or supports based on the Multisensory Structured Approach for the adjustment of the educational response in teaching English to learners with LD who study English.

I-2.3. Level of application of knowledge about inclusive practices in the care of students with LD who study English.

I-2.4. Level of application of knowledge and skills to care for students with LD who study English as a FL in curricular activities that integrate the academic, work and research components of the university.

Dimension III. (D-II). Attitudinal. Level of beliefs and perceptions, feelings and actions.

Indicators (I)

I-3.1. Level of beliefs and perception towards care for primary school students with LD who study English.

I-3.2. Level of affective-emotional significance towards care for primary school students with LD who study English.

I-3.3. Level of action towards care for primary students with LD who study English.

Note: The figure shows the relationship of dimensions and indicators.

To parametrize the variable, a scale expressed as: Inadequate (I), Poorly Adequate (PA), Adequate (A), Quite Adequate (BA) and Very Adequate (MA) was used. Descriptive and inferential statistics were used to process the data, particularly the absolute and relative percentage frequency distribution, the index calculation (Table 3) and the student t test. To calculate the index by dimension and the complete variable, the formula shown was used:

Table 3- Formula for calculating the index.

D	Formula
GAVE	$(I1 + I2 + I3 + I4) / 4 * 9$
D-II	$(I1 + I2 + I3 + I4) / 4 * 9$
D-III	$(I1 + I2 + I3) / 3 * 9$
IV	$(IV) IV = (D1 + D2 + D3) / 3 * 9$

Note: (D) Dimensions, (IV) Variable index

Methodological triangulation of sources (Figure 1) was used to contrast the information collected pre-test and post-test. The decision rule was the following:

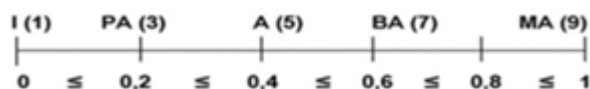


Fig. 1- Decision rule for methodological triangulation.

After the pre-experiment, the student t-test was applied because it was a small sample (31 students), to compare the means of the pre-test and post-test samples, determine their differences statistically and verify the proposed hypothesis. We proceeded as follows:

1-Hypothetical starting point.

Null hypothesis (Ho): The application of the subject program in the curriculum of the Bachelor's Degree in Foreign Language Education. English does not cause greater positive changes in the FP process of the FL teacher for the attention of primary students with LD who study English, therefore, the students would have a higher level of training in this regard.

Alternative hypothesis (H1): The application of the subject program in the curriculum of the Bachelor's Degree in Foreign Language Education. English, causes greater positive changes in the FP process of the FL teacher for the attention of primary students with LD who study English, therefore, the students would have a higher level of training in this regard.

2-Determine the level of significance.

The level of significance is: $\alpha = 0.01$.

Student assessment test is compared with the probability values, which for $\alpha = 0.01$ with 30 degrees of freedom the decision rule:

Reject **Ho** if $Z_p \leq -2.457$, otherwise accept **H1**.

3-Calculation of the test statistician:

The calculation of Z_p , from the data record to compare with the critical value in the normal probability distribution table, was carried out according to the formula:

$$z_p = \frac{\bar{x}_2 - \bar{x}_1}{\sqrt{\frac{\sigma_2^2}{N_2} + \frac{\sigma_1^2}{N_1}}}$$

where: **N**: sample size; **or 1**: standard deviation in pre-test; **or 2**: standard deviation in post-test; x_1 : mean in the pre-test and x_2 : average in the post-test.

RESULTS

Program proposal "Learning difficulties and English as a foreign language"

Based on the rhetorical review carried out, the program was structured into: preliminary data and substantiation of the subject; general objectives; system of knowledge, skills and values to which it contributes; planning and organization of topics; methodological and organizational indications; evaluation system and bibliographic plan. (RM-47/2022). It was proposed for the curriculum itself in the DLE discipline, in the 1st period of the 2nd year of the degree in the encounter course.

