The effect of the poem on the educational treatment and education of learners with mild special educational needs in the primary education: a statistical study

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ABSTRACT

Learning is considered as a highly individualized procedure that requires diverse learning techniques to be applied to address the multifaceted educational needs of learners. To attenuate the various learning difficulties emerging in case learners exhibiting learning deficiencies, art-based strategies, including poetry, are integrated into the educational process. Poetry offers exceptional educational opportunities, leading to the necessity of examining its incorporation into the educational approach of students experiencing special educational needs. In the current study, a series of statistical analyses have been conducted to evaluate the impact of a number of independent variables to the effectiveness of poetry integration in teaching students with learning difficulties. Specifically, following a separate study in which an Exploratory Factor Analysis and a Confirmatory Factor Analysis that validated the proposed instrument construct and factor split into two dimensions, an ANOVA analysis has been conducted to assess the relationship between each dimension and descriptive features. Additionally, linear regression analysis has been exploited to validate how much each dimension contributes to the overall level of effectiveness of poetry integration in teaching students with learning difficulties. In terms of results, the descriptive statistics analysis has proven the positive positioning of the survey participants, while ANOVA analysis proved that teacher's educational level is significantly related with the effectiveness of poetry integration practices in teaching students with learning difficulties. Other factors such as the frequency of poetry educational presentations, the number of students with learning difficulties in classroom, as well as the age and gender of the teachers have also been assessed and correlation to the effectiveness of poetry integration practices in teaching students with learning difficulties has not been proven. Finally, a linear regression analysis has proven that both dimensions contribute significantly to the overall impact of poetry application.

KEYWORDS

Poetry, primary education, elementary-age students, learning difficulties

RÉSUMÉ

L'apprentissage est considéré comme un processus hautement individualisé qui nécessite l'application de techniques d'apprentissage variées afin de répondre aux besoins éducatifs multiples des apprenants. Pour atténuer les diverses difficultés d'apprentissage qui apparaissent chez les apprenants présentant des lacunes, des stratégies basées sur l'art,

notamment la poésie, sont intégrées au processus éducatif. La poésie offre des possibilités éducatives exceptionnelles, ce qui rend nécessaire d'examiner son intégration dans l'approche pédagogique des élèves ayant des besoins éducatifs particuliers.

MOTS-CLÉS
Poésie, enseignement primaire, élèves d'âge élémentaire, difficultés d'apprentissage

INTRODUCTION

Identifying the learners' needs is considered a fundamental step during the educational approach, as it enables the fulfillment of the arising goals leading to the acquisition of knowledge. By taking advantage of multiple educational methods and the incorporation of diverse learning strategies the optimization of the learners' engagement to the learning process is attempted, ensuring the outcome of the educational procedure (Bjorklund, 2018). Thus, the main goal of learning strategies is not only to be incorporated into the process of learning, but to enable the learners during their struggle to conquer knowledge, allowing them to evaluate their effectiveness. The selection of alternative learning techniques, according to one's personal educational profile is regarded as the cornerstone of the learning procedure (Iwamoto et al., 2017; Kizi & Fazliddinovna, 2020).

In this point of view the educators retain an integral part during the educational process, by inducing learning and by enhancing understanding and skill development of the learners. Although during the past decades the integration of the traditional teacher-centered learning model prevailed, in the present context the educational community is driven towards a learner-centered educational approach, accepting that the individualization of learning strategies is highly required, based on the assumption that learning consists of a self-regulated process relying on an individual's specific capacities and characteristics (Lerkkanen et al., 2016). The incorporation of adaptable educational methods strongly influences the learning outcome, revealing the importance of learners' characteristics during the design of instructional strategies that guide the learning process (Spektor-Levy & Yifrach, 2017).

Based on this concept the emerge of learning difficulties is considered crucial. The identification of learning deficiencies leads to the necessity of selecting and implementing tailored learning techniques for the specific target group of struggling learners. Considering the special characteristics of these learners is required in order to achieve the development of more efficient and motivating educational strategies (Ehsan et al., 2018; Sormunen et al., 2020).

Learners presenting learning difficulties exhibit unexpected low academic performances in distinctive learning aspects, whereas discrepancies are also detected between intelligence and academic performance, especially in specific domains. The emerge of learning difficulties is often perceived as the learners' failure to progress academically, conquering the educational goals imposed (Bjekic et al., 2014). Learning disabilities play a dominant role during the conquer of knowledge as individuals exhibiting meaningful differences from their co-learners regarding the expected level of learning skills and educational competencies require the implementation of specific educational strategies (Cousik, 2014). The alleviation of problems detected via appropriate learning strategies that aim to assist learners with deficiencies in regulating their own learning process according to their personal learning profile, is regarded as a main goal of the educational process (Sormunen et al., 2020).

During the past, educational systems, based on the prevailing educational initiative, advocated the separation of learners with learning deficiencies, as they claimed that students with special learning needs should not be grouped together with normally developing

learners. Furthermore, for many years, special education approaching students with learning difficulties applied specific educational strategies that led to setting multiple limitations regarding the interventions proposed. The assumption that learners struggling with learning disabilities experience ceilings on learning, due to their weaknesses, deprived them from relying on alternated methods and techniques (Grigorenko et al., 2020).

The disappointing outcomes emerging began to gradually urge the special education community to thrive towards the approach of struggling students through various and effective methods. Placing learners with difficulties along with typically developing peers to avoid their social discrimination and alienation was promoted and the learning plateau of these learners finally begun to expand, as proper educational strategies, including innovating methods, were applied. The integration of students with learning difficulties is regarded as a constructive step leading to their acceptance into the learning process, the main goal of which is their evolution into independent personalities with the power to live autonomously (Brown et al., 2013).

