



**THE VIEWS OF GREEK EDUCATIONALISTS
ON THE ASSESSMENT OF THE KINDERGARTEN
CURRICULUM CONTENT AND FUNCTION**

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Abstract:

High-quality education is considered as a crucial issue for every organised society since it prepares the next-to-come generation of active citizens. The assessment of the quality of education comprises the research object for a large number of researchers and members of the educational community, since through it the content and results of the assessment itself are examined. A structural feature of quality in education is the curriculum, inside which the very purpose of Kindergarten is reflected, which is no other than the wholesome development of toddlers. The objective of the present study was to investigate the views of general and special education teachers concerning the assessment of content as well as the operation of the curriculum proposed for the educational rank of Kindergarten. The study was conducted during the 2022-23 academic year, with the participation of 1204 educationalists (N: 864 general education Kindergarten teachers, N: 337 special education Kindergarten teachers) from all over Greece. The results of the research showed that the assessment of the pupils' advancement relates to the type of education, whether, that is, the educationalists are employed within general education facilities or in special education ones, as well as to the number of pupils who attend each class. More on this, it surfaced that the dimension "Learning domains", in which the content of the curriculum is being described, is affected by the number of pupils in each contextual class.

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1. Introduction

The purpose of assessment within today's educational reality is the improvement of the quality of the educational process, of learning and exploring, no less the amelioration of the functionality of school facilities (Blanco-Ramírez, & Berger, 2017· Bongaarts *et al.*, 2017· Manatos *et al.*, 2017· Nguyen *et al.*, 2017· Nguyen *et al.*, 2018· Wahjusaputri *et al.*, 2021). The matter of ensuring quality prioritizes the issue of designing new assessment types (Janušauskienė & Dvorak, 2021), which ought to be based upon the scientific drawing of data that regard the educational process (Bull *et al.*, 2017· Chalaris *et al.*, 2014· Dhal, 2021), such as data about the pupils' progress (Sun, 2022). Within Kindergarten, the assessment procedure focuses on the evaluation of goals, activities, teaching methods, means, and materials as well as learning outcomes (Tao & Jianhua, 2019).

The pillars of a high-quality education are responsibility, autonomy, assessment, and organised design (Hardianto *et al.*, 2017· Poernamawijayai *et al.*, 2018). A modern educational system, in order to be described as "high-quality" and improve its level, is not only confined to the educational personnel, but it should be constructively utilising a satisfactory number of quality criteria (Santa & Solis, 2020· Zheng & Thomas, 2022), such as founding new school units, designing and reviewing of the curricula, lessening of the bureaucracy required, rational management of resources and upgrading of the administrative services in general, as well as of the system as a whole (Rojas *et al.*, 2021· Zulfiqar & Tahir, 2019).

2. Assessment within Greece

In Greece, the framing of assessment was posed by Law 4189/2021, according to which assessment can be categorised into internal, where all of the educational community should pinpoint and enhance the positive elements of the educational process but also amend any failings, and external one, where the educationalists are provided with the feedback required for their work, on the basis of the facilities' operation, socio-cultural circumstances as well as the atmosphere of the school.

The assessment process is divided into three phases: a) *collective programming*, which regards the designing of the educational work and includes the setting of educational goals and designing of collective acts towards making the educational quality better, b) *realisation*, during which all those previously designed come to life and in which the entities involved move onto the adjustments demanded, and c) *evaluation* which is carried out at the end of the school year and includes the overall assessment of the school unit function as well as of the educational work (Hellenic Ministry of Education and Religious Affairs, Institute of Educational Policy/ HEMERA-IEP, 2021).

Moving on, the educational work of each school unit is evaluated according to the three basic functions it employs. More specifically, the first function of the school to be

evaluated is the pedagogical-learning function, which includes teaching, learning and assessment, school dropout-attendance, the relationship of pupils with each other as well as with the facility personnel, and the school-family relationship. The second function to undergo evaluation is the administrative operation of the facility, in which the organisation and facility management are included, as well as the relationships it develops with the broader community. The third and final function is that of the educationalists' professional development, which refers to the degree of participation, on the teaching personnel's side, in retraining acts and programs of a national or European nature (HMERΑ-IEP, 2021).