The contents that the program offers are the result of the theoretical systematization carried out on research in the area of teaching English as FL to students with LD in the foreign context, in particular, based on the didactic-methodological suggestions offered in the course. DysTEFL 2. (Nijakowska, Kormos, Hanusova, Jaroszewicz, Kálmos, Sarkadi & Pižorn (2015). In addition, it considers the methodological conception of English teaching that is being adopted in Cuba and the advances in the area of care for students with LD in the Cuban Special Education.

The objective of the program was to offer the theoretical-methodological foundations for the modeling of educational strategies, corrective-compensatory actions and English classes aimed at solving professional pedagogical problems in the school, family and community setting related to the care of primary students with LD who study English as a FL in any educational context (primary and special schools).

The thematic plan with the units and contents addressed is shown in Table 4.

Table 4- Thematic plan.

T	Thematic units
I	Learning difficulties and English as a FL. Educational attention in Cuba. 4 h/c. Contents: Difficulties in learning. Psychopedagogical characteristics and particularities in learning English as a FL. Etiology. Modalities of educational attention in Cuba. Corrective-compensatory work in primary, special school. The transit and egress strategy.
II	Diagnosis, Learning Difficulties and English as a FL. 4 h/c Contents: School diagnosis, methods and techniques. Psychopedagogical characterization and its stages in the special school. The design of educational attention strategies. Application of techniques and implementation of psychopedagogical characterization.
III	Learning Difficulties and English. Resources and/or supports for adjusting the educational response. 14h/c Contents. Resources and/or supports to care for students with learning difficulties who study English as a FL. The Multisensory Structured Language (MSL) Approach. Precisions for teaching- learning listening; speaks (speaking); vocabulary and grammar; of reading (reading), phonological and orthographic awareness and writing (writing). Multisensory techniques and exercises for the correction and/or compensation of difficulties. Modeling of multisensory activities, techniques or exercises for correction and/or compensation.

Inclusive practices in the English class. Family and community orientation.
Total hours 22 h/c

Note: (T). Issue

It was applied in person during the first period of the 2023 academic year, to 31 2nd year students of the Bachelor's Degree in Foreign Language Education. English, course by meeting. It lasted three months, with 22 hours of classes (h/c). 1 meeting was held every 15 days, for a total of 11 face-to-face classes, 2 hours of classes (h/c) each and 11 weeks of self-preparation interspersed. The form of organization (FO) used was the class, meeting class type. (RM-47/2022). The program was based on the combination of methods such as analogy learning method and problem-based learning method.

The evaluation was systematic, with a combination of heteroevaluation, co-evaluation and self-evaluation. The final evaluation consisted of the defense of a class where the modeling of corrective-compensatory actions, techniques and multisensory exercises for the attention of students with LD who study English is demonstrated.

Pre-test Stage

When applying the *interview* to the students, it was found that in indicator 1.1, 90.3% (28) with an index of 0.30, declared that they did not have knowledge about DA and learning English, they only referred to two of its general characteristics without referring to concrete examples. In indicator 1.2, 54% (17) with an index of 0.39, declared that they did not master the school diagnosis, the educational strategies in the school, family and community context, referring imprecisely to methods such as observation and documentary analysis.

In indicator 1.3, with an index of 0.11, 100% (31) declared that they had no knowledge about it, particularly about the MSL, and that they had never received this

content in the subjects. In indicator 4, with an index of 0.30, 90.3% (28) declared that they had little knowledge about inclusive practices and felt insecure if they had to care for children with LD in both primary and special schools. The dimension was evaluated as PA with an index of 0.27.

Dimension II was evaluated as I, with an index of 0.11, being the most affected. In indicator 2.1, with an index of 0.20, 61% (19) of the students showed that they do not apply knowledge about the diagnosis because they feel insecure in that area and are not prepared in this regard. The remaining 41% (13) showed that they do it with inaccuracies and were also unable to exemplify actions.

Indicators 2.2, 2.3 and 2.4 with indices of 0.11 were evaluated as I, 100% (31) of the students declared that they do not apply these contents in practical activities because they are not worked on in any subject, especially in the DLE subject, as well nor are research tasks carried out on the care of students with LD who study English.

