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# Factors that influence the perceptions of Greek secondary school teachers about inclusive education

***Factores de incidencia en la percepción del docente de Educación Secundaria griego hacia la educación inclusiva***

***Fatores que influenciam a perceção do professor do ensino secundário grego na educação inclusiva***

*影响希腊中学教师对全纳教育看法的因素*

**عوامل الحدوث في تصور معلمي التعليم الثانوي اليوناني نحو التعليم الدامج**

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## Abstract

Inclusive education still presents a challenge for teachers in ordinary classrooms, and addressing diversity is one factor that conditions the learning process and the development of social skills in school. In this regard, teachers' attitudes towards inclusion and teaching efficacy, which facilitate equal opportunities for students, require further study. The research presented here has been carried out to analyse teaching efficacy among secondary school teachers in Greece in terms of addressing student diversity in the ordinary classroom, and to determine the factors that affect the feelings, attitudes and concerns of these teachers to accomplish this task. This study applies a non-experimental, descriptive, correlational design, using a questionnaire-survey to compile information. A total of 339 teachers from 39 schools in the Greek prefecture of Kavala participated in the research. Findings show that teachers feel able to respond to the specificities of their students and that the key factors that mediate feelings and concerns are efficacy in teaching strategies and differentiation in learning outcomes. In addition, the efficacy of student participation is shown to directly affect teachers' attitudes and concerns about inclusion.

**Keywords:** educational inclusion; secondary school; attitudes towards inclusion; teaching

## Resumen

La educación inclusiva sigue siendo uno de los retos a afrontar por el profesorado que imparte su docencia en las aulas ordinarias, siendo la atención a la diversidad uno de los factores condicionantes del proceso de aprendizaje y del desarrollo de las habilidades sociales en la escuela. En este ámbito, los aspectos actitudinales del docente hacia la inclusión y la eficacia que faciliten la igualdad de oportunidades al alumnado son aún motivo de estudio. En esta línea se ha llevado a cabo la presente investigación, cuya finalidad fue analizar el nivel de eficacia docente del profesorado de Educación Secundaria de Grecia para atender a la diversidad del alumnado en el aula ordinaria y determinar los factores que afectan a las sensaciones, las actitudes y las inquietudes de dichos docentes para cumplir con esta labor. Este estudio responde a un diseño no experimental, descriptivo y correlacional, en el que se ha utilizado un cuestionario para la recogida de información. Han participado 339 docentes de 39 escuelas de la Prefectura de Kavala (Grecia). Los resultados revelan que estos se sienten capacitados para responder a las especificidades del alumnado, siendo los factores que median en las sensaciones e inquietudes la eficacia en las estrategias de instrucción y la diferenciación en los resultados de aprendizaje. Además, se ha comprobado que la eficacia de la participación del estudiante afecta directamente a la actitud hacia la inclusión, así como a la inquietud del docente.

**Palabras clave:** educación inclusiva; educación secundaria; actitudes hacia la inclusión; profesorado

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**Resumo**

A educação inclusiva continua a ser um dos desafios que os professores enfrentam nas salas de aula regulares, sendo a atenção à diversidade um dos fatores condicionantes do processo de aprendizagem e do desenvolvimento de competências sociais na escola. Neste domínio, os aspetos atitudinais do professor em relação à inclusão e à eficácia do ensino na promoção da igualdade de oportunidades para os alunos estão ainda a ser estudados. O objetivo desta investigação foi analisar o nível de eficácia pedagógica dos professores do ensino secundário na Grécia, ao lidarem com a diversidade dos alunos na sala de aula normal, e determinar os fatores que afetam as sensações, as atitudes e as preocupações destes professores no desempenho desta tarefa. Este estudo responde a um design não-experimental, descritivo e correlacional, em que foi utilizado um questionário para recolher informação. Participaram 339 professores de 39 escolas da prefeitura de Kavala (Grécia). Os resultados revelam que se sentem capacitados para responder às especificidades dos alunos, sendo os fatores mediadores das sensações e preocupações: a eficácia nas estratégias de ensino e a diferenciação nos resultados da aprendizagem. Além disso, verificou-se que a eficácia da participação dos alunos afeta diretamente as atitudes em relação à inclusão, bem como a preocupação do professor.

**Palavras-chave:** Educação inclusiva; ensino secundário; atitudes face à inclusão; professores

**摘要**

全纳教育仍然是普通教室教师需要面对的挑战之一，而对多样性学生的关注是学习过程和学校社会技能发展的决定性因素。在这一领域，教师对全纳教育的态度和有助于为学生提供平等机会的教学效能仍然是研究的重点。基于此，本研究旨在分析希腊中学教师在普通教室中应对学生多样性的教学效能水平，并确定影响这些教师履行此任务的感受、态度和关注的因素。

本研究采用非实验性、描述性和相关性设计，并使用问卷收集信息。共有339名教师参与，来自希腊卡瓦拉州的39所学校。结果显示，这些教师感到有能力应对学生的特殊需求，影响其感受和关注的因素包括教学策略的有效性和学习结果的差异化。此外，学生参与的有效性直接影响教师对全纳教育的态度以及教师的关注程度。

**关键词**: 全纳教育；中学教育;对包容的态度；老师

**ملخص**

لا يزال التعليم الجامع يمثل أحد التحديات التي يواجهها المعلمون الذين يقومون بالتدريس في الفصول الدراسية العادية، مع كون الاهتمام بالتنوع أحد عوامل تكييف عملية التعلم وتنمية المهارات الاجتماعية في المدرسة. في هذا المجال، لا تزال الجوانب المتعلقة بمواقف المعلم تجاه الدمج وفعالية التدريس التي تسهل تكافؤ الفرص للطلاب موضوعاً للدراسة. وعلى هذا المنوال، تم إجراء البحث الحالي، والذي كان الغرض منه تحليل مستوى فعالية التدريس لدى معلمي التعليم الثانوي في اليونان لمعالجة تنوع الطلاب في الفصول الدراسية العادية، وتحديد العوامل التي تؤثر على الأحاسيس واتجاهات واهتمامات هؤلاء المعلمين للقيام بهذه المهمة. تستجيب هذه الدراسة للتصميم غير التجريبي والوصفي والارتباطي، حيث تم استخدام استبيان لجمع المعلومات. شارك في الدورة 339 معلماً من 39 مدرسة في محافظة كافالا (اليونان). كشفت النتائج أنهم يشعرون بالقدرة على الاستجابة لخصوصيات الطلاب، مع العوامل التي تتوسط الأحاسيس والمخاوف وهي فعالية الاستراتيجيات التعليمية والتمايز في نتائج التعلم. علاوة على ذلك، فقد ثبت أن فعالية مشاركة الطلاب تؤثر بشكل مباشر على الموقف تجاه دمج الطلاب، وكذلك على اهتمام المعلم.

**الكلمات الدالة** :التعليم الدامج؛ التعليم الثانوي؛ المواقف تجاه الإدماج؛ المعلمون

## Introduction

Addressing diversity is one of the most significant factors in the learning process of students, but also the difficulty they face socialising at school. For this reason, it is imperative that students today receive adequate support for equal opportunities in education.

Inclusion is a right that emerges within the framework of addressing diversity, which must ensure the personal and social development of students, regardless of their special educational needs (Echeita & Ainscow, 2011; Peña et al., 2018; Arnaiz, 2019). For this purpose, attitudes towards inclusion and teacher training to respond to the specificities of students are crucial to achieving effective inclusion. Some of the key aspects established by the European Agency for Special Needs and Inclusive Education (2011) to deal with such diversity pertain to the importance of teachers possessing a positive attitude towards the new challenges posed by addressing plurality, as well as teacher efficacy when it comes to reflecting on the barriers hindering the development of their students, modulating various methodological and assessment approaches that afford them flexibility in pursuit of participation and success in the education process.