3. Material and Methods

3.1 Purpose of the exploratory study

The purpose of the hereunto research was to investigate upon the views of Kindergarten teachers who worked in general and special education, over the assessment of the content and operation of the curriculum that is implemented for Kindergarten.

3.2 Exploratory sample

The sample of the research was made up of 1204 educationalists working in general education kindergartens and special education facilities (special kindergartens, integration classes, parallel support) on a national level. To specify with, the percentage of general education teachers who took part in the study was up to 72.0% (N:867), while special education teachers comprised the remaining 28.0% of the sample (N:337).

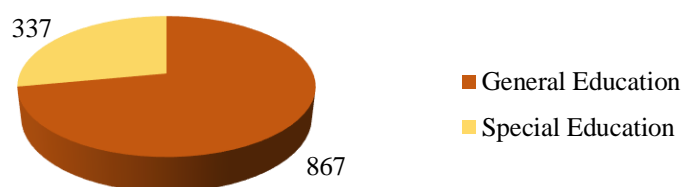


Figure 1: Type of education of participant educationalists

3.3 Exploratory tool

The exploratory tool that was employed for the present research is a questionnaire whose purpose was to evaluate the quality of the education provided within the Greek Kindergarten facilities. It contained closed-type questions in which the participants were due to report whether they agreed or not with the content of each hypothesis on a 5-degree, Likert-type scale. The questionnaire was formed after the study of three (3) scales concerning the assessment of quality in preschool education. In particular, the first scale to be studied was the "ACEI Global Guidelines Assessment" (Association for Childhood Education International, 2006), whose objective was the assessment of the education provided within preschool education and care centres (Hardin *et al.*, 2005) and was

translated into Greek by Rentzou (2011). Subsequently, the second scale was the “Early Childhood Environment Rating Scale–Revised” (2014), which included indicators associated with the quality of education (Harms, Clifford & Cryer, 2014a). The third scale is named “Infant/Toddler Environment Rating Scale–Revised” (2014) and is used for the assessment of school environments not only on a national level but globally as well. (Harms, Clifford & Cryer, 2014b).

4. Results

With regards to the question “how important do you consider each of the following sentences about the content and function of the curriculum proposed for Kindergarten” the participants, as Table 1 demonstrates, reported that the teaching personnel reads children's books, according to 41.8% of the responders, while a 48.6% deems this as extremely important. The books are well arranged on a reading spot, according to 38.2% of the participants, which is taken as extremely important by a 47.2% of them. Books, language material, and activities are appropriate for the children’s age span. A 40.0% see this as very important while 51.3% as extremely important.

Table 1: Assessment of books and the “library” spot of interest

	Not at all	Slightly	Moderately	Very	Extremely
	N (%)	N (%)	N (%)	N (%)	N (%)
The educational personnel read books to the children.	5 (0.4%)	21 (1.7%)	90 (7.5%)	503 (41.8%)	585 (48.6%)
The books are arranged at a reading spot (library).	45 (3.7%)	82 (6.8%)	114 (9.5%)	395 (32.8%)	568 (47.2%)
The books, language material, and activities are appropriate for the children’s age span.	6 (0.5%)	21 (1.7%)	78 (6.5%)	481 (40.0%)	618 (51.3%)

The teaching of mathematics/numerals takes place through rote learning or worksheets. A 37.7% sees this as very important while 14.1% as extremely important. Daily activities are held for teaching mathematics/numerals. A 53.1% considers this as very important, while 22.6% as extremely important.

Table 2: Assessment of mathematics activities

	Not at all	Slightly	Moderately	Very	Extremely
	N (%)	N (%)	N (%)	N (%)	N (%)
The teaching of mathematics/numerals is realised mainly via rote learning or worksheets.	135 (11.2%)	232 (19.3%)	213 (17.7%)	454 (37.7%)	170 (14.1%)
Activities on teaching mathematics/numerals are held daily.	8 (0.7%)	54 (4.5%)	231 (19.2%)	639 (53.1%)	272 (22.6%)

Daily activities are held regarding gross mobility and active gaming according to 48.7% of the participants, while a 28.7% takes this as extremely important. Play-based activities are held on a daily basis according to 45.8% of the participants, while 32.4% sees this as extremely important.