Dimension III was evaluated as PA with an index of 0.25. Indicator 3-1 was the only one evaluated as A, with an index of 0.58, 67.7% (21) of the students declared that they consider it important to care for primary students with LD in any educational context and expressed their willingness to prepare on these topics. However, they declared that they felt unsafe and even that they should be cared for in special schools.

Indicator 3.2, with an index of 0.29, was evaluated as PA and indicator 3.3, with an index of 0.11, was evaluated as I, with an index of 0.11 for 100% (31) of the students who stated that they would avoid having to offer care to students with DA in their educational practice, and dissatisfaction with their preparation in this regard, nor do they self-prepare and investigate the problems of their educational practice related to this topic. The variable was evaluated as BP, with an index of 0.25.

The survey of teachers of the FPG discipline showed that indicator 1.1, with an index of 0.18 and indicator 1.3, with an index of 0.11, were evaluated as I, for 100% (3) of the teachers who affirm that students do not have knowledge about DA and English learning. Indicator 1.2, with an index of 0.25, was evaluated from PA, for a total of 67% (2) who considered that they master the diagnosis and the development of educational strategies in general, but not adjusted to students with LD who study English and indicator 1.4, with an index of 0.40, was evaluated as A, since 67% (2) declared that the students master general elements about inclusive practices, but not contextualized to students with LD and learning English.

Dimension I was evaluated from PA, with an index of 0.27. Dimension II was evaluated as PA, with an index of 0.25. Both indicator 2.1, 2.3 and 2.4 were evaluated as PA, with minimal differences in indices, 0.33, 0.25 and 0.33, for 67% (2) who marked indicator 2.1 and 2.4 as PA, as they argued that they only enhance practical activities over the diagnosis in their classes, in a general way and not adjusted to students with LD in primary or special schools, nor inclusive practices.

The I-2.2, with an index of 0.11, was evaluated as I, for 100% (3) who do not create specific content activities on DA, English learning and resources and/or support from the subjects of the FPG discipline that integrate the substantive processes. Dimension III was evaluated by PA, with an index of 0.33 in total and in each indicator, for a total of 100% (3) of teachers who considered that the students have a poorly adequate level in the three indicators of the attitudinal dimension.

They argue that they are important topics but that the FP of the FL teacher does not prepare them to work with these students in primary or special schools and these contents are not included in the FPG discipline. The variable was evaluated as BP, with an index of 0.33.

The survey of DPIDLE teachers showed that dimension I was evaluated as I with an index of 0.16. The I-1.1 was evaluated from PA, with an index of 0.24, 60% (3) considered that the students have knowledge about LDs only in a general way, but not their impact on learning English. The I-1.2 was evaluated as I, with an index of 0.2, 60% (3) do not have knowledge about diagnosis in this particular.

In the indicators I-1.3 and I-1.4, with indices of 0.11, they were evaluated as I, for 100% (5) who considered they did not have knowledge about it. In dimensions II and III the results were similar and it was evaluated as I, with indices of 0.11, for a total of 100% (5) of the teachers who considered that they do not comply, nor are they met in vocational training with the evaluated indicators.

They argue that curricular activities that integrate substantive processes are not developed and that students have an inadequate level of perception, affective-emotional significance, and professional performance in relation to caring for students with LD. The variable was evaluated as I, with an index of 0.18.

The interview with managers showed that dimension I was evaluated by them as I, with an index of 0.11. Indicators 1.1, 1.2 and 1.4 obtained an evaluation of I, with indices of 0.17, 71% (5) declared that the students did not know enough either. Indicator 1.3 obtained a much lower index of 0.11, 100% (7) agreed that the students do not know about the approach to teaching English to these students. For its part, dimension II was also evaluated as I, with an index of 0.11 in total. Indicators 2.1 and 2.3 with indices of 0.17 and indicators 2.2 and 2.4, with indices of 0.11.