Doubtlessly, learning strategies belong to the learners and should be utilized according to their individual needs and competencies. Therefore, in their attempt to integrate students exhibiting learning deficiencies into the educational process, with respect to their personal educational profile, educators are examining different learning strategies, often incorporating novel educational methods into the learning procedure (Boyle et al., 2015; Dorgu, 2015).

Gradually, the educational community is opening to the exploitation of art-based learning strategies, including poetry, as a fundamental tool during the educational approach of struggling learners. Educators that utilize art during the educational process are provided with a rich base upon which they can silhouette various themes from different learning subjects and can manipulate the participation of the learners according to the specific learning inefficiencies they are experiencing. Based on the capacity of art-based strategies to create deeper connections between the learners and the printed context of a specific subject students struggling with learning disabilities manage to perform better in various academic tasks, as their decoding skills and their total comprehension abilities can be accelerated (Monigir & Rinderngan, 2019).

In the field of art-based learning strategies poetry is treated as an educational tool that offers exceptional learning opportunities regarding learners presenting learning deficiencies. By stimulating their eagerness to learn poetry, learners enhance their learning abilities, while by ensuring the development of phonemic skills, vocabulary, and one-to-one interaction, also improves other dimensions of their literacy such as listening, speaking, and writing. Through the integration of poetry into the learning process individuals experiencing learning disabilities are offered the opportunity to connect to the educational procedure, as poetry presents an excellent teaching possibility for them to listen, to participate and to reflect (Masayu, 2018).

Incorporating poetry into the learning process creates an effective avenue that provides appropriate opportunities for struggling learners through increasing affective as well as cognitive learning (Boyd & Janicki-Gechoff, 2019). Especially when applied to elementary-age students, educational schemes that involve poetry seem extremely successful, as poetry provides a rich backdrop that enables educators to silhouette more advanced themes regarding science, math, social studies, and language arts. Associations formed among these different themes and subject matters seem to be enhanced via the integration of poetry and the learners' approach of various educational areas can be ultimately facilitated (Concannon-Gibney, 2018; Irish, 2021).

Without any doubt, in the core of the poetry program lies the educator, holding a main role during its evolvement, acting as a guide that regulates the participation of the learners. The main purpose arising is the creation of a powerful liaison towards the educational process

through which all obscure and difficult notions appear easier to comprehend. Undeniably, poetry includes multiple and interesting routes for the teacher to approach the learners, especially when struggling learners are involved (Abbass & Hamdan, 2021; Mahmood & Husain, 2021).

Previous literature outcomes reveal the outstanding benefits of poetry's incorporation into the educational procedure, supporting the positive learning outcome of the poetry program and depicting the fundamental role of the educator regarding its effectiveness. According to Cousik (2014) the development of a forceful teacher-learner liaison is considered as the basis of the implementation of special education strategies, whereas poetry aids the evolution of strong educator-student relationships. The educators' competence regarding the integration of poetry influences the educational outcome, whereas their proficiency in engaging multiple special education techniques is placed au milieu of the educational program.

Concannon-Gibney (2018) also identified poetry as a necessary tool in the field of appropriate educational approach of students experiencing learning disabilities, revealing at the same time the immense influence of the educators' experience and positive attitude in reassuring the desired outcome of the proposed program. The level of previous teaching experience is considered as an undeniable basis that strongly supports the incorporation of poetry into the educational approach, as more experienced educators tend to have the competence to both motivate and engage students of all abilities, leading to the conquer of academic skills. In liaison with their enhanced teaching experience, it is considered that older educators strongly engage into the proposed educational program, therefore conquering promising educational outcomes. Although one would assume that younger educators are more eager to experiment by utilizing novel learning strategies, older educators seem to be more confident regarding their teaching skills.

Johnson (2019) emphasized on the educators' attempt to discover ways to integrate poetry into their elementary classrooms. Via a cross-disciplinary approach this study promoted poetry implementation as a satisfactory approach to cultivate primary reading and vocabulary skills. Poetry incorporation is promoted in case the educators achieve their profound engagement to the educational procedure, revealing the main role they assume during the poetry program. The modification of poetry activities in order to meet the needs of diverse learners was underlined, leading to the assumption that an elevated teaching experience is required. Addressing appropriately learners exhibiting learning deficiencies seems to be facilitated when educators have specialized into the principles of special education.

Bonanni (2018) by hosting several workshops concluded that struggling students beneficiate from poetry as a route for improving their reading and writing skills. During the implementation of the poetry program, Bonanni (2018) applied multiple special education strategies, therefore underlined the necessity of specialized educators to be involved. Furthermore, the educators' gender was found to thoroughly influence the educational outcome of the poetry program, as well as the educators' personal attitude, ability, and methods applied during the educational process. In particular, female educators seemed to firmly engage to the incorporation of appropriate learning strategies in the field of approaching learners that exhibit learning deficiencies, expressing an elevated level of empathy and commitment towards them.

Moats (2019) also indicated the positive influence of the incorporation of special education strategies, such as visualizing the information presented and re-reading, during poetry integration, leading to the assumption that the intense engagement of students presenting difficulties to the educational process is assured via the involvement of specialized educators. Evidence is presented that the majority of students ameliorated their reading skills,

whereas the methods applied were considered critical for students with reading disabilities, including dyslexia.

According to the study of Rasinski and Young (2017) the necessity to implement well-designed educational programs is considered undeniable, with the researchers supporting the implementation of various educational interventions. Educators presenting an elevated level of teaching experience were considered more competent regarding the integration of poetry into the educational procedure as they influenced the educational outcome, whereas their competence also enabled the implementation of authentic, consistent and synergetic approaches. Furthermore, according to Rasinski and Young (2017) the age of the students involved, and therefore their educational grade, altered thoroughly the selection of learning strategies implemented by the educator assigned, especially while poetry integration was desired.