Table 3: Assessment of gross mobility activities

	Not at all	Slightly	Moderately	Very	Extremely
	N (%)	N (%)	N (%)	N (%)	N (%)
Gross mobility activities and active gaming is held daily.	6 (0.5%)	33 (2.7%)	234 (19.4%)	586 (48.7%)	345 (28.7%)
Play activities are held daily.	7 (0.6%)	23 (1.9%)	233 (19.4%)	551 (45.8%)	390 (32.4%)

The children are provided with toys, materials, and equipment to be used during free play. A 48.3% considers this as very important, while 33.4% as extremely important. Adequate time is daily offered for outdoor and indoor free play. A 48.3% sees this as very important, while 33.4% as extremely important.

Table 4: Assessment of free play activities

	Not at all	Slightly	Moderately	Very	Extremely
	N (%)	N (%)	N (%)	N (%)	N (%)
Children are provided with toys, materials and equipment for them to use during free play.	7 (0.6%)	15 (1.2%)	198 (16.4%)	582 (48.3%)	402 (33.4%)
Adequate time is daily offered for indoor and outdoor free play.	4 (0.3%)	21 (1.7%)	195 (16.2%)	582 (48.3%)	402 (33.4%)

An abundance of daily use materials is provided, that promotes the development of fine mobility. A 46.1% deems this as very important, while 29.7% as extremely important. Fine mobility materials are of graded difficulty. A 41.2% considers this as very important, while 20.3% as extremely important.

Table 5: Assessment of fine mobility activities

	Not at all	Slightly	Moderately	Very	Extremely
	N (%)	N (%)	N (%)	N (%)	N (%)
An abundance of daily use materials that promote fine mobility is available.	10 (0.8%)	41 (3.4%)	241 (20.0%)	555 (46.1%)	357 (29.7%)
Fine mobility materials are of graded difficulty.	57 (4.7%)	120 (10.0%)	286 (23.8%)	496 (41.2%)	245 (20.3%)

Artistic activities are at the children’s disposal. A 44.2% considers this as very important, while 25.7% as extremely important. There are music/kinetic activities available for the children. A 45.3% sees this as very important, while 23.3% as extremely important. During the realisation of the activities, various types of music are being heard. A 41.4% considers this as very important, while 23.9% as extremely important.

Table 6: Assessment of artistic/music activities

	Not at all	Slightly	Moderately	Very	Extremely
	N (%)	N (%)	N (%)	N (%)	N (%)
Artistic activities are available for children.	32 (2.7%)	72 (6.0%)	258 (21.4%)	532 (44.2%)	310 (25.7%)
Music/kinetic activities are available for children.	18 (1.5%)	67 (5.6%)	293 (24.3%)	546 (45.3%)	280 (23.3%)
During the realisation of activities various types of music are being heard.	47 (3.9%)	106 (8.8%)	264 (21.9%)	499 (41.4%)	288 (23.9%)

A variety of dramatic play and disguise materials is offered. A 36.4% takes this as very important, while 16.9% as extremely important. Finally, dramatic play equipment that reflects diversity is offered. A 34.0% deems this as very important, while 15.9% as extremely important.

Table 7: Assessment of the “dramatic play” spot of interest

	Not at all	Slightly	Moderately	Very	Extremely
	N (%)	N (%)	N (%)	N (%)	N (%)
A variety of dramatic play and disguise materials is offered.	127 (10.5%)	168 (14.0%)	267 (22.2%)	438 (36.4%)	204 (16.9%)
Dramatic play equipment that reflects diversity is offered.	141 (11.7%)	194 (16.1%)	268 (22.3%)	409 (34.0%)	192 (15.9%)

Construction materials and accessories are accessible for everyday use. A 42.4% takes this as very important, while 44.0% as extremely important. There is a specially designed place for construction materials. A 27.6% sees this as very important, while 21.8% as extremely important.

Table 8: Assessment of the “construction material” spot of interest

	Not at all	Slightly	Moderately	Very	Extremely
	N (%)	N (%)	N (%)	N (%)	N (%)
Construction materials and accessories are accessible for daily use.	9 (0.7%)	22 (1.8%)	133 (11.0%)	510 (42.4%)	530 (44.0%)
There is a spot specially arranged for construction materials, with storage space and appropriate construction surfaces.	332 (27.6%)	81 (6.7%)	198 (16.4%)	330 (27.4%)	263 (21.8%)

Developmentally appropriate activities are available, concerning nature/science. A 36.9% considers this as very important, while 17.9% as extremely important. The teaching personnel encourage children to bring natural objects over with them. A 45.5% deems this as very important, while 26.0% as extremely important.