The percentage of managers with the same criteria coincided, with 71% (5) stating that students do not have opportunities to apply this knowledge because it is not taught in the undergraduate degree and they do not have an answer from the

curricular framework. Dimension III was evaluated as I, with an index of 0.11, also consistent with the results of the teacher survey. The directors believed that the training of the students is limited. The variable was evaluated as I, with an index of 0.11.

When applying the *methodological triangulation* from the results obtained, the DI was evaluated as PA, with an index of 0.22, the D-II was evaluated as I, with an index of 0.11 and the D-III was evaluated as I, with an index of 0.18. In general, the variable was evaluated as I, with an index of 0.11, where the most affected dimensions were procedural, with an index of 0.11, and attitudinal, with an index of 0.18. Figure 2 shows the value of each indicator.

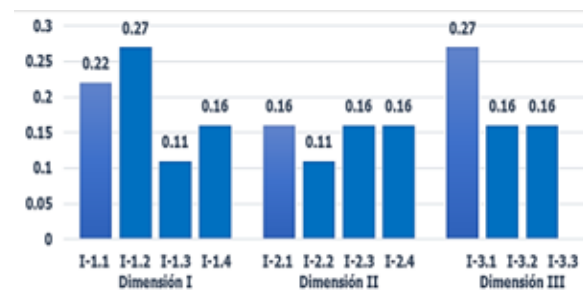


Fig. 2- Current state of the variable.

Implementation Stage:

Before its application, the program was subjected to evaluation by expert criteria. 100% (30) of the experts valued the MA proposal and considered it relevant and important for improving the vocational training process of this professional. Regarding the theoretical foundation of the program, 57% (17) valued it as MA and 43% (13) as BA. The aspects related to the structure of the program and the adjustment of the program contents to the needs of the students in training and the educational support needs of students with LD who study English, were valued by 100% (30) of the experts as MA.

In relation to the contribution of the program in general to the training of the

object of study, 77% (23) of the experts valued it as MA and 23% (7) as BA. Finally, 100% (30) of the experts valued MA the contribution of the program in particular to the direction of the educational process in primary and special education, with emphasis on the teaching-learning process of English to students with LD.

The results through the application of the Delphi method showed a high level of significance and coincidence in the experts' responses in the first round of application of the instrument, which revealed the coherence and theoretical validity of the proposed program.

Post-test Stage

After applying the proposal, the results of the *post-test interview* applied to the students showed changes in the indicators of the three dimensions, located between the levels of A, BA and MA, where the complete variable evaluated MA, with an index of 0.92. The results are shown in the following figure 3:

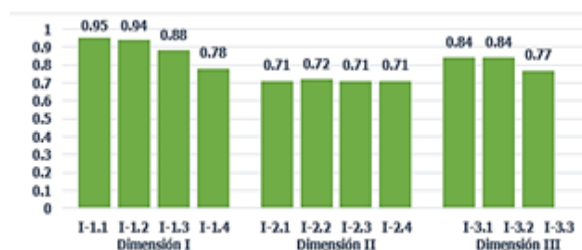


Fig. 3- Results of the post-test interview with students.

In dimension I, indicator 1.1 evaluated of MA, where 87% (27) declared and demonstrated with examples (more than 5) having obtained knowledge about DA and English learning, its characteristics and attention in both primary and special schools. . 6.4% (2) declared 4 elements and the other 6.4% (2) only 3. Indicator 1.2 was evaluated from MA, where 74.1% (23) declared and demonstrated with examples (more than 5) master the school diagnosis and the development of educational strategies in the school, family

and community context. The rest, 25.8% (8), managed to exemplify only 4 related elements.

Indicator 1.3 was evaluated from MA, for 48% (15) of the students who declared having acquired knowledge about the resources and/or supports, the MSL approach, for the adjustment of the educational response, in addition, exemplified with more than 5 items. The remaining 48% (15) demonstrated it with 4 elements. Indicator 1.4, evaluated by BA, was the lowest, where 97% (30) declared having knowledge about inclusive practices in both primary and special schools with more than 5 examples and only 3% (1) declared 4 examples. . The dimension was evaluated as MA with an index of 0.94.