The effective teacher is defined by Walker (2008) as one who possesses the specific personal qualities that enable them to achieve success by making a significant impact on students during the learning process.

In this regard, the most relevant traits that an effective teacher must put into operation in the classroom, taking into account the study carried out in the Spanish context by Reoyo et al. (2017), refer to aspects such as: encouraging interpersonal relationships, managing and developing classes, as well as content knowledge and mastery. Interpersonal relationships correspond to the personal and intrapersonal qualities available to the teacher (Reoyo et al., 2017). The management and development of classes would be related to the strategies required to generate debate and discussion in the classroom group and in the distribution of students into small groups, producing a positive effect on their progress (Killen, 2006), including having the necessary tools to address student control to resolve discipline problems, such as establishing rules of conduct and using mediation to resolve conflicts (Reoyo et al., 2017). As for knowledge and mastery of content, this focuses on the skills required to transmit such knowledge in a clear, fluid way so that it is accessible to all students, respecting the order and connection that must exist between contents (Shulte et al., 2011).

When it comes to achieving quality education through the development of effective teaching strategies, Ainscow (2020) states that the essential pillars that must be addressed are inclusion and equity, together with the need to tackle all forms of exclusion and marginalisation, eliminating disparities and inequalities in access, participation and learning, both in the processes and in student outcomes.

If inclusive education is based on the principle of equity (Azorín, 2018), this implies that teachers must attend to the personal and social characteristics of each student with an open attitude to diversity and through educational practices that allow them to overcome obstacles that prevent students from learning (Tschannen-Moran & Woolfolk, 2001; Forlin et al., 2011; Arnaiz, 2019; Sandoval et al., 2020). From this perspective, the attitude and feelings teachers have towards inclusion determine their concern and sensitivity to design educational actions that respond to this premise. In turn, their classroom behaviour, the efforts invested in designing innovative experiences and the support they provide to students will facilitate a good learning environment (González-Gil et al., 2019; Rodriguez-Fuentes & Caurcel, 2020).

For this reason, the pre-service training and continuing professional development of teachers, as student or practising teachers, requires changes in current pedagogical

practices, seeking new tools where everyone (teachers and students) can participate and learn collaboratively, thus promoting quality in educational relations (Amaral & Moriel, 2021), to respond to the demand for inclusive schooling. Bzuneck (2017) argues that the benefits of teacher training focused on inclusive practices are integrated with the self-efficacy beliefs of these teachers, understanding teacher self-efficacy as the teacher's reflection on the abilities and skills to promote learning and responsibility with their students, even if they present specific needs (Tschannen-Moran & Woolfolk, 2001). The higher the teacher's level of self-efficacy, the greater the effort they will invest in performing the task entrusted to achieve success (Bandura, 1997; Navarro, 2007).

Regarding this perspective, Navarro-Montaño et al. (2021) analysed the beliefs and training needs of teachers in inclusive education, with the aim of considering quality indicators that could guide training actions on the subject, showing the importance of carrying out this type of research. These authors confirm that for there to be true inclusion, this concept must be understood in terms of addressing the diversity of all students, not exclusively associated with disability. Some of the keys factors in this regard include the commitment of teachers to designing innovative educational strategies based on the real evidence of their students, the association between educational theory and practice, as well as research methodologies focused on capacity development.

Arnaiz-Sánchez et al. (2021) examined the training of teachers, together with other professionals, to attend to the special educational needs (SEN) of students in open classrooms. The results highlighted a lack of training and capacity, especially among non-specialist teachers, to respond to these kinds of students, as one of the fundamental elements for the construction of inclusive schools. Their findings also reinforced the idea that teachers should continue to work on developing inclusive attitudes and be trained to use tools that facilitate the development and materialisation of diversity management.

Friesen and Cunning (2020) also conducted research with undergraduate students studying degrees in Education, aimed at identifying factors influencing the formation of self-efficacy beliefs focused on inclusion. The results showed that these undergraduates had a high level of confidence in themselves and in the work needed to be done to address diversity when they knew which inclusive resources and practices to implement in the classroom and focused learning strategies on the personal growth of their students.

Shanen et al. (2021) analysed the efficacy of differentiated education within the ordinary classroom, understood as the educational approach in which curriculum, teaching processes, resources, learning activities and assessment are adapted to the diversity of the students and their individualities, in order to maximise learning in the classroom. Among their conclusions, they expressed the importance of the teacher's attitude to diversity and the implementation of new educational strategies to achieve successful inclusion of the entire student body.

These studies indicate that school is a privileged setting to re-evaluate differences and thus build a more inclusive and cohesive society, where, through the idea of difference, students can mature in school as individuals and, in turn, the school will contribute to constructing and construing difference as a positive and distinctive trait in people (Fernández-Blázquez & Echeita, 2021).

From this perspective, for teaching developed in an inclusive school to be considered effective, not only must the teacher have theoretical knowledge about the nature of learning disabilities and the development of skills to adapt teaching objectives and teaching materials to the special needs of the students, but they must also have a receptive attitude to be able to work with everyone, and this is the reason for this research. On the basis of these precepts, the aims of this research have been, on the one hand, to analyse the teaching

efficacy of Greek secondary school teachers with regard to addressing the diversity of students in the ordinary classroom, in particular SEN students, and, on the other, to determine the factors that affect the feelings, attitudes, and concerns of these teachers in order to accomplish this task.

## Method

This research is based on a non-experimental research design, in order to understand the reality surrounding the phenomenon we are investigating (Arnal et al., 1992). In particular, a survey study is used to address the problem posed from a descriptive and correlational perspective, ensuring rigour in the data collection process (Galindo, 1998).

### *Data collection instrument*

To gather data, a questionnaire was used based on several subscales adapted from different instruments (see table 1), with a total of 105 items distributed in four dimensions that include the variables studied.

Table 1. Dimensions and adapted instruments

| **Measurements** | **Instruments** |
|---|---|
| Sentiments, Attitudes and Concerns about inclusive education | The Sentiments, Attitudes, and Concerns about Inclusive Education Scale Revised (SACIE-R) |
| Levels of teaching efficacy in learning environments | Teachers' Sense of Efficacy Scale (TSES) |
| Strategies of the teaching-learning process to create an inclusive environment in the classroom | Strategies for teaching students with special educational needs tool |

The first dimension encompasses the socio-demographic and employment characteristics of the teaching staff, made up of a total of 10 items (sex, age, area in which the school is located, position held, years of experience as a teacher, highest qualification obtained, training in special education, number of students in the ordinary classroom, number of students in the classroom with special educational needs [SEN] who are recognised as such, and case studies of students with SEN in the ordinary classroom).

The second refers to the evaluation of Sentiments, Attitudes and Concerns about inclusive education, focusing on students with SEN. The questions were based on the instrument created by Forlin, Earle, Loreman & Sharma (2011), entitled "The Sentiments, Attitudes, and Concerns about Inclusive Education Scale Revised (SACIE-R)". It is composed of 15 items scored on a scale, with five possible responses (1= totally disagree to 5= totally agree) and distributed into 3 subdimensions. The *Sentiments* block (5 items) measures teachers' disposition towards inclusion and their feelings towards people with educational needs. The *Attitudes* block (5 items) reflects acceptance of students with different learning needs in the ordinary classroom. And finally, the *Concerns* (5 items) block addresses concerns about the implementation of inclusive practices (see annex 1).