The study of Aisyah et al. (2019) revealed that low achieving students presenting learning disabilities managed to align in the pursuit of critical thinking through poetry incorporation during the educational procedure, as they were asked to perform poems interpretation using reasonable points of view. Based on descriptive qualitative research conducted by Aisyah et al. (2019), the educators' perceptions regarding poetry integration and their level of engagement were both depicted as crucial factors in successfully addressing students with learning difficulties. Additionally, in this study the correlation between the educators' gender and their perceptions and preferences regarding the learning strategies applied was clearly demonstrated, leading to the assumption that female educators are more capable to embrace poetry as a crucial educational tool in the field of special education.

Sidekli and Ozsavli (2019) aimed to investigate the effect of the poetry method on elementary-age students, specifically in the field of proper use of punctuation marks. Data collected revealed that the correct use of punctuation increased significantly among all students involved into the poetry program, regardless of their learning skills and abilities. The impact of this program was enhanced when younger students were involved, as they supported the learning techniques applied underlining that through poetry learning activities became enjoyable. Additionally, a bigger number of students attending the 5th grade of elementary units confessed that they desire poetry being utilized along with other subjects, such as mathematics and science, whereas students attending the 6th and 7th grade appeared less enthusiastic regarding this option.

Objectives

The present study aims at extracting insights from processing and statistically analyzing a validated and reliable instrument designed to reveal important information regarding the effectiveness of the integration of poetry into the educational approach of learners experiencing learning difficulties. Depicting the educators' personal stances and perceptions, as well as their proficiency in utilizing poetry as an educational tool, permits the clarification of factors influencing the successful incorporation of poetry and reveals possible flaws and failures. The designed instrument attempts also to elucidate the potential influence of students' previous educational experiences, as their unique needs and abilities guide the teachers' attempts during their educational approach, especially when struggling students are included.

METHOD

Sampling and participants

The instrument designed for the current research is an anonymous questionnaire with a total of fifteen (15) descriptive or open-ended questions, and forty (40) close-ended, polythematic

questions, based on a Likert response scale with five options, ranging from "*totally disagree*" (1) to "*totally agree*" (5). The initial questions aimed to depict a number of independent variables, such as gender, age, educational level, teaching grade, years of educational experience, questions related to the difficulties students face because of their disability, educational strategies applied by the teacher exploiting poetry, etc. In the quantitative part of the questionnaire, responses in some of the questions have been inverted from negative to positive scoring to become suitable for common analysis when combined with the rest of the questions.

The validated instrument was distributed to Greek teachers for completion, aiming at clarifying their perceptions regarding the contribution of poetry to the learning procedure. The participants were selected via non-probabilistic convenience sampling, as the questionnaire was distributed to the groups of educators that the researcher managed to access during the data collection period. The selection of the sample for the present study was based on their occupation in elementary school units in Greece, as well as on the inclusion of at least one student experiencing learning difficulties in his classroom, whereas no restraints were posed regarding the nature of the deficiency observed. Additionally, no limits were imposed regarding the number of years of educators' teaching experience.

The survey lasted two (2) months and was conducted from 15/01/2022 to 30/03/2022. Following the preparation and standardization of the questionnaire, a relevant request for its completion was sent via email to five hundred (500) candidate participants who met the criteria mentioned above. A total of 201 responses were finally collected, processed, and analyzed as part of the current study.

Establishment of variables

To appropriately study and justify the effect of the poem on the educational treatment and education of learners with mild special educational needs in the primary education, three different variable types have been introduced and relative information has been collected by participants through their responses to the questionnaire distributed. In the following sections the variables introduced are grouped and stated accordingly.

Independent variables

The first part of the questionnaire includes eight (8) independent variables that sketch the profile of the participants to the current study. Those variables are depicted in the list below and are commonly used to group and statistically analyze responses provided in relevant studies.

TABLE 1
List of independent variables

1. Sex
2. Age (years)
3. Educational level
4. Teaching grade
5. Years of educational experience
6. Years of educational experience involving learners with special educational needs
7. Grade assigned during the last educational year
8. Administrative region (of Primary or Secondary Education) in which served during the last educational year

Dependent variables

The second part of the questionnaire includes nineteen (19) dependent variables that define the perspective and opinion of the participants towards the following two separate aspects, aligned with the theoretical framework presented in the current study:

- Dimension 1: Effectiveness of poetry integration practices in teaching students with learning difficulties.
- Dimension 2: Students' abilities and previous experience.

Those variables, along with their relevant grouping, as it was validated by performing an EFA and a CFA, are depicted in the list below and are thoroughly statistically analyzed in the subsequent sections.

TABLE 2
List of dependent variables

	Dimension 1	Dimension 2
1. Poetry can be used to increase the motivation of students with mild learning disabilities to develop their language skills.	■	
5. The integration of poetry into teaching can increase the ability of students with mild learning disabilities to use language to express their personal experience		■
8. There are differences between students with mild learning disabilities in the level at which they develop their language skills through poetry depending on their previous language background		■
13. The integration of poetry in teaching promotes the acquisition of language skills in students with mild learning difficulties	■	
14. The time the teacher devotes to the preparation of the teaching that incorporates poetry influences the learning outcome		■
16. The previous level of development of the reading skills of children with mild learning disabilities affects the effectiveness of the integration of poetry in teaching		■
18. The way in which the teacher harmonizes the content of the poems with the learning objectives of each teaching unit affects the effectiveness of poetry in acquiring the language skills of students with mild learning difficulties	■	
20. The earlier concentration ability of children with mild learning disabilities affects the effectiveness of integrating poetry into teaching	■	
21. The integration of poetry in teaching can be helpful in enriching the vocabulary of students with mild learning difficulties	■	
22. The way the teacher interprets the meaning of the content of the poems affects the level of understanding of students with mild learning difficulties	■	
25. The integration of poetry in teaching can reduce the difficulties faced by students with mild learning difficulties in acquiring language skills		■
30. The teacher's willingness to use poetry in teaching influences the motivation of students to develop their language skills through poetry	■	
31. The development of vocabulary skills can be achieved through the integration of poetry		■
33. Poetry is an auxiliary educational tool for teaching grammar rules to students with mild learning difficulties		■
35. The integration of poetry improves the reading skills of students who have educational difficulties		■