Table 9: Assessment of natural sciences activities

	Not at all	Slightly	Moderately	Very	Extremely
	N (%)	N (%)	N (%)	N (%)	N (%)
There are developmentally appropriate toys, materials or activities on the domain of nature/science.	56 (4.7%)	163 (13.5%)	326 (27.1%)	444 (36.9%)	215 (17.9%)
The teaching personnel encourage children to bring natural objects over with them, in order to enrich their collections or share with their peers.	30 (2.5%)	83 (6.9%)	230 (19.1%)	548 (45.5%)	313 (26.0%)

Materials that are employed during the use of computers are violence-free and promote cultural elements. A 43.9% considers this as very important, while 38.9% as extremely important.

Table 10: Assessment of activities with the use of computers

	Not at all	Slightly	Moderately	Very	Extremely
	N (%)	N (%)	N (%)	N (%)	N (%)
The materials employed during the use of computers are violence-free and promote cultural elements.	30 (2.5%)	35 (2.9%)	142 (11.8%)	529 (43.9%)	468 (38.9%)

Within the materials to be used there is a distinct racial or cultural diversity. A 26.8% considers this as very important, while 12.0% as extremely important. The materials depict diversity in a positive manner. A 45.1% sees this as very important, while 23.3% as extremely important. Co-inclusion of diversity comprises an inextricable part of the daily routine. A 46.0% deems this as very important, while 26.7% as extremely important. Activities are held that aim at understanding and embracing diversity. A 47.7% takes this as very important, while 27.5% as extremely important.

Table 11: Assessment of activities for embracing diversity

	Not at all	Slightly	Moderately	Very	Extremely
	N (%)	N (%)	N (%)	N (%)	N (%)
Within the materials to be used there is a distinct racial or cultural diversity.	260 (21.6%)	202 (16.8%)	274 (22.8%)	323 (26.8%)	145 (12.0%)
The materials depict diversity in a positive manner.	36 (3.0%)	72 (6.0%)	273 (22.7%)	543 (45.1%)	280 (23.3%)
Co-inclusion of diversity comprises an inextricable part of the daily routine and play activities.	20 (1.7%)	36 (3.0%)	273 (22.7%)	554 (46.0%)	321 (26.7%)
Activities are held that aim at understanding and embracing diversity.	11 (0.9%)	30 (2.5%)	258 (21.4%)	574 (47.7%)	331 (27.5%)

The educationalists evaluated a regular assessment of the curriculum as very important to a percentage of 47.7%, while 18.1% deems this as extremely important. The ability of the curriculum to implement state-of-the-art childcare standards is exhaustively evaluated according to a 32.0% of the responders, while 13.0% sees this as extremely important.