The third dimension refers to elements related to levels of teaching efficacy in learning environments. The questions were based on the "Teachers' Sense of Efficacy Scale (TSES)" instrument (Tschannen-Moran & Woolfolk, 2001; Appendix A), consisting of 15 items rated on a scale of five response options (1= not at all, to 5= a lot) distributed in three sub-scales related to three areas of educational teaching: Student participation (4 items), Instructional strategies (5 items), and Classroom management (6 items) (see annex 1).

Finally, the fourth dimension consisted of questions related to strategies applied to the teaching-learning process to create an inclusive environment in the classroom. It was

based on the "Strategies for teaching students with special educational needs tool" (Siam & Al-Natour, 2016; Appendix A) consisting of 65 items distributed in six scales with response options from 1 to 5 (1= Strongly disagree to 5= Strongly agree): Differentiation in content (15 items), Differentiation in process (11 items), Differentiation in teaching resources (5 items), Differentiation in learning outcomes (5 items), Differentiation in assessment (11 items), and Differentiation in classroom management (18 items) (see annex 1).

The instrument was translated into Greek in order to facilitate understanding of the items. Cronbach's alpha coefficient was used to test the reliability of the scales, establishing a measurement value above 0.7 as a criterion of high reliability (Nunnally, 1978). The results showed a high level of reliability throughout, with alpha coefficients in excess of 0.784 (Table 2).

Table 2. Reliability analysis

| Dimensions and sub-dimensions | Cronbach's Alpha |
|---|---|
| Sentiments | 0.804 |
| Attitudes | 0.807 |
| Concerns | 0.818 |
| Efficacy of student participation | 0.919 |
| Efficacy in instructional strategies | 0.938 |
| Efficacy in Classroom Management | 0.874 |
| Differentiation in content | 0.874 |
| Differentiation in the process | 0.882 |
| Differentiation in teaching resources | 0.924 |
| Differentiation in results | 0.957 |
| Differentiation in assessment | 0.784 |
| Differentiation in classroom management | 0.836 |

Discriminatory analysis of the scale items found that 10 of the 95 did not present any differences between groups that assign a high or low score, but because of their relevance to the study, they were retained, taking into account the data obtained in the reliability analysis.

### *Description of the sample*

The study was conducted with 339 teachers from all 39 secondary schools in the Greek prefecture of Kavala. Of the sample as a whole, 53.4% were women and 46.6% were men, with a mean age of 48.3 (SD=8.4) ranging in age from 25 to 64, and an average of 18.9 years (SD=8.7) of teaching experience.

The majority of teachers held Bachelor's Degrees (59.7%), while a significant percentage of teachers held a Postgraduate Degree (28.4%). To a lesser extent, they were holders of Degrees from Technical Colleges (2.2%), Master's Degrees (7.6%) and Doctorates (2.2%). In turn, 31% had received training in special education, and 69% stated they had not received such training.

In terms of the area of work, the majority teach in secondary schools in towns with fewer than 100,000 inhabitants (47.7%) or in villages (37.3%). The lowest participation was recorded for teachers working in small municipalities (14.2%) or in large cities (0.8%).

The average number of students the teachers had in their class was 22.6 (SD=9.2), with an average of 3.7 students with SEN (SD=4.1). 92.6% of the sample had students with learning disabilities, 58.7% with behavioural problems, and 15.3% with mental disorders, with other cases being less representative (Table 3).

Table 3. Distribution of the sample according to cases of SEN students

| Cases | Yes | | No | | Total | |
|---|---|---|---|---|---|---|
| | f | % | f | % | f | % |
| Learning disabilities | 314 | 92.6 | 25 | 7.4 | 339 | 100 |
| Behavioural problems | 199 | 58.7 | 140 | 41.3 | 339 | 100 |
| Mental disorder | 52 | 15.3 | 287 | 84.7 | 339 | 100 |
| Disabilities | 10 | 2.9 | 329 | 97.1 | 339 | 100 |
| No cases | 5 | 1.5 | 334 | 98.5 | 339 | 100 |
| Deafness and/or hearing blindness | 1 | 0.3 | 338 | 99.7 | 339 | 100 |
| All cases | 1 | 0.3 | 338 | 99.7 | 339 | 100 |

### *Procedure and data analysis*

Having formulated the instrument, it was translated into Greek so that the participating teachers could understand the questions. The instrument was implemented in 2020 using a self-administered approach, following the ethical principles of the Declaration of Helsinki (Manzini, 2000), on paper, in the 39 schools in the prefecture of Kavala (Greece). The data were collected in a matrix of the SPSS statistical software, version 27 for Mac (commercial licence for the Universidad de Córdoba).

After the data matrix was refined, and in order to respond to the first of research goals, an analysis of basic statistics was conducted of the elements of each dimension and sub-dimensions (means, standard deviation, asymmetry and kurtosis).

Then, regarding the second research goal, and taking into account the large number of variables that make up the dimensions and sub-dimensions of the analysis, the items that make up each of the dimensions and sub-dimensions were added together, calculating the new variables for the whole set. These were: Sentiments, Attitudes, Concerns, Efficacy of student participation, Efficacy in instructional strategies, Efficacy in classroom management, Differentiation in content, Differentiation in process, Differentiation in teaching resources, Differentiation in results, Differentiation in assessment and Differentiation in classroom management.

Bivariate correlational tests were applied to help determine the factors that affect the sentiments, attitudes and concerns of teachers when it comes to addressing student diversity in the ordinary classroom, along with multiple regression tests to establish the relationship between the different variables and their degree of interdependence. The independence of errors assumption was contrasted by means of the Durbin-Watson test, and the variance inflation factor (VIF) was calculated according to the maximum permissible value established by Marquardt (1970).

## Results

The results described below pertain to the research objectives pursued in this study. Regarding the first research objective - to analyse teaching efficacy among Greek secondary school teachers to address student diversity in the ordinary classroom, the first approach indicates that, in general, teachers feel able to respond to the specificities of students on the basis of the mean values obtained.

Analysis of the levels of teaching efficacy in learning environments (see annex 2) showed that they consider they possess most of the required skills, the highest scoring items referring to strategies used in the process of student instruction. Interestingly, the lowest scoring element, in contrast, relates to the support the teacher provides to the families of SEN students (M=2.62).

When analysing the sub-dimensions that make up the section on strategies related to the teaching-learning process to create an environment of inclusion in the classroom, the first set of items, Differentiation of contents (see annex 3), indicates that teachers devote their efforts, above all, to helping students develop their skills in problem solving (M=4.24), as well as in the preparation of classroom sessions (M=4.22) and the key aspects of the topics (M=4.14), relegating to the last level elements related to establishing the level of learning that every student should achieve (M=2.58). From the group of elements Differentiation in the teaching process, higher values reflect aspects related to student interaction and participation, seeking to incorporate them into the subject matter at hand (M=4.24), using activities that are compatible and appropriate to the skills students possess (M=4.06) and adjusting the amount of time students may need to perform certain tasks (M=4.04). However, the formation of small groups to explain the ideas and skills needed is not considered a priority (M=2.74). With regard to the Differentiation of resources, teachers recognise that they take advantage of different types of learning resources to engage students, including videos, computers, websites, books, magazines, photographs and/or images, etc. (M=4.07 and M=4.04), with audiovisual systems capable of reading texts out loud being the least used.