37. Language teaching through poetry is able to increase the creativity of students with mild learning difficulties in the production of written speech.		
38. The teacher's personal attitude towards poetry influences the learning outcome		

Variables for qualitative evaluation

The third part of the questionnaire contains fifteen (15) additional variables, derived from questions that are targeting to a qualitatively evaluation of the effect of the poem on the educational treatment and education of learners with mild special educational needs in the primary education:

TABLE 3
List of questions for qualitative evaluation

1. What was the learners' responses towards poetry?

2. Which was the frequency of poetry educational presentations (frequency per week)?

3. Which was the number of students presenting learning difficulties in the classroom?

4. What kind of learning difficulty do they present?

5. This learning difficulty has been officially identified by an experienced specialist?

6. At what age was this learning difficulty detected?

7. Which poetry reading strategies have you applied?

8. Which general reading strategies have you applied?

9. Which special education strategies have you applied?

10. Which support strategies have you applied?

11. Have the students in concern learning skills ameliorated by the use of poetry during the educational process?

12. How were their reading skills affected by the use of poetry during the educational process?

13. Were these students eager to retain the use of poetry during the educational process?

14. What poetry type was incorporated?

15. List the poems included in the educational schedule during the last educational year as a part of the standard educational process.

RESULTS

Descriptive Statistics

A descriptive statistics analysis has been carried out for the total sample of the responses provided in the current survey. For the dependent variables, mean values and standard deviations look healthy; mean values range from 3.73 (question 8) to 4.34 (question 1), with

an overall average of 4.02 which proves positive positioning of the survey participants. Standard deviation is also normal, ranging from 0.738 (question 13) to 1.066 (question 20).

Additional descriptive statistics on the sample of the 201 responses collected and processed as part of the current survey, are provided in Section 4.2 (Analysis of Variance), where, as part of the analysis of variance, the responses are split and presented in the relevant tables per gender, age group, educational level, educational experience, frequency of poetry educational presentations, number of students with learning difficulties in classroom, and grade assigned to the tutor during the last educational year.

Analysis of Variance (ANOVA)

In the current section, the impact of a number of descriptive factors on the two model dimensions are analyzed and presented. For this reason, the average of the response scores provided by each participant in the survey per dimension, has been calculated. Table 4.1 below presents the means, standard deviations, and number of participants for both dimensions. As can be easily noted, means are slightly higher in Dimension 1 compared to Dimension 2, while the opposite happens with the standard deviations for a total of 201 responses provided.

TABLE 4.1

Mean, Standard Deviation and Sample Size for the two dimensions of the proposed model

	Dimension 1	**Dimension 2**
Mean	4,0862	3,9372
N	201	201
Std. Deviation	0,66411	0,61924

Furthermore, in what follows, ANOVA analyses have been performed to assess the relationship between each dimension of the impact of poem usage on learners with mild special educational needs in primary education, and several descriptive features. Specifically, the analysis has been carried out for survey participants' *sex*, *age*, *educational level*, *years of educational experience*, *frequency of poetry educational presentations*, *number of students with learning difficulties in classroom*, and *grade assigned to the tutor during the last educational year*.

Table 4.2 presents relationship with teacher's gender. Given that sigma values are much higher than the significance level of .05, it comes out that gender does not differentiate analysis results in any of the two dimensions. Table 4.3 presents relationship with teacher's age group. Given that sigma values are much higher than the significance level of .05, it comes out that age group is not responsible for any differentiation of the results.

TABLE 4.2

Relationship of teachers' gender and poem usage on the educational treatment and education of learners with mild special educational needs in the primary education for all dimensions of the proposed model

	Sex	**N**	**Mean**	**Std. Deviation**	**F**	**Sig.**
dim1	Female	141	4,1214	,62796	1,323	,251
	Male	60	4,0037	,74126		
	Total	201	4,0862	,66411		
dim2	Female	141	3,9663	,59140	1,045	,308

Male	60	3,8688	,68055		
Total	201	3,9372	,61924		

TABLE 4.3

Relationship of teacher's age and poem usage on the educational treatment and education of learners with mild special educational needs in the primary education for all dimensions of the proposed model

	Age	N	Mean	Std. Deviation	F	Sig.
dim1	22-35	57	4,1111	,66997	,056	,946
	36-50	61	4,0747	,64811		
	51-65	83	4,0776	,67914		
	Total	201	4,0862	,66411		
dim2	22-35	57	3,9737	,65155	1,128	,326
	36-50	61	3,8381	,58867		
	51-65	83	3,9849	,61745		
	Total	201	3,9372	,61924		

Table 4.4 presents relationship with teacher's educational level. Given that sigma values are lower than the significance level of .05 for both dimensions, it comes out that educational level is significantly related with Dimension 1 (effectiveness of poetry integration practices in teaching students with learning difficulties) and Dimension 2 (students' abilities and previous experience). In both dimensions, it can be easily noticed that biennial re-education scores are lower than University degrees scores (including or not any type or quantity of masters, or phd).