Procedural dimension II was evaluated as BA, with an index of 0.77, being the lowest statistically. In indicators 2.1, 2.3 and 2.4 there was coincidence in the data, with an index of 0.71, where 71% (22) declared and demonstrated (more than 5 corrective-compensatory actions) applying knowledge about methods for school diagnosis, actions of inclusive practices and participate in more than ten curricular activities as part of the subject, both in the classroom and in educational practice by directly attending to students with LD and researching about it. The remaining 29% (9) with only 4 shares. Unlike the remaining 29% (9), they declared between 4 or 8 actions, since they declare that they do not have students with LD in the schools where they carry out internships or work.

In indicator 2.2, evaluated by BA, they stated that they demonstrated the application of resources and/or supports and the MSL approach with more than 5 examples, unlike the remaining 22.5% (7) with at least 3 examples.

In attitudinal dimension III, indicator 3.1 was evaluated as MA, with an index of 0.84, for 90.3% (28) who showed a positive attitude, believing that attention to students with LD in any educational context was important and beneficial. for them, as

well as raising their preparation as a FL teacher to take it on. The remaining 9% (3) believed they needed more training.

In indicator 3.2, it obtained the same values as 3-1, they expressed a positive attitude, pleasure towards the attention to these students in any educational context, as well as satisfaction in knowing that they could do it. Finally, indicator 3.3, evaluated by BA, with an index of 0.70, 100% (31) declared to implement resources and/or supports to adjust the educational response, try to eliminate barriers to learning with an optimistic stance and investigate on how to improve attention to these students from the English class.

However, they expressed feeling the need to have more opportunities to practice and train in caring for these students in primary school through inclusive practices and, at times, feeling insecure about their abilities.

The *post-test survey* applied to the teachers of the FPG discipline and the teachers of the DPIDLE also showed changes in the three dimensions. 100% of the teachers of the FPG discipline evaluated BA, with an index of 0.77 respectively, all the indicators of the three dimensions in favor of the student body. These data were also found in the case of DPIDLE teachers, in DI, D-III and indicators 2.1, 2.2 and 2.4 of D-II. However, they rated indicator 2.3 as A, with an index of 0.55.

In addition, they declared that more than 10 curricular activities were implemented in the subject with integration of the academic, work and research components where the students applied the acquired knowledge and skills, but the use of special schools was not achieved and there was a lack of integration of their content and activities with other subjects of the FPG and DPIDLE, both the meeting and day courses and the increase in the time of the subject of the own curriculum.

Finally, in the *post-test interview* applied to the managers, it showed 100% coincidence with the results of the survey to the DPIDLE

teachers in the three dimensions (BA, index of 0.77, respectively and in the complete variable). It is necessary to clarify that the managers believe that these positive results are only attributable to the students, since they were the ones who received the subject program.

From another perspective, they affirm that in the methodological work of the degree, treatment of these contents is not offered, nor are other stages of the continuous teacher training process taken advantage of for the treatment of this topic.

When again applying the methodological triangulation and the index calculation, it was found as points of coincidence that all the indicators were evaluated between BA and A, the DI and the D-III were evaluated from MA, with indices of 0.99 and the D -II was evaluated as BA, with an index of 0.77, being the lowest. In general, the variable was evaluated as MA, index of 0.92. The figure shows the value of each indicator.

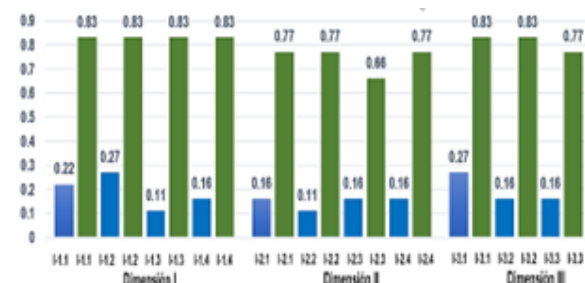


Fig. 4- Final state of the variable. Initial state (blue) and final state (green).

Student technique

The behavior of the variable by students during the pre-experiment is shown in table 5. From their data and the formula used, the value of Z_p was calculated.