In turn, the five elements that make up the measures relating to Differentiation in outcomes are all scored above 4 points, with fairly homogeneous results. They focus importance on the opportunities that teachers give to students to present their productions through performance, instead of in writing (M=4.17). As for Differentiation in assessment, the group of teachers highlight reading out questions to students with special educational needs (M=4.19), as well as adapting the time allowed to answer them (M=4.16). However, they recognise that they do not give equal emphasis to printing out work using a large font adapted to the needs of students (M=2.85) or including images that facilitate understanding of the questions posed (M=3.20).

Finally, in terms of Classroom management, the teaching group assigned high scores to most of the actions, particularly the specification of rules and instructions for the correct development of classroom sessions (M=4.32), as well as the observation and overseeing of students' performance (M=4.22), with the distribution of students into similar ability groups being positioned last (M=2.24).

The second of the objectives was to determine the factors that affect teachers' sentiments, attitudes and concerns to address student diversity in the ordinary classroom. To this end, as discussed above, we extracted the set of variables from the elements of each of the dimensions and sub-dimensions studied (Table 4).

Table 4. Mean, standard deviation, maximum value, minimum value, asymmetry and kurtosis of the sum totals of the dimensions and sub-dimensions

| Elements | Mean | SD | Min | Max. | Asymmetry | | Kurtosis | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Value | St. Dev. | Value | St. Dev. |
| Sentiments | 2.23 | 0.549 | 1 | 4 | 0.277 | 0.133 | 0.832 | 0.266 |
| Attitudes | 2.52 | 0.703 | 1 | 5 | 0.902 | 0.133 | 0.131 | 0.266 |
| Concerns | 3.43 | 0.816 | 1 | 5 | -0.474 | 0.133 | -0.800 | 0.265 |
| Efficacy of student participation | 2.89 | 0.691 | 2 | 5 | 0.436 | 0.133 | -0.857 | 0.265 |
| Efficacy in instructional strategies | 3.12 | 0.954 | 2 | 5 | 0.653 | 0.133 | -0.902 | 0.265 |
| Efficacy in Classroom Management | 3.20 | 0.664 | 2 | 5 | 0.448 | 0.133 | -1.029 | 0.265 |
| Differentiation in content | 3.72 | 0.372 | 2 | 5 | 0.529 | 0.133 | 0.875 | 0.265 |
| Differentiation in the process | 3.53 | 0.432 | 3 | 5 | 0.604 | 0.134 | -0.059 | 0.266 |
| Differentiation in teaching resources | 3.72 | 0.665 | 1 | 5 | -0.168 | 0.133 | 1.037 | 0.265 |
| Differentiation in learning outcomes | 4.12 | 0.571 | 3 | 5 | -0.012 | 0.133 | -0.239 | 0.265 |
| Differentiation in assessment | 3.58 | 0.367 | 2 | 5 | 0.148 | 0.134 | 0.685 | 0.266 |
| Differentiation in classroom management | 3.77 | 0.321 | 3 | 5 | 0.332 | 0.133 | 0.169 | 0.266 |

To understand the relationship between them, Pearson's correlation index was calculated for the variables sentiments, attitudes and concerns in relation to all the others (see Table 5). The results showed that there is a direct relationship with all the elements ($p<.05$), with a medium intensity in terms of sentiments, medium-low for attitudes and high for concerns, which implies a relational structure and interdependence between all of them.

Table 5. Bivariate correlations between the set of variables

| | | Sentiments | Attitudes | Concerns |
|---|---|---|---|---|
| Efficacy of student participation | r | -.420** | .417** | -.721** |
| | p | .000 | .000 | .000 |
| Efficacy in instructional strategies | r | -.505** | .336** | -.744** |
| | p | .000 | .000 | .000 |
| Efficacy in Classroom Management | r | -.488** | .329** | -.719** |
| | p | .000 | .000 | .000 |
| Differentiation in content | r | -.374** | .322** | -.598** |
| | p | .000 | .000 | .000 |
| Differentiation in the process | r | -.347** | .305** | -.646** |
| | p | .000 | .000 | .000 |
| Differentiation in teaching resources | r | -.400** | .208** | -.472** |
| | p | .000 | .000 | .000 |
| Differentiation in learning outcomes | r | -.414** | .232** | -.486** |
| | p | .000 | .000 | .000 |
| Differentiation in assessment | r | -.383** | .239** | -.515** |
| | p | .000 | .000 | .000 |
| Differentiation in classroom management | r | -.393** | .139* | -.524** |
| | p | .000 | .011 | .000 |

*Note:* *. Correlation is significant at level 0.05 (bilateral).
**. Correlation is significant at level 0.01 (bilateral).

With regard to teachers' feelings, there is a negative relationship with the variables corresponding to the levels of teaching efficacy in learning environments (efficacy of student participation, efficacy in instructional strategies, and efficacy in classroom management) and strategies related to the teaching-learning process to create an

environment of inclusion in the classroom (differentiation in content, differentiation in the process, differentiation in teaching resources, differentiation in outcomes, differentiation in assessment, differentiation in classroom management), which indicates that as teachers' perceptions of these elements increase, their feelings towards inclusive education tend to diminish.

In contrast, there is a positive relationship between the variables and attitudes, which indicates that, as levels of teacher efficacy in learning environments and strategies related to the teaching-learning process to create an environment of inclusion in the classroom increase, attitudes also increase.

As in the first dimension, teachers' concerns also have a negative relationship with the rest of the variables, with a high intensity in this case. This reveals that by increasing levels of teaching efficacy in learning environments and strategies related to the teaching-learning process to create an environment of inclusion in the classroom, concerns diminish.

Finally, based on the relationship of interdependence described, we applied multiple linear regression to establish, independently, an effective measure to determine the behaviour of sentiments, attitudes and concerns based on the variables Efficacy of student participation ($X_1$), Efficacy in instructional strategies ($X_2$), Efficacy in classroom management ($X_3$), Differentiation in content ($X_4$), Differentiation in the process ($X_5$), Differentiation in teaching resources ($X_6$), Differentiation in learning outcomes ($X_7$), Differentiation in assessment ($X_8$) and Differentiation in classroom management ($X_9$).

With regard to the teachers' management of sentiments in the inclusive classroom (see Table 6), to adjust the predictive variables, we selected all those that make a significant contribution to the model: $X_2$= Efficacy in the instructional strategies, $X_5$= Differentiation in the process, $X_7$= Differentiation in learning outcomes and $X_8$= Differentiation in assessment. The results obtained reveal that of the four predictive variables incorporated, only two have been selected, explaining 27.7% of the variance, so the model offers a high level of accuracy. The order in which they were incorporated and their specific weighting were as follows:

- Efficacy in instructional strategies ($X_2$), explaining 25.5% of the criterion variability.
- Differentiation in learning outcomes ($X_7$), explaining 2.7% of the criterion variability

The diagnosis of collinearity of variance indicates that there are no relationships between the model regressors, taking into account that the values obtained for the VIF are below the maximum permissible value of 10.

Table 6. A multiple regression model of the elements involved in teachers' sentiments towards inclusive education

| Steps | Criterion variable | Predictor variables | R | R2 | Delta R | F | p | Durbin-Watson | Multicollinearity (tolerance/VIF) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Y | $X_2$ | .505 | .252 | .255 | 109.981 | .000 | | |
| 2 | Y | $X_2$, $X_7$ | .531 | .277 | .027 | 12.021 | .000 | 1.824 | .678/1.474 ($X_2$) |
| | | | | | | | | | .678/1.474 ($X_7$) |
| $Y=3.732+-.225X_2+-.193X_7$ | | | | | | | | | |

*Note:* Y=Sensations, $X_2$=Efficacy in Instruction Strategies, $X_7$=Differentiation in Learning Outcomes.