TABLE 4.4

Relationship of teacher's educational level and poem usage on the educational treatment and education of learners with mild special educational needs in the primary education for all dimensions of the proposed model

	Educational Level	N	Mean	Std. Deviation	F	Sig.
dim1	Biennial re-education	4	4,0000	1,52618	2,674	,001
	Master in Special education, Biennial re-education	1	4,5556	.		
	Msc, Biennial re-education	1	4,0000	.		
	University education	86	4,1447	,52947		
	University education, Biennial re-education	22	4,0707	,47208		
	University education, Master in Special education	10	3,9667	,92229		
	University education, Msc	57	4,1014	,65441		
	University education, Msc, Biennial re-education	4	3,2222	1,24392		
	University education, Msc, Master in Special education	2	4,0000	,62854		
	University education, Msc, Master in Special education, Biennial re-education	1	4,0000	.		
	University education, Msc, Phd	2	4,9444	,07857		

	University education, Msc, Second Msc	6	4,1852	,41376		
	University education, Msc, Second Msc, Biennial re-education	1	1,0000	.		
	University education, Msc, Second Msc, Master in Special education	3	4,1111	,44444		
	University education, Second Msc, Biennial re-education	1	4,1111			
	Total	201	4,0862	,66411		
dim2	Biennial re-education	4	3,7500	1,24164	2,624	,002
	Master in Special education, Biennial re-education	1	4,0000			
	Msc, Biennial re-education	1	4,1250			
	University education	86	4,0116	,50716		
	University education, Biennial re-education	22	3,9375	,33795		
	University education, Master in Special education	10	3,9875	,89840		
	University education, Msc	57	3,8969	,63568		
	University education, Msc, Biennial re-education	4	3,1563	1,08193		
	University education, Msc, Master in Special education	2	4,0000	,17678		
	University education, Msc, Master in Special education, Biennial re-education	1	4,1250			
	University education, Msc, Phd	2	4,7500	,35355		
	University education, Msc, Second Msc	6	3,9375	,55762		
	University education, Msc, Second Msc, Biennial re-education	1	1,1250			
	University education, Msc, Second Msc, Master in Special education	3	3,7917	,14434		
	University education, Second Msc, Biennial re-education	1	4,2500			
	Total	201	3,9372	,61924		

Table 4.5 presents relationship with teacher's years of educational experience. Given that sigma values are much higher than the significance level of .05, it comes out that teacher's years of educational experience is not responsible for any differentiation of the results. Table 4.6 presents relationship with frequency of poetry educational presentations. Similarly, that sigma values are much higher than the significance level of .05, it comes out that frequency of poetry educational presentations is not responsible for any differentiation of the results.

Table 4.7 presents relationship with the number of students with learning difficulties in classroom. Given that sigma values are much higher than the significance level of .05, it comes out that the number of students with learning difficulties in classroom is not responsible for any differentiation of the results. Finally, Table 4.8 presents relationship with the grade assigned to teacher during the last educational year. Given that all sigma values are higher than the significance level of .05, it comes out that grade assigned to teacher during the last educational year is not significantly related with any of the two dimensions of the proposed model.

TABLE 4.5

Relationship between teacher's years of educational experience and poem usage on the educational treatment and education of learners with mild special educational needs in the primary education for all dimensions of the proposed model

Years of Educational Experience		N	Mean		Std. Deviation	F	Sig.
dim1	1-5 years	29	3,8582		,77431	1,755	,140
	11-15 years	30	4,2037		,63867		
	16- 20 years	33	4,1987		,42741		
	20+ years	92	4,0459		,70967		
	6-10 years	17	4,2680		,55146		
	Total	201	4,0862		,66411		
dim2	1-5 years	29	3,7716		,79132	,852	,494
	11-15 years	30	4,0250		,56324		
	16- 20 years	33	3,9394		,49620		
	20+ years	92	3,9361		,63670		
	6-10 years	17	4,0662		,49236		
	Total	201	3,9372		,61924		

TABLE 4.6

Relationship of frequency of poetry educational presentations and poem usage on the educational treatment and education of learners with mild special educational needs in the primary education for all dimensions of the proposed model

Frequency of poetry educational presentations		N	Mean	Std. Deviation	F	Sig.
dim1	more than 3 times a week	2	4,3333	,62854	1,487	,229
	once a week	169	4,0513	,68943		
	twice a week	30	4,2667	,47911		
	Total	201	4,0862	,66411		
dim2	more than 3 times a week	2	4,1875	,97227	1,849	,160
	once a week	169	3,9009	,63517		
	twice a week	30	4,1250	,47570		
	Total	201	3,9372	,61924		

TABLE 4.7

Relationship between number of students with learning difficulties in classroom and poem usage on the educational treatment and education of learners with mild special educational needs in the primary education for all dimensions of the proposed model.