Table 5- Comparison of the variable by students during the pre-test and the post-test.

Is	PRE-TEST						POST-TEST					
	GAVE		D-II		D-III		GAVE		D-II		D-III	
	IV	AND	IV	AND	IV	AND	IV	AND	IV	AND	IV	AND
1	0.28	28	0.16	16	0.70	70	1	100	0.77	77	0.92	92
2	0.11	11	0.11	11	0.11	11	0.88	88	0.55	55	0.77	77
3	0.33	33	0.16	16	0.25	25	0.94	94	0.77	77	0.92	92
4	0.33	33	0.11	11	0.25	25	0.94	94	0.55	55	0.92	92
5	0.33	33	0.16	16	0.25	25	0.94	94	0.77	77	0.92	92
6	0.33	33	0.16	16	0.24	24	0.77	77	0.77	77	0.92	92
7	0.33	33	0.16	16	0.25	25	0.88	88	0.77	77	0.92	92
8	0.28	28	0.16	16	0.25	25	0.94	94	0.77	77	0.92	92
9	0.28	28	0.16	16	0.25	25	0.94	94	0.77	77	0.92	92
10	0.28	28	0.11	11	0.25	25	0.88	88	0.55	55	0.92	92
11	0.28	28	0.16	16	0.25	25	0.88	88	0.77	77	0.92	92
12	0.28	28	0.11	11	0.70	70	0.88	88	0.77	77	0.92	92
13	0.28	28	0.16	16	0.70	70	0.88	88	0.77	77	0.92	92
14	0.33	33	0.11	11	0.70	70	0.83	83	0.55	55	0.92	92
15	0.33	33	0.11	11	0.25	25	0.83	83	0.55	55	0.92	92
16	0.11	11	0.11	11	0.11	11	0.88	88	0.61	61	0.77	77
17	0.33	33	0.11	11	0.25	25	0.88	88	0.61	61	0.92	92
18	0.28	28	0.11	11	0.25	25	0.94	94	0.55	55	0.92	92
19	0.28	28	0.11	11	0.25	25	0.94	94	0.77	77	0.92	92
20	0.28	28	0.11	11	0.25	25	0.88	88	0.77	77	0.92	92
21	0.33	33	0.11	11	0.25	25	0.83	83	0.77	77	0.92	92
22	0.11	11	0.11	11	0.11	11	0.77	77	0.77	77	0.77	77
23	0.33	33	0.16	16	0.25	25	0.83	83	0.77	77	0.92	92
24	0.33	33	0.11	11	0.25	25	0.83	83	0.77	77	0.92	92
25	0.28	28	0.16	16	0.25	25	0.88	88	0.77	77	0.92	92
26	0.28	28	0.11	11	0.70	70	0.77	77	0.77	77	0.92	92
27	0.28	28	0.16	16	0.70	70	0.94	94	0.77	77	0.92	92
28	0.28	28	0.11	11	0.25	25	0.94	94	0.77	77	0.92	92
29	0.28	28	0.11	11	0.25	25	0.94	94	0.77	77	0.92	92
30	0.28	28	0.11	11	0.25	25	0.94	94	0.55	55	0.92	92
31	0.28	28	0.16	16	0.25	25	0.88	88	0.77	77	0.92	92
M	24.5						83.4					
σ	14.3						11.2					

Note: (It is) Students. (IV) Variable indicator. (E) Scale.

Decision: The Zp value of the sample after applying the program was 18.0545, which is greater than the Z value of the theoretical distribution (Zp e" 2.457).

DISCUSSION

From the results obtained in the post-test, it can be stated that what was planned was fulfilled, corroborating the hypothetical approach formulated. Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted, so it is very likely that the designed subject program contributes to the FP process of the FL teacher for the attention of primary students with LD who study English and that, In fact, the students have a higher level of training in this regard. The significant changes in all the indicators of the variable (between MA and BA), the complete variable (MA with an index of 0.92) and the statistically significant differences found in the sample with the t-Student technique ($Z_p = 18.0545$ e" $Z = 2.457$), demonstrate the effectiveness of the application of the subject program and support this approach.