Regarding teachers' attitudes towards inclusive education (see Table 7), the variables selected for their significant contribution to the model were $X_1$= Efficacy of student participation, $X_3$ = Efficacy in classroom management, $X_4$ = Differentiation in content, $X_7$=Differentiation in learning outcomes and $X_9$=Differentiation in classroom management. The results indicate that all of the predictive variables were incorporated into the model, explaining 21.3% of the criterion variability, so the model offers a high level of accuracy. The order in which they were incorporated and their specific weighting were as follows:

- Efficacy of student participation ($X_1$), explaining 17.5% of the criterion variability.
- Efficacy in instructional strategies ($X_3$), explaining 1.1% of the criterion variability.
- Differentiation in content ($X_4$), explaining 1.3% of the criterion variability
- Differentiation in classroom management ($X_9$), explaining 1.2% of the criterion variability
- Differentiation in learning outcomes ($X_7$), explaining 1.3% of the criterion variability

With regard to the diagnosis of variance collinearity, this indicates that there are no relationships between the model regressors, with VIF values below 10.

Table 7. A multiple regression model of the elements involved in teachers' attitude towards inclusive education

| **Steps** | **Criterion variable** | **Predictor variables** | **R** | **R2** | **Delta R** | **F** | **p** | **Durbin-Watson** | **Multicollinearity (tolerance/VIF)** |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Y | $X_1$ | .419 | .173 | .175 | 66.549 | .000 | | |
| 2 | Y | $X_1$, $X_3$ | .431 | .181 | .011 | 4.185 | .000 | | |
| 3 | Y | $X_1$, $X_3$, $X_4$ | .446 | .192 | .013 | 5.352 | .000 | | |
| 4 | Y | $X_1$, $X_3$, $X_4$, $X_9$ | .460 | .202 | .012 | 5.067 | .000 | | |
| 5 | Y | $X_1$, $X_3$, $X_4$, $X_9$, $X_7$ | .474 | .213 | .013 | 5.435 | .000 | 1.595 | .201/4.981 ($X_1$)<br>.183/5.461 ($X_3$)<br>.385/2.595 ($X_4$)<br>.414/2.417 ($X_9$)<br>.543/1.842 ($X_7$) |
| $Y=1.329+.557X_1+-.281X_3+.427X_4+-.504X_9+.187\ X_7$ | | | | | | | | | |

*Note:* Y=Attitudes, $X_1$= Efficacy of student participation; $X_3$= Efficacy in instructional strategies, $X_4$= Differentiation in content, $X_9$= Differentiation in classroom management, $X_7$= Differentiation in learning outcomes.

Finally, regarding teachers' attitudes towards inclusive education (see Table 8), the variables selected for their significant contribution to the model were $X_1$= Efficacy of student participation, $X_2$=Efficacy in instructional strategies, $X_5$=Differentiation in the process, $X_7$=Differentiation in learning outcomes. The results showed that, of the predictor variables incorporated, all have been maintained, with an explained variance of 60.6%. The order in which they were incorporated into the model and their specific weighting were as follows:

- Efficacy in instructional strategies ($X_2$), explaining 56.6% of the criterion variability.

- Differentiation in the process ($X_5$), explaining 2.6% of the criterion variability
- Efficacy of student participation ($X_1$), explaining 1.4% of the criterion variability.
- Differentiation in learning outcomes ($X_7$), explaining 0.5% of the criterion variability

With regard to the diagnosis of variance collinearity, this indicates that there are no relationships between the model regressors, with VIF values below 10.

Table 8. A multiple regression model of the elements involved in teachers' concerns regarding inclusive education

| Steps | Criterion variable | Predictor variables | R | R2 | Delta R | F | p | Durbin-Watson | Multicollinearity (tolerance/VIF) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Y | $X_2$ | .752 | .565 | .566 | 422.838 | .000 | | |
| 2 | Y | $X_2$, $X_5$ | .769 | .589 | .026 | 20.184 | .000 | | |
| 3 | Y | $X_2$, $X_5$, $X_1$ | .778 | .602 | .014 | 11.533 | .000 | | |
| 4 | Y | $X_2$, $X_5$, $X_1$, $X_7$ | .782 | .606 | .005 | 4.159 | .000 | 1.936 | .228/4.380 ($X_2$)<br>.412/2.426 ($X_5$)<br>.253/3.949 ($X_1$)<br>.625/1.600 ($X_7$) |
| $Y=6.850+-.324X_2+-.284X_5+-.303X_1+-.129X_7$ | | | | | | | | | |

*Note:* Y=Concerns, $X_2$=Efficacy in Instructional Strategies, $X_5$=Differentiation in the process, $X_1$= Efficacy of student participation, $X_7$=Differentiation in learning outcomes.

## Discussion and conclusions

The first of the research goals of this study was to analyse the teaching efficacy of secondary school teachers in terms of addressing student diversity in the ordinary classroom, specifically students with SEN. In general terms, the results have shown that teachers feel able to perform this function, because the dialogue between educator and student fosters the promotion and improvement of the educational process (Freire, 1994). As a result, the role played by students has changed, as they have become active agents of their learning. However, further support must be provided for the families of students with SEN, an essential element in the teaching-learning process, since, as indicated by Herrera et al. (2021), within the field of education, the family becomes the driver of change and transformation for the student.

As for the aspects that influence the training of teachers at this stage, these are concentrated in instructional strategies, where they use diverse tools to assess the learning of students with SEN, along with the implementation of an effective classroom management system for these students, confirmed by Ainscow (2017), who states that being a more inclusive teacher is a matter of reflection and dialogue in the constant process of reviewing and updating practice in order to foster a more inclusive culture.

Along these lines, teachers generally implement adaptations or specifications of the contents when preparing classroom sessions, establish clear and achievable goals, determine the main ideas, and support and encourage students with SEN to resolve the problems that arise in the classroom. However, they do not stipulate the standard or level that these students must achieve or adapt the presentation of content to the learning pace of each student. To resolve this issue, Ainscow (2020) believes

that more emphasis should be placed on school-wide approaches that support teachers in the development of inclusive practices, an aspect that seems to have been forgotten in the training of the teachers participating in this study. In this regard, in the pre-service training of future professionals, to become effective and inclusive teachers, training is required in the acquisition of strategies that favour relationships with students (Van Tartwijk et al., 2009). Beard et al. (2010) propose the idea of going further in training, in teacher self-efficacy and classroom management, emphasising the academic optimism of teachers to favour relationships in the classroom and the inclusive practices approach.

While it is true that teachers seek the engagement, participation and motivation of students with SEN, they tend not to prepare specific tasks to create collaborative working groups to facilitate this process. In this respect, our findings support the conclusions of Sandoval et al. (2020), who state that students prefer oral explanations not to be too long and repetitive, that it is beneficial to have such explanations on the board and provide them with visual materials, and carry out activities on the subject in order to promote learning as effectively as possible.

With regard to classroom management, the teachers participating in this study establish that the distribution of work in the classroom through different tasks and the organisation of time, among others, is positive and inclusive for students with SEN, leaving to one side the organisation of students into groups of similar abilities, an aspect that contradicts Parrillas (2002), who recommends creating homogeneous groups based on the characteristics of the students to give them better help.