Students with learning difficulties in classroom		N	Mean	Std. Deviation	F	Sig.
dim1	more than three	22	4,1768	,72954	,643	,588
	one	77	4,0289	,64017		
	three	37	4,1892	,51311		
	two	65	4,0650	,74533		

		N	Mean	Std. Dev	F	Sig.
	Total	201	4,0862	,66411		
dim2	more than three	22	3,8864	,69854	,321	,810
	one	77	3,9058	,60838		
	three	37	4,0169	,46971		
	two	65	3,9462	,68464		
	Total	201	3,9372	,61924		

TABLE 4.8

Relationship of the grade assigned to teacher during the last educational year and poem usage on the educational treatment and education of learners with mild special educational needs in the primary education for all dimensions of the proposed model

Grade assigned during the last educational year		N	Mean	Std. Deviation	F	Sig.
dim1	1st grade	43	3,9871	,78425	,674	,644
	2nd grade	28	4,0833	,64052		
	3rd grade	27	4,0370	,67093		
	4th grade	27	4,0700	,62029		
	5th grade	36	4,0802	,59368		
	6th grade	40	4,2444	,63565		
	Total	201	4,0862	,66411		
dim2	1st grade	43	3,9215	,74253	,242	,944
	2nd grade	28	3,9375	,55850		
	3rd grade	27	3,9028	,57839		
	4th grade	27	3,8981	,62887		
	5th grade	36	3,9063	,55451		
	6th grade	40	4,0313	,61807		
	Total	201	3,9372	,61924		

4.3 Linear Regression

TABLE 4.9

Linear regression model summary for Dimension 1

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,971[a]	,943	,942	,14903	2,018
a. Predictors: (Constant), Dim1					
b. Dependent Variable: overall_effect					

To validate how much each dimension contributes to the overall level of effectiveness of poetry integration in teaching students with learning difficulties, linear regression analyses have been conducted for each dimension. The regression model summary for Dimension 1 (Effectiveness of poetry integration practices in teaching students with learning difficulties) is presented in Tables 4.9 and 4.10 below; a Durbin-Watson value of 2.018 proves model validity (Table 4.9), while the linear regression coefficients and values of *t* and *sigma* (Table 4.10) prove the significant weighting of Dimension 1 to the overall impact of poetry application.

TABLE 4.10

Linear regression coefficients, t and sigma for Dimension 1

Coefficients[a]					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	,311	,066		4,729	,000
Dim1	,907	,016	,971	57,147	,000
a. Dependent Variable: overall_effect					

Also Figure 4.1 proves the prediction effectiveness of the linear regression model, since the majority of the realized values are very close to the straight line.

FIGURE 4.1
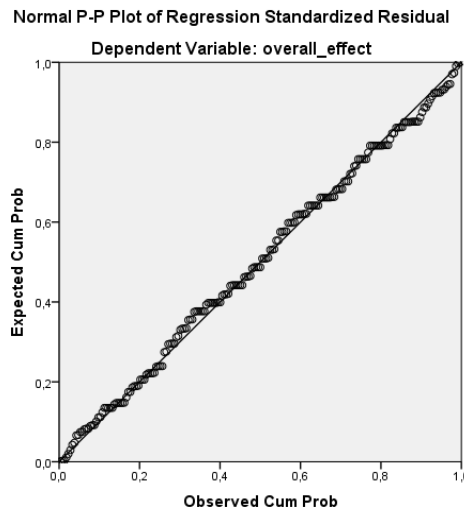
Normal P-P Plot of linear regression analysis for Dimension 1

Similarly, the regression model summary for Dimension 2 (Students' abilities and previous experience) is presented in Tables 4.11 and 4.12 below; a Durbin-Watson value of 1.951 proves model validity (Table 4.11), while the linear regression coefficients and values of t and sigma (Table 4.12) show the weighting of Dimension 2 to the overall impact of poetry application. Also Figure 4.2 proves the prediction effectiveness of the linear regression model, since the majority of the realized values are very close to the straight line. Generally, Dimension 2 has not the level of fit of Dimension 1.

TABLE 4.11

Linear regression model summary for Dimension 2

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,957[a]	,916	,916	,17981	1,951
a. Predictors: (Constant), Dim2					
b. Dependent Variable: overall_effect					

TABLE 4.12

Linear regression coefficients, t and sigma for Dimension 2

Coefficients[a]					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	,241	,082		2,941	,004
Dim2	,959	,021	,957	46,703	,000
a. Dependent Variable: overall_effect					

FIGURE 4.2
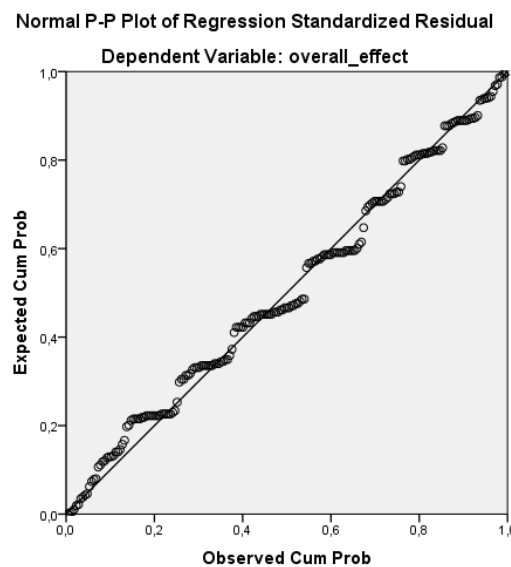
Normal P-P Plot of linear regression analysis for Dimension 2

STATISTICAL ANALYSIS SUMMARY AND CONCLUSIONS

The instrument used in the current study, has been decided following a Confirmatory Factor Analysis that validated the results provided by the Exploratory Factor Analysis. This paper focuses on a descriptive statistics analysis along with other types of analysis suitable to evaluate effectiveness of poetry integration in teaching students with learning difficulties. Specifically, the descriptive statistics concluded to mean values and standard deviations that prove the positive positioning of the survey participants on the survey subject. Also, split of the responses per *gender, age group, educational level, educational experience, frequency of poetry educational presentations, number of students with learning difficulties in classroom, and grade assigned to the tutor during the last educational year* has been done, to examine if the results differ based on those variables.