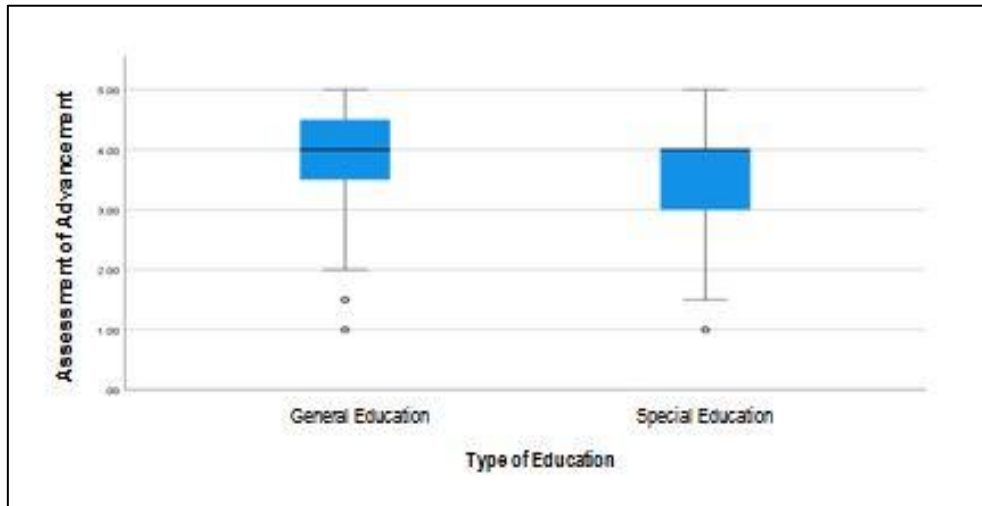
Table 12: Assessment of the Curriculum

	Not at all	Slightly	Moderately	Very	Extremely
	N (%)	N (%)	N (%)	N (%)	N (%)
A regular assessment of the curriculum is realised, regarding its general contribution and relativity not only to the children but to the broader community as well.	49 (4.1%)	80 (6.6%)	283 (23.5%)	574 (47.7%)	218 (18.1%)
The ability of the curriculum to implement local, national, and international top-quality standards towards childcare and education is exhaustively assessed.	211 (17.5%)	134 (11.1%)	317 (26.3%)	385 (32.0%)	157 (13.0%)

On the t-test to follow, it becomes obvious that statistically significant variations are located on the "Assessment of Advancement" dimension in relation to the type of education of the participants, with a $p=0.009$. More specifically, it is observed that the participants who work in general education (3.81) show statistically remarkably higher values in comparison to those of special education (3.67) with a $t(1202)=2.627$. The estimations are analytically presented in the following table, while the statistically significant variations are depicted in the comparative Boxplot 1 that follows.

Table 13: Dimension "Assessment of Advancement" in relation to the type of education of the participants

	Type of Education	N	Mean value	Standard deviation	Typical error Mean value	P
Assessment of Advancement	General education	867	3.81	.79	.03	.009
	Special education	337	3.67	.83	.05	

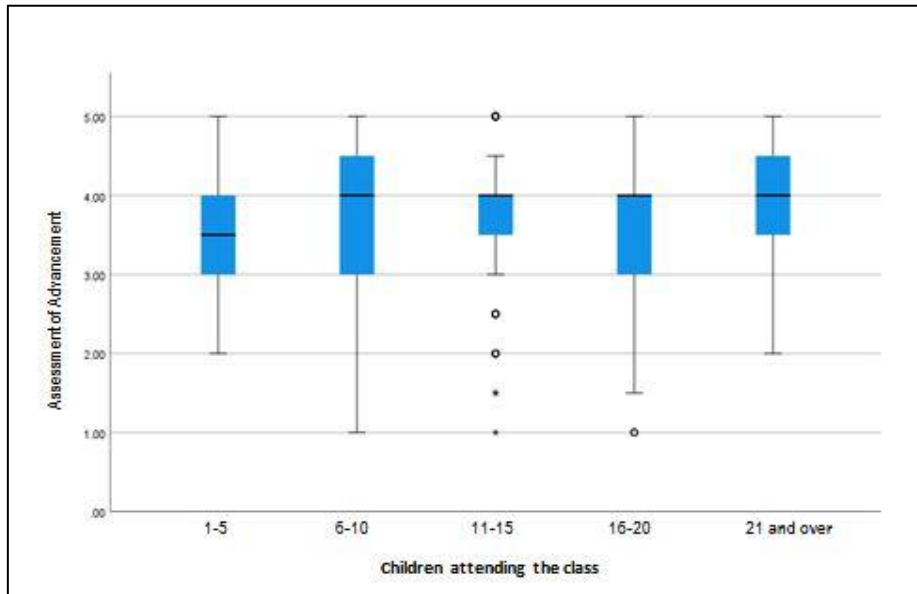


Boxplot 1: Dimension “Assessment of Advancement” in relation to the type of education of the participants

From the check of the following analysis of variance, it seems that statistically significant variations are located on the “Assessment of advancement” dimension in relation to the number of pupils who attend the class, with a $p=0.004$. In particular, one can see that $F(4)=3.828$ while regarding the category “21 and over” (3.89) statistically significant higher values are predominant in comparison to the categories “1-5” (3.58) and “16-20” (3.70) which means that the participants with 21 or more pupils in class have reported being more highly satisfied with the assessment of advancement, compared to the participants in classes of 1-5 and 16-20 pupils. The estimations are analytically presented on the following table while the statistically significant variations are depicted on the comparative Boxplot 2.