The second of the research goals established was to determine the factors that affect teachers' sentiments, attitudes and concerns to accomplish this. The findings have shown that, in general, feelings towards inclusive education are influenced, inversely, by their perceived levels of teaching efficacy in learning environments, as well as strategies of the teaching-learning process to create an environment of inclusion in the classroom, because as teachers' knowledge of these two aspects increases, their feelings towards inclusion diminish. In particular, instructional strategies and the differentiation the teacher makes in terms of learning outcomes mediate in this regard. In this sense, Štemberger and Kiswarday (2018) determined that teachers in the stages of Early Childhood and Primary Education are more willing to adapt their educational practice to the needs of students with SEN than teachers in Secondary Education, an aspect that would explain the inverse relationship between the teacher's feelings as knowledge of how to tackle this increases.

Regarding teachers' attitudes towards student inclusion, the higher the levels of teaching efficacy in developing learning environments favourable to inclusion, together with the implementation of concrete strategies to promote the teaching-learning process and thus improve the classroom environment, the greater the teachers' attitudes towards the inclusion process, with the efficacy of student participation mediating attitudes. This finding reinforces the ideas of Avramidis and Kalyva (2007) when they indicate that teachers do not display unfavourable attitudes to inclusion; rather, their attitude may vary depending on the possibilities they encounter to solve problems that arise in the classroom and which are beyond their control.

With regard to teachers' concerns about inclusive proposals in the classrooms, it is evident that by increasing levels of teaching efficacy in learning environments and in the strategies used for the development of the teaching-learning process, such concerns decrease, which indicates it might be necessary to expand on teacher training in this regard in order to shore up this situation. In addition, what modulates this concern is the efficacy of student participation, efficacy in instructional strategies, the differentiation the teacher makes

in terms of the process, as well as the differentiation in learning outcomes.

The limitations of the study include the difficulty of using a different information collection instrument, in addition to the questionnaire (interview, discussion group, among others), which would have provided the perceptions of Greek teachers about their qualification to develop inclusive practices with students, further reinforcing the results of the quantitative data analysis. Likewise, it would have been interesting to obtain information from other professionals related to these aspects such as university teachers, education inspectors, as well as guidance counsellors.

In this sense, the future lines of work emanating from this study could expand on the key elements required to improve the teaching efficacy of teachers and analyse the pre-service training and continuing professional development plans of future teachers in Greece to adapt to new social and educational requirements.

Therefore, the research carried out here with Greek secondary school teachers shows that actions are being carried out so that diversity can be addressed in the classroom based on the principles of inclusive education, which focuses on the search for efficacy in student participation, the identification and implementation of instructional strategies favourable to their needs, the development of differentiating aspects in the process of completing tasks, as well as on learning outcomes. As noted by Akalin et al. (2014), inclusion is favourable in the classroom, taking into account the need for adequate resources and training to achieve this.

In short, this research seeks to build dreams in which students with SEN are able to create their freedom in the educational community and to project themselves in it (Ruiz-Roman et al., 2017). To achieve this, as Echeita (2019) points out, significant progress must be made towards completely overhauling education systems that exclude students.

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# Appendix

## Annex 1. List of elements in the instrument dimensions

| Dimensions | Subscales | Elements |
|---|---|---|
| Sentiments, Attitudes and Concerns | Sentiments | 1. I dread the thought of having to work with students with special educational needs. |
| | | 2. I tend to make contacts with people with disabilities brief and I finish them as quickly as possible. |
| | | 3. I would feel terrible if I had students with a disability or special educational needs. |
| | | 4. I am afraid to look directly at a person with a disability. |
| | | 5. I find it difficult to overcome my initial shock when meeting people with severe physical disabilities. |
| | Attitudes | 6. Students who have difficulty expressing their thoughts verbally should be in regular classes. |
| | | 7. Students with attention deficit should be in regular classes. |
| | | 8. Students who require communicative technologies (e.g. Braille/sign language) should be in regular classes. |
| | | 9. Students who frequently fail exams should be in regular classes. |
| | | 10. Students who need an individualised academic programme should be in regular classes. |
| | Concerns | 11. I am concerned that students with special educational needs will not be accepted by the rest of the class. |
| | | 12. I am concerned that it will be difficult to give appropriate attention to all students in an inclusive classroom. |
| | | 13. I am concerned that my workload will increase if I have students with disabilities in my class. |
| | | 14. I am concerned that I will be more stressed if I have students with disabilities in my class. |
| | | 15. I am concerned that I do not have the knowledge and skills required to teach students with disabilities. |
| Teaching efficacy in learning environments | Student participation | 1. I help students with special educational needs to appreciate the value of learning. |
| | | 2. I motivate students with special educational needs who are less interested in the lesson. |
| | | 3. I help students with special educational needs believe that they can make progress in school work. |
| | | 4. I help families of students with special educational needs to help their children make progress at school. |
| | Instructional strategies | 5. I use a variety of assessment strategies for children with special educational needs. |
| | | 6. I tailor the questions I ask to students with special educational needs. |
| | | 7. I implement alternative learning strategies for children with special educational needs. |
| | | 8. I try to foster student creativity. |
| | | 9. I better explain or set a different example of something that a child with special educational needs has difficulty understanding. |
| | Classroom management | 10. I am able to implement a classroom management system for children with special educational needs. |
| | | 11. Students with special educational needs can follow the rules established in the classroom. |
| | | 12. I effectively manage students with behavioural problems. |

| | | |
|---|---|---|
| | | 13. I can get students with special educational needs to follow the rules of the classroom. |
| | | 14. I am able to calm a student who is disruptive or noisy. |
| | | 15. I am able to respond effectively to defiant students. |
| Strategies of the teaching-learning process to create an inclusive environment in the classroom | Differentiation in content | 1. I plan the lessons well before each class. |
| | | 2. I incorporate differentiated instruction processes when I am planning for teaching. |
| | | 3. I set clear and specific lesson goals. |
| | | 4. I specify the suitable time interval per learning goal. |
| | | 5. I consider individual differences and variations among students given the important impact this creates on the students' behaviour inside the classroom. |
| | | 6. I adjust the educational content to suit the educational needs. |
| | | 7. I provide support to students and encourage them to immerse themselves in problem-solving skills. |
| | | 8. I give consideration to the identification of the main idea(s) of the topic or unit. |
| | | 9. I give consideration to scoping to be in line with the capabilities and the needs of different students. |
| | | 10. I do not deviate from the standard level that every student should reach |
| | | 11. I present the content to the students at different speeds; I do not commit all students to the same timing. |
| | | 12. Consideration of cognitive levels among students: I present the content at different levels in line with the needs of the students. |
| | | 13. I provide students with the opportunity to immerse themselves in different activities that motivate their minds and increase their attentiveness. |
| | | 14. I diversify my pedagogy and the way I present the content in consideration of the levels and capabilities of the students. |
| | | 15. I summarise some of the existing information within the content provided, I do not compromise the main idea(s) that are to be taught within this topic. |
| | Differentiation in the process | 16. I use activities that are compatible and suited to the skills that students have. |
| | | 17. I implement special plans with students (regular classroom activities and supplementary activities for students with SEN). |
| | | 18. I prepare special assignments for students. |
| | | 19. I provide additional support to students with learning disabilities. |
| | | 20. I adjust the time interval that students may need to carry out certain assignments. |
| | | 21. I set different levels of expectations to conclude an assignment. |
| | | 22. I encourage students to interact and participate; I seek to engage them in the topic at hand. |
| | | 23. I use technology-based learning with SEN students. |
| | | 24. I usually form small groups to explain necessary ideas and skills. |
| | | 25. I use diversified learning strategies that suit different pedagogies and achieve the aspired goals. |
| | | 26. I provide resources and information to encourage student initiative for learning |
| | Differentiation in teaching resources | 27. I provide and use technology resources to help increase motivation and incentive among students: reading and writing programmes, word processors, spelling and grammar. |
| | | 28. I use digital tools for writing and text, spelling and grammar, and means that aid reading. |
| | | 29. I use audio-visual systems capable of reading texts aloud. |
| | | 30. I provide different types of learning resources that serve the environment in an enjoyable way that attracts learners (video, computers and websites). |