These results demonstrate that the adequate FP provided to the FL teacher is related to the increase in knowledge, skills and positive attitudes towards the care of primary students with LD who study English. However, considering the indicators and dimensions established in the operationalization of the variable, findings have been found after the pre-experiment that distinguish this study.

In the DI related to the level of knowledge, it was shown that the students had greater knowledge about the care for primary students with LD who study English, both in primary and special schools, in relation to all the indicators measured (Knowledge about LD, school contexts, family and community; characteristics and impact on English learning, diagnosis, development of strategies and inclusive practices). This means that the program had a significant positive effect and is related to the increase in the level of knowledge of the students in this regard. These results coincide with the studies of Nijakowska (2022) who found that after the application of an online course to 2nd year English teachers in training they had greater preparation, their self-

efficacy beliefs and knowledge of inclusion and SEN increased.

However, this study verified that the application of the program also had a significant positive effect on the FL teacher's vocational training process in general. This can be explained because the use of the academic, work and research components of the training process at this stage was enhanced through the subject. In this way, the articulation of these components through concrete activities guarantees the university-society link, where the student body can not only appropriate the new content through teaching, but also develop modes of action related to the solution of professional pedagogical problems related to attention to these educated in primary schools and develop investigative skills.

It should be noted that not only did general knowledge about LD and English learning increase, but also how LD manifest in family and community contexts and their influence, which allows the English teacher to offer more comprehensive educational attention. that goes beyond the limits of the class. These findings require further research to verify the influence of the knowledge of the English teacher in training on the family and community context of the student with LD who studies English and the improvement of their attention.

Indicator 1.4 (0.78) (inclusive practices) was the lowest of the dimension. This may be due, first, to the short time dedicated to their treatment, when considering the novelty of their treatment in the undergraduate degree. Second, because the student's idea that inclusion is only associated with SEN as the educational work of the Special Education teacher may have impacted the outcome of their learning, by giving them less importance.

The procedural D-II was the lowest statistically. This could be explained by the short application time of the knowledge learned, which would indicate further

increasing the class hours of the program. However, it was shown that students increased their level of application of the knowledge and skills acquired, both in curricular activities at the university, where the academic, work and research components were integrated, and in practice schools. That is to say, not only did they receive these contents as part of the teaching, but through the meeting class as a form of organization, they were able to put the knowledge and skills into practice and investigate, through investigative work and the systematization of lived experiences, how to improve care for these learners.

This shows that, on the one hand, the adequate use of direct practice with students with LD is related to the increase in skills to serve students with LD who study English. Results that are similar to the studies of Kormos & Nijakowska (2017), who found that after the implementation of an online course, teachers' self-efficacy beliefs increased, which is often associated with the skills they believe they have to teach English to these students. in inclusive contexts. It was also corroborated by Nijakowska (2022) who, after applying an online course to Polish English teachers in training, students in their 2nd^{year} of the degree, their preparation for inclusive teaching of English to learners with SEN increased.

However, regarding indicator 2-1, this study found that the students expressed difficulty in modeling and applying actions to guide the families of students with LD on how to improve their children's English learning. This could be explained by the lack of experience in caring for these children and their families. More research is needed in this area, particularly how to increase the skills of pre-service English teachers to guide families of students with LD.

Another finding of this study is that it demonstrated that the participation of the students in curricular activities as part of the program, where the academic, work

and research components are integrated, increased their abilities to serve these students. This can be explained because the use of these components allowed them to put into practice what they had learned both in the university classroom and directly in the practice school with students with LD and to investigate how to improve the care offered to them. This finding constitutes an important element to improve the vocational training process of these teachers, as it allows the design of training programs to have a comprehensive view and enhances not only the appropriation of knowledge and skills but also practice in the classroom, directly in schools, primary schools and the development of investigative skills.

A limitation of this study was that it was not possible for all students to have direct practice with these learners in primary schools, because in some of them, there were no learners included with LD. Nor was it possible for the students to be placed in special schools, therefore, the impact of this type of practical experience in increasing the skills to serve these students could not be measured.