Table 14: Dimension “Assessment of Advancement” in relation to the number of children attending the class

Assessment of Advancement							
	N	Mean Value	Standard deviation	Standard error	95% C.I.		p
					Lower limit	Upper limit	
1-5	93	3.58	.88	.09	3.40	3.76	.004
6-10	147	3.75	.89	.07	3.61	3.90	
11-15	319	3.78	.76	.04	3.70	3.86	
16-20	311	3.70	.79	.04	3.61	3.79	
21 and over	334	3.89	.78	.04	3.81	3.97	
Total	1204	3.77	.80	.02	3.73	3.82	

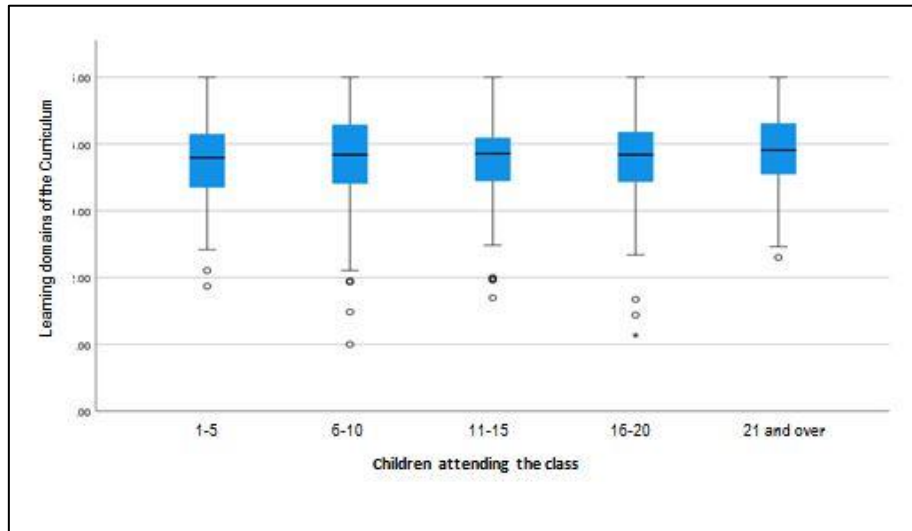


Boxplot 2: Dimension “Assessment of Advancement”
 in relation to the number of children attending the class

From the check of the following analysis of variance, it seems that statistically significant variations are located on the “Learning Domains of the curriculum” dimension in relation to the number of pupils who attend the class, with a $p=0.016$ and $F(4)=3.060$. The estimations are analytically presented on the following table while the statistically significant variations are depicted on the comparative Boxplot 3 that follows.

Table 15: Dimension “Learning Domains of the Curriculum”
 in relation to the number of children attending the class

Learning Domains of the Curriculum							
	N	Mean value	Standard deviation	Standard error	95% C.I.		p
					Lower limit	Upper limit	
1-5	93	3.72	.62	.06	3.60	3.85	.016
6-10	147	3.77	.73	.06	3.65	3.89	
11-15	319	3.79	.56	.03	3.73	3.86	
16-20	311	3.80	.63	.04	3.73	3.87	
21 and over	334	3.92	.61	.03	3.85	3.98	
Total	1204	3.82	.62	.02	3.79	3.86	



Boxplot 3: Dimension “Learning Domains of the Curriculum”
in relation to the number of children attending the class

Noteworthy is the fact that no statistically significant variations are located on the “Learning Domains of the curriculum” dimension in relation to the type of education with a $p=0.036$, the years of service in the class, with a $p=0.228$, the number of children to be catered for by the special education teachers, with a $p=0.809$ and the geographical district in which the facility is located, with a $p=0.446$.

4. Discussion of the Conclusions

From the analysis of the research data, it surfaced, initially, that the majority of educationalists to respond, expressed a positive attitude towards love for reading, evaluating the use of appropriate books and language material for Kindergarten children as well as the arrangement of the library, to be very important, a finding that is confirmed by other studies too (Zivan & Horowitz-Kraus, 2020; Lewis *et al.*, 2016; Penteri & Papanastasiou, 2020). Subsequently, daily engagement with Mathematics was deemed as very important (Benz, 2012; Lee & Pant, 2017; Sofou & Kasimati, 2006; Thiel, 2010), while remarkable is the fact that almost half of the educationalists reported that the teaching of Mathematics is realised mainly through rote learning (Hejny & Littler, 2006; Skoumios & Skoumbourdi, 2014) or the use of worksheets, probably due to the easiness they provide towards the pupils’ assessment and self-assessment.