| | |
|---|---|
| | 31. I provide different learning resources that serve the environment in an enjoyable way that attracts the learners (books, magazines, photographs/images). |
| Differentiation in learning outcomes | 32. I give students the opportunity to participate in activities as individuals or in groups or in a cooperative manner. |
| | 33. I allow students to present their productions verbally. |
| | 34. I allow students to present their productions verbally (oral presentation, singing, poetry recitation). |
| | 35. I allow students to present their productions in writing. |
| | 36. I allow students to present their productions in performance style (acting). |
| Differentiation in assessment | 37. I rely on continuous and varied assessments of students: pre- and post-assessments |
| | 38. I adopt assessments from teachers and peers. |
| | 39. I use a rating scale (rubrics) to assess the students. |
| | 40. I print out test papers using a big / large font that is suited to the needs of the students. |
| | 41. I read the questions to the students. |
| | 42. I give a break in the middle of the assessment interval. |
| | 43. I add some illustrative images or drawings to help the students understand the questions. |
| | 44. I assess students according to pivotal and referenced indicators. |
| | 45. I adopt individual and group assessments. |
| | 46. I give some students extra time to answer questions. |
| | 47. I take into consideration the homework and testing paragraphs in classifying via Bloom's classic Taxonomy (remembering, understanding and applying). |
| Differentiation in classroom management | 48. I distribute the instructions in different ways to avoid chaos. |
| | 49. I distribute students into homogeneous groups in terms of capabilities. |
| | 50. I distribute students into heterogeneous groups in terms of capabilities. |
| | 51. I monitor the achievements and progress of students within the cognitive portfolio of the student. |
| | 52. I prepare a plan for students who need more time than their peers to complete assignments. |
| | 53. I observe the performance of students and direct them. |
| | 54. I identify the special skills and capabilities of each student in order to try to answer two questions: what does each student know? What does each student need? |
| | 55. I clarify to students the permitted mobility limits. |
| | 56. I train students to take responsibility for their learning by doing their schoolwork and homework. |
| | 57. I train students to put the classroom furniture back after carrying out activities. |
| | 58. I train students on activities, monitoring those activities and learning their outcomes. |
| | 59. I specify a time to carry out primary concepts and design suitable activities per learner. |
| | 60. I plan how the student will submit completed work. |
| | 61. I specify the rules and instructions to carry out an activity. |
| | 62. I focus on a limited number of concepts to ensure students have grasped the concepts. |
| | 63. I provide opportunities for group, pair or individual work. |
| | 64. I set out basic ground rules for students on the basis of which they will start and finish at the beginning and at the end of the lesson, respectively. |
| | 65. I work on building the teaching material according to the needs of the students. |

## Annex 2. Mean, standard deviation, asymmetry, kurtosis, maximum and minimum value of the elements of the dimension Levels of teaching efficacy in learning environments

| Elements | | | | | Asymmetry | | Kurtosis | |
|---|---|---|---|---|---|---|---|---|
| | Mean | SD | Min | Max. | Value | St. Dev. | Value | St. Dev. |
| 1. I help students with special educational needs to appreciate the value of learning. | 2.73 | 0.802 | 2 | 5 | 0.729 | .133 | -0.446 | .265 |
| 2. I motivate students with special educational needs who are less interested in the lesson. | 2.98 | 0.832 | 2 | 5 | 0.262 | .132 | -1.000 | .264 |
| 3. I help students with special educational needs believe that they can make progress in school work. | 3.05 | 0.807 | 2 | 5 | 0.078 | .132 | -1.075 | .264 |
| 4. I help families of students with special educational needs to help their children make progress at school. | 2.62 | 0.803 | 1 | 5 | 0.658 | .132 | -0.558 | .264 |
| 5. I use a variety of assessment strategies for children with special educational needs. | 2.68 | 1.343 | 1 | 5 | 0.493 | .133 | -0.980 | .265 |
| 6. I tailor the questions I ask to students with special educational needs. | 3.49 | 0.878 | 1 | 5 | 0.436 | .132 | -0.302 | .264 |
| 7. I implement alternative learning strategies for children with special educational needs. | 2.72 | 1,355 | 1 | 5 | 0.419 | .132 | -1.052 | .264 |
| 8. I try to foster student creativity. | 3.18 | 0.743 | 2 | 5 | -0.047 | .132 | -0.687 | .264 |
| 9. I better explain or set a different example of something that a child with special educational needs has difficulty understanding. | 3.54 | 0.867 | 2 | 5 | 0.602 | .132 | -0.776 | .264 |
| 10. I am able to implement a classroom management system for children with special educational needs. | 2.69 | 1.319 | 1 | 5 | 0.453 | .132 | -0.924 | .264 |
| 11. Students with special educational needs can follow the rules established in the classroom. | 3.10 | 0.704 | 2 | 5 | -0.045 | .132 | -0.738 | .264 |
| 12. I effectively manage students with behavioural problems. | 3.25 | 0.764 | 1 | 5 | 0.349 | .132 | 0.338 | .264 |
| 13. I can get students with special educational needs to follow the rules of the classroom. | 3.29 | 0.614 | 2 | 5 | 0.277 | .133 | 0.137 | .265 |
| 14. I am able to calm a student who is disruptive or noisy. | 3.49 | 0.607 | 2 | 5 | -0.029 | .132 | -0.351 | .264 |
| 15. I am able to respond effectively to defiant students. | 3.50 | 0.617 | 2 | 5 | -0.070 | .132 | -0.305 | .264 |

## Annex 3. Mean, standard deviation, asymmetry, kurtosis, maximum and minimum value of the elements of the dimension Strategies of the teaching-learning process to create an inclusive environment in the classroom