In attitudinal dimension III, there was correspondence with the results obtained in the cognitive and procedural dimensions. It was proven that the students increased the level of beliefs, perceptions (MA, index of 0.84), affective-emotional significance (MA, index of 0.84) and action (BA, with an index of 0.77) towards care for primary school students with LD who They study English, after the program is implemented. This means, on the one hand, that the higher the level of knowledge and skills, the more prepared they are in this regard and the more opportunities to put the knowledge learned into practice, the more positive their attitudes will be towards caring for students with LD who study English. .

On the other hand, it was shown that the adequate FP provided, in this case, through the implemented program, is also related to the increase in positive attitudes of the English teacher in training towards the

attention to these students. These results coincide with the studies by Kormos & Nijakowska (2017), Miesera & Gebhardt (2018) and Nijakowska (2022). They found that after the preparation provided with the implementation of a course, the attitudes of teachers in training towards the inclusive teaching of students with dyslexia or other SEN in regular schools increased.

However, as a finding of this study, it was found in indicator 3-1, the teachers in training, after receiving the program, believed that students with LD should be attended to in any educational context, referring to regular primary schools and special schools, that is, they would benefit from any of these.

This can be explained because as part of the contents of the program, treatment was offered to the conception of inclusive education and special school assumed in Cuba. Where it was clarified that the inclusive approach in the special school is given by its role as a resource and support center, its transitory nature and the quality of education from the assurance of the necessary resources and support.

Also, it was found that, although the students after receiving the program increased the level of affective-emotional significance and action towards attention to these students, they felt the need to receive more preparation, more direct practice with students with LD included in regular primary schools, because they continued to feel insecurities about how to apply what they had learned.

These results are related to the studies of Miesera & Gebhardt (2018) when they found that German teachers in training had negative attitudes and concerns towards inclusive education in regular contexts, serving them only in special schools.

They also agree with Nijakowska (2022), after applying an online course to English teachers in training in times of Covid-19, she found that the attitudes were positive, but not statistically significant, where 20%

of those surveyed declared they had experience very limited teaching with students with SEN.

However, a finding of this study was that, although the students believed that students with LD should be cared for in any educational context, they reported concerns or insecurities regarding their care in the special school. These results can be explained for two reasons, the first, because it was not possible for them to be placed in special schools because the faculty management considers these institutions only for Special Education professionals and they are unaware that their curriculum also includes the subject. English language.

The second and most important reason is that the Professional Model of these teachers does not recognize these educational institutions as one of their spheres of action. Which justifies that they are not taken into account for their location. Finally, it was found that, as part of the level of action, the students declared that they were investigating how to improve the attention to these students from the English class. This means that the use of the research component contributes to raising positive attitudes towards the care of this group of students.

The study carried out made it possible to verify that the implementation of the subject program had a significant positive effect on the FP process of the FL teacher for the attention of primary students with LD who study English. Its content system expresses the basic theoretical-methodological foundations for the modeling of educational care strategies, corrective-compensatory actions and classes aimed at solving professional pedagogical problems in the school, family and community setting related to the care of these students. .

These findings have great implications for the design of future subject programs for the undergraduate courses of these professionals. To this end, it is suggested

that its design must be coherent with the substantive processes of the university, the Professional Model and conceive the contents on inclusion and attention to diversity based on the curriculum, research, the development of positive attitudes and ways of professional performance in accordance with the needs that this 21st century imposes.

However, more research is still needed to delve into the theory and search for innovative solutions to elevate the FL teacher's FP process in this regard. The limitations of this study are associated with the fact that it was not possible to verify the effect of the program on the level of knowledge, skills and attitudes of teachers and directors, the implementation of the special school as spheres of action of this professional, as well as the use of the methodological work of the degree, the interdisciplinary relationship between disciplines, or other stages of the professional's training for these purposes.

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The author declares that he has no conflicts of interest.

Authors' contribution:

The author participated in the design and writing of the article, in the search and analysis of the information contained in the consulted bibliography.

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