An ANOVA analysis has been performed to assess the relationship between each dimension and descriptive features such as survey participants' sex, age, educational level, years of educational experience, frequency of poetry educational presentations, number of students with learning difficulties in classroom, and grade assigned to the tutor during the last educational year. Teacher's educational level proved to be significantly related with both Dimension 1 (effectiveness of poetry integration practices in teaching students with learning

difficulties) and Dimension 2 (students' abilities and previous experience), while all other nominal variables are not significantly related with any of the two dimensions.

Finally, to validate the how much each dimension contributes to the overall level of effectiveness of poetry integration in teaching students with learning difficulties, linear regression analyses have been conducted for each dimension. All two dimensions proved to be well-fitted by linear regression models with Dimension 1 to contribute slightly higher, (compared to Dimension 2) to the overall impact of poetry application.

DISCUSSION

Via the utilization of the designed instrument, post to its validation, the educators' stances and perceptions regarding the incorporation of poetry in the field of primary education during the educational approach of students with learning difficulties was depicted. The statistical analysis performed revealed the relationship presented between the educators' diverse demographic characteristics and the effectiveness of poetry's utilization, especially when learners exhibiting learning difficulties are included. Based on the results of the present analysis, the educational level of the teachers involved is significantly related with both Dimension 1 (*effectiveness of poetry integration practices in teaching students with learning difficulties*) and Dimension 2 (*students' abilities and previous experience*).

The acquisition of a master's degree or a PhD is considered to improve the educators' teaching skills, as it leads to the enhancement of knowledge through the continuance of cognitive conquer. Educators of an increased educational level have gained the necessary teaching abilities to act as a guide during the educational approach of struggling students, as they seem competent to incorporate appropriate learning strategies and techniques into the learning process. Based on their advanced academic skills these educators exhibit the strength to lead the educational journey to novel routes, as they aim at a desired educational outcome. In the field of integrating of poetry into the educational procedure, the optimization of teaching skills of the educators, gained through the acquisition of an elevated educational level, is correlated to their enhanced comfort to implement various educational methods leading to the conquer of knowledge. The correlation depicted among the educational level of the educators and the effectiveness of the poetry program is also revealed by recent studies (Aisyah et al., 2019; Cousik, 2014; Johnson, 2019).

In addition, the acquisition specifically of a master's degree or a PhD in special education is highly desired, when students exhibiting learning difficulties are approached. Via their pursuit to obtain a postgraduate degree the educators cultivate important skills and experiences that enable them to specialize in educational strategies urging students beyond their learning deficiencies. A variety of post-graduate studies may act as an introduction for the educators by preparing their engagement regarding the educational approach of struggling students. By attending specialized courses the educators manage to acknowledge the heterogeneity of learning disabilities, as well as the appropriate strategies to address learners with learning difficulties. Furthermore, it is revealed that attending a biennial re-education program is also considered as an avenue in attempting to enhance one's educational abilities, although it does not present a similar educational upgrade as the acquisition of a master's degree or a PhD in this field. The correlation between the myriad of knowledge and educational strategies gained through the acquisition of a master's degree, a PhD, or even a biennial re-educational program in special education is revealed also in many recent research papers (Bonanni, 2018; Johnson, 2019; Moats, 2019).

Additional education in the field of special education allows the educators to approach the conquer of knowledge in a rather differentiated manner, placing the needs of the students

au milieu of every learning process. During the educational approach students experiencing learning deficiencies gain their undeniable right to involve into the educational procedure, embracing its outcomes and conquering knowledge through an enlarged scope of learning strategies. The engagement during the learning process that characterizes educators who obtain a postgraduate degree in special education allows the emerge of a huge level of flexibility regarding the learning strategies applied, leading to the deciphering of the struggling learners' needs and gradually to their holistic educational approach. The strong correlation depicted among the educational level of educators, especially their expertise in the field of special education, and the enhanced educational support provided to students experiencing learning difficulties, by incorporating novel learning strategies into the educational process, is also depicted in previous studies (Aisyah et al., 2019; Bonanni, 2018; Cousik, 2014; Concannon-Gibney, 2018; Johnson, 2019).

It is considered essential that educators exhibit an elevated level of competence while approaching learners expressing learning difficulties. Furthermore, empathy is regarded as an undeniable teaching skill, especially when learners with deficiencies are included. Both qualities are considered to involve a thorough understanding of the specific needs of learners dealing with learning difficulties. An educator presenting an elevated teaching experience, as revealed through the enhanced number of years of teaching, is regarded as more competent to approach adequately the emerging educational inefficiencies of struggling learners. The engagement of experienced educators is regarded as an immense advantage in the field of the educational approach of learners presenting learning difficulties. Support of struggling learners is regarded as an individualized process, involving multiple aspects of educational methods and techniques, whereas the incorporation of poetry seems to lead to promising results. Experienced teachers focus not only on coping with the diverse challenges a learner is demanded to face during the educational process, but they also attempt to design and execute an improved educational plan that will enable each student to meet desired learning goals. Recent studies also depict an existing correlation between teaching experience and positive educational outcomes, especially when leaners with learning difficulties are approached (Aisyah et al., 2019; Bonanni, 2018; Concannon-Gibney, 2018; Johnson, 2019; Rasinski & Young, 2017; Sidekli & Ozsavli, 2019).

However, in this study, teaching experience in its own did not prove significantly correlated to the effectiveness of poetry integration practices while teaching students with learning difficulties, even though experienced educators are probably more capable to select appropriate learning strategies to successfully incorporate poetry into the educational procedure.