On the following, the educationalists taking part in the research, evaluated as very important the engagement of children with active and free play on a daily basis, with the required space, time, and abundance of materials and equipment at their disposal, which is in full alignment with the findings of similar studies (Broström, 2017; Fleer, 2010; Sakellariou & Banou, 2020). With regards to the development of gross and fine mobility, by majority both, general and special Kindergarten teachers evaluated the use of graded difficulty materials by the pupils, as very important (Anagnostopoulou, 2017). The learning domain of Arts holds a prominent place within the Kindergarten curriculum,

according to the participants, since most of them consider that the engagement of children with artistic activities is very important, while, at the same time, music comprises an inextricable part of the activities (Flore, 2018; Papadogianni-Kouranti & Anagnostopoulou, 2019; Sullivan, 2016). During the assessment of dramatic play, a division was observed among the educationalists, half of which stated that there is no organised interest spot regarding drama play in their classroom, while as incomplete were described the materials available for disguise, which, in addition, fail to promote the concept of diversity.

Furthermore, unanimously, the Kindergarten teachers evaluated the availability of construction materials and appropriate accessories for in-class play, as very important (Anagnostopoulou, 2017), with a large percentage of them pointing out, nonetheless, the absence of a specially arranged spot with special construction surfaces as well as a storage room for the materials under discourse. Such shortages are probably due to the general lack of space and resources, a lack that has been pestering the structure of Greek preschool education for decades. For most of educationalists it is very important that material is available and activities are held regarding Natural Sciences (Kalogiannakis, 2016; Kalogiannakis & Papadakis, 2018; Papadakis, 2016), no less that pupils are encouraged to bring materials over so that they enrich the class collection and share feedback about them with their peers, a finding that opposes to other studies, in which Kindergarten teachers reported that there is not an interest spot about Natural Sciences in their classroom available (Besi, 2013; Oikonomidis & Linadrakis, 2012; Paramythiotou, 2009).

More on this, the majority of participants deemed as very important that the materials used for Informatics and Communication Technologies are appropriate for the age spectrum of the children, that they do not promote violence, and that they embrace diversity, which comes in accordance with a corresponding research (Papadakis *et al.*, 2021). With regards to co-inclusion of diversity, most of the Kindergarten teachers take as very important that it is promoted with the employment of suitable activities, thus confirming findings of other studies (Galaterou & Antoniou, 2017; Tsakiridou & Polyzopoulou, 2014), while, on the contrary, it was gathered that the material which is used in teaching does not depict racial or cultural differences, a fact that may be due to the lack of such material and to the geographical region in which the contextual facility is located.

Additionally, a large percentage of educationalists considered a regular assessment of the curriculum to be very important, regarding its contribution to the education of toddlers, a finding that has emerged from other studies, as well (Agus *et al.*, 2023; Gelastopoulou, 2017; Supriani *et al.*, 2022), while the fact that the curriculum should be meeting various top-quality standards, was deemed as extremely important, showcasing, apparently, the educationalists' desire for toddlers to be offered a high-quality education.

Moving on, general education teachers evaluated the need for assessing the pupils' advancement, in a more positive manner (Vareltzi & Giavrimis, 2018; Hillyard, 2013;

Koutselini & Pyrgiotakis, 2015) compared to their special education colleagues, who manifested a less favorable attitude towards the need for assessment, a fact that might be due to the specific nature of the disability, whose particularities do affect the academic achievements of pupils.

Yet more, the educationalists who have 21 or more pupils in their class consider as very important the need for assessing the children's advancement, in comparison to their colleagues who serve in classes with a smaller number of pupils, which can be attributed to the fact that classes of over than 21 pupils concern urban regions, where feedback on assessment is more comprehensive. Ultimately, in our research a correlation emerged between the learning domains of the curriculum and the number of pupils per class, a finding that could be justified by the resources available for educationalists working in large facilities of populous classes, to organize their teaching in the various cognitive domains, space and professional expertise, for which more opportunities are provided when it comes to urban facilities.

Conflict of Interest Statement

The authors declare no conflicts of interest.

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