The frequency of the poetry educational presentations, which can be promoted via the implementation of a well-designed curriculum focusing on the holistic integration of poetry into the educational procedure, is considered essential in achieving the intended goals of the poetry program. Undoubtedly, the enhanced spectrum of poems eligible to be incorporated into the educational approach of elementary-age students enables the design of a curriculum that presents an elevated frequency of poetry presentations. Amplifying the frequency in which the students' encounter the benefits of poetry's integration leads to intense educational outcomes deriving from this approach, as learners gradually evolve a better understanding of the learning strategies applied, enabling them to prosper within this educational field. When learners presenting learning deficiencies are included, frequent poetry presentations enable them to improve their reading and writing skills, leading to their enhanced engagement to the educational process. The study of Concannon-Gibney (2018), which was conducted with the participation of elementary-age students, attempted to investigate the influence of regular implementations of poems into the educational procedure leading to promising conclusions that support the design of a curriculum ensuring an enhanced frequency of poetry educational

presentations. In the current study, the frequency of the poetry educational presentations in its own did not prove significantly correlated to the effectiveness of poetry integration practices, or to students' abilities and previous experience.

Educators that work with learners with learning difficulties attempt through the learning procedure to embrace all rising opportunities to support both their academic and social development. The presence of a bigger number of struggling students within their classroom obliges the educators to apply multiple, as well as novel learning strategies, aiming at engaging these students into the conquer of knowledge. Thus, ameliorating the educational outcome when approaching students exhibiting learning disabilities via the incorporation of poetry during the educational process might depend on the number of struggling students included in the classroom, as educators, under the arising educational circumstances deriving due to the existence of students experiencing diverse learning difficulties, reinforce their engagement towards them. The assumption that the existence of struggling students within the classroom act as a trigger for the educators' intensified involvement is supported by recent studies that reveal the positive influence of the presence of an elevated number of students with learning deficiencies during the educational approach (Aisyah et al., 2019; Johnson, 2019; Moats, 2019; Rasinski & Young, 2017). In the current study, the number of struggling students within their classroom in its own, did not prove significantly correlated to the effectiveness of poetry integration practices.

The present research also revealed that the educators' gender does not influence the effectiveness of poetry integration practices when teaching students with learning difficulties, nor the educators' personal attitude, ability, and methods applied during the educational process. Additionally, gender does not seem to correlate with the alteration of students' abilities and previous experience. In opposition, Bonanni (2018) revealed in his study that the educators' gender may thoroughly influence the educational outcome of the poetry program. In this research female educators seemed more considerate to engage into the educational process by attempting the incorporation of appropriate learning strategies in order to approach learners with learning difficulties. Their elevated level of empathy and consideration led to their enhanced sentimental involvement resulting to the development of strong bonds with the students involved, and thus ameliorating the educational outcome. According to the more recent research of Aisyah et al. (2019) a strong correlation was revealed between the educators' gender and their perceptions and preferences regarding the learning strategies applied. Female educators appeared more competent as well as willing to embrace novel educational strategies during the learning procedure, including poetry, admitting its influence as an educational tool in the field of special education.

Furthermore, the present study, by contrast to previous research, revealed no correlations between the grade assigned to teacher during the last educational year and the two dimensions presented in the proposed model. In contrast, Rasinski & Young (2017) during their research concluded that the age of the students involved, and therefore their educational grade, influenced thoroughly the selection of learning strategies implemented by the educator assigned. In the field of the integration of poetry into the educational procedure the selection of poems incorporated was firmly based on the age of the students included, as the level of their academic skills, as well as their maturity, differentiated thoroughly the range of poems proposed. Additionally, Sidekli and Ozsavli (2019) revealed that the influence of the poetry program was expanded when younger students were involved. During their approach by the researchers, students attending the 5th grade of elementary units confessed that they desire poetry being incorporated in multiple educational fields, in contrast to older students, attending the 6th and 7th grade who exhibited less enthusiasm regarding this educational option. It is undeniable that, especially when elementary-age students are involved, poetry presents an elevated educational outcome via supporting multiple aspects of

literacy. Children of a younger age group seem to stronger relate to poetry, as they react unconsciously to rhyme and rhythm, which consist a part of lullabies, a field they can easily connect.

Additionally, no correlations were detected regarding the educators' age and either of the two dimensions of the present study. This outcome relies in contrast with the conclusions of the recent study of Concannon-Gibney (2018) that revealed a positive correlation between the age of the teachers involved and the effectiveness of the incorporation of the poetry program into the educational procedure. Older teachers appeared more eager to engage into the proposed educational program, as their elevated teaching experience led to the enhancement of their confidence as well as their competence.

7. CONCLUSIONS

Arguably the selection of an appropriate learning strategy in order to approach learners that present learning difficulties is considered a decision of immense significance. One of the most daunting tasks that an educator has to fulfil is acknowledging the influence of the specific learning techniques incorporated into the educational process, especially when struggling students are involved.

Teaching students that experience learning difficulties is not for the faint of heart. Their educational approach should be based upon the engagement of appropriate learning strategies, in an attempt to outweigh the challenges and to overleap the arising obstacles. Poetry is accompanied be a myriad of instructional strategies enabling the holistic approach of all students, regardless of their learning abilities or deficiencies. The diverse repertoire of the poetry program enables the educators' attempts to engage the learners' focus and desire to learn, as it leads to the exploitation of a vast field of educational techniques.

The incorporation of poetry into the educational program seem to meet the surge in the case of learners experiencing learning deficiencies. The undeniably important outcomes of the integration of poetry derive from the positive stance presented by the educators' regarding the poetry program, as well as their educational level. Thus, assuring the successful integration of poetry depends upon the educators' desire to create the appropriate educational environment for its implementation.

The glass ceiling appears to be high for those educators that desire to pursue the exploitation of the poetry program while attempting to approach students presenting learning difficulties, as its educational options seem endless. Within the cinder block walls of the classroom a world of vast educational opportunities is revealed based on poetry's implementation, waiting to support all students' attempt towards the conquer of knowledge.

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