| Elements of the dimension Differentiation of contents | | | | | Asymmetry | | Kurtosis | |
|---|---|---|---|---|---|---|---|---|
| | Mean | SD | Min | Max. | Value | St. Dev. | Value | St. Dev. |
| 1. I plan the lessons well before each class. | 4.22 | 0.508 | 2 | 5 | 0.308 | .133 | 0.997 | .265 |
| 2. I incorporate differentiated instruction processes when I am planning for teaching. | 3.52 | 0.587 | 2 | 5 | 0.355 | .132 | -0.528 | .264 |
| 3. I set clear and specific lesson goals. | 4.14 | 0.411 | 3 | 5 | 0.972 | .132 | 1.610 | .264 |
| 4. I specify the suitable time interval per learning goal. | 4.06 | 0.527 | 2 | 5 | -0.418 | .132 | 2.691 | .264 |
| 5. I consider individual differences and variations among students given the important impact this creates on the students' behaviour inside the classroom. | 3.73 | 0.573 | 2 | 5 | -0.203 | .132 | -0.036 | .264 |
| 6. I adjust the educational content to suit educational needs. | 3.71 | 0.586 | 2 | 5 | -0.013 | .132 | -0.317 | .264 |
| 7. I provide support to students and encourage them to immerse themselves in problem-solving skills. | 4.24 | 0.516 | 2 | 5 | -0.005 | .132 | 1.265 | .264 |
| 8. I give consideration to the identification of the main idea(s) of the topic or unit. | 4.13 | 0.538 | 2 | 5 | -0.133 | .133 | 1.336 | .265 |
| 9. I give consideration to scoping to be in line with the capabilities and the needs of different students. | 3.91 | 0.497 | 2 | 5 | -0.477 | .132 | 1.882 | .264 |
| 10. I do not deviate from the standard or level that every student should reach | 2.58 | 0.864 | 1 | 5 | 1.089 | .132 | -0.051 | .264 |
| 11. I present the content to the students at different speeds; I do not commit all students to the same timing. | 2.90 | 0.985 | 1 | 5 | 0.458 | .132 | -1.152 | .264 |
| 12. Consideration of cognitive levels among students: I present the content at different levels in line with the needs of the students. | 3.35 | 0.690 | 1 | 5 | -0.094 | .132 | 0.300 | .264 |
| 13. I provide students with the opportunity to immerse themselves in different activities that motivate their minds and increase their attentiveness. | 4.07 | 0.520 | 2 | 5 | -0.290 | .132 | 2.330 | .264 |
| 14. I diversify my pedagogy and the way I present the content in consideration of the levels and capabilities of the students. | 3.53 | 0.626 | 1 | 5 | -0.034 | .132 | 0.205 | .264 |
| 15. I summarise some of the existing information within the content provided, I do not compromise the main idea(s) that are to be taught within this topic. | 3.65 | 0.558 | 2 | 5 | -0.193 | .133 | -0.424 | .265 |

| Elements of the dimension Differentiation in the process | Mean | SD | Min | Max. | Asymmetry | | Kurtosis | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Value | St. Dev. | Value | St. Dev. |
| 16. I use activities that are compatible and suited to the skills that students have. | 4.06 | 0.526 | 2 | 5 | -0.425 | .133 | 2.728 | .265 |
| 17. I implement special plans with students (regular classroom activities and supplementary activities for students with learning disabilities). | 3.10 | 0.708 | 2 | 5 | 0.258 | .133 | -0.074 | .265 |
| 18. I prepare special assignments for students. | 3.03 | 0.755 | 2 | 5 | 0.207 | .133 | -0.600 | .265 |
| 19. I provide additional support to students with learning disabilities. | 3.23 | 0.772 | 1 | 5 | -0.002 | .133 | -0.404 | .265 |
| 20. I adjust the time interval that students may need to carry out certain assignments. | 4.04 | 0.474 | 2 | 5 | -0.378 | .133 | 3.776 | .265 |
| 21. I set different levels of expectations to complete an assignment. | 3.76 | 0.612 | 2 | 5 | -0.823 | .133 | 1.162 | .265 |
| 22. I encourage students to interact and participate; I seek to engage them in the topic at hand. | 4.24 | 0.463 | 3 | 5 | 0.740 | .133 | -0.304 | .265 |
| 23. I use technology-based learning that decreases the span of losing attention, disabilities in memorising and low incentives that some students with learning disabilities may have. | 3.34 | 0.608 | 2 | 5 | 0.536 | .133 | 0.257 | .265 |
| 24. I usually form small groups to explain required ideas and skills. | 2.74 | 0.762 | 2 | 5 | 0.723 | .133 | -0.147 | .265 |
| 25. I use diversified learning strategies that suit different pedagogies and achieve the aspired goals. | 3.38 | 0.601 | 2 | 5 | 0.445 | .133 | 0.027 | .266 |
| 26. I provide resources and information to motivate initiative among students for learning | 3.90 | 0.603 | 2 | 5 | -0.201 | .133 | 0.366 | .266 |

| Elements in the dimension Differentiation in teaching resources | Mean | SD | Min | Max. | Asymmetry | | Kurtosis | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Value | St. Dev. | Value | St. Dev. |
| 27. I provide and use technology resources to help increase motivation and incentive among students: reading and writing programmes, word processors, spelling and grammar. | 3.51 | 0.771 | 1 | 5 | 0.019 | .133 | 0.447 | .265 |
| 28. I use digital tools for writing and text, spelling and grammar, and means that aid reading. | 3.50 | 0.752 | 1 | 5 | 0.158 | .133 | 0.134 | .265 |
| 29. I use audio-visual systems capable of reading texts aloud. | 3.46 | 0.77 | 1 | 5 | -0.017 | .133 | 0.652 | .265 |
| 30. I provide different types of learning resources that serve the environment in an enjoyable way that attracts the learners (video, computers and websites). | 4.04 | 0.757 | 1 | 5 | -0.636 | .132 | 0.845 | .264 |
| 31. I provide different learning resources that serve the environment in an enjoyable way that attracts the learners (books, magazines, photographs/images). | 4.07 | 0.733 | 1 | 5 | -0.707 | .133 | 1.245 | .265 |

| Elements in the dimension Differentiation in the outcomes | Mean | SD | Min | Max. | Asymmetry Value | Asymmetry St. Dev. | Kurtosis Value | Kurtosis St. Dev. |
|---|---|---|---|---|---|---|---|---|
| 32. I give students the opportunity to participate in activities as individuals or in groups or in a cooperative manner. | 4.11 | 0.598 | 2 | 5 | -0.126 | .132 | 0.083 | .264 |
| 33. I allow students to present their productions verbally. | 4.13 | 0.621 | 2 | 5 | -0.168 | .132 | -0.154 | .264 |
| 34. I allow students to present their productions verbally (oral presentation, singing, poetry recitation). | 4.11 | 0.623 | 3 | 5 | -0.079 | .133 | -0.459 | .265 |
| 35. I allow students to present their productions in writing. | 4.08 | 0.652 | 1 | 5 | -0.535 | .132 | 1.382 | .264 |
| 36. I allow students to present their productions in performance style (acting). | 4.17 | 0.598 | 3 | 5 | -0.075 | .132 | -0.348 | .264 |

| Elements of the dimension Differentiation in the assessment | Mean | SD | Min | Max. | Asymmetry Value | Asymmetry St. Dev. | Kurtosis Value | Kurtosis St. Dev. |
|---|---|---|---|---|---|---|---|---|
| 37. I rely on continuous and varied assessments of students: pre- and post-assessments | 4.09 | 0.566 | 1 | 5 | -0.574 | .132 | 3.276 | .264 |
| 38. I adopt assessments from teachers and peers. | 3.26 | 0.744 | 1 | 5 | -0.460 | .132 | -0.366 | .264 |
| 39. I use a rating scale (rubrics) to assess the students. | 3.04 | 0.784 | 1 | 5 | 0.044 | .133 | -0.716 | .265 |
| 40. I print out test papers using a big / large font that is suited to the needs of the students. | 2.85 | 0.663 | 1 | 5 | 0.172 | .132 | 0.001 | .264 |
| 41. I read the questions to the students. | 4.19 | 0.582 | 1 | 5 | -1.045 | .132 | 5.743 | .264 |
| 42. I give a break in the middle of the assessment interval. | 3.73 | 0.726 | 1 | 5 | -0.808 | .132 | 1.428 | .264 |
| 43. I add some illustrative images or drawings to help the students understand the questions. | 3.20 | 0.697 | 1 | 5 | 0.027 | .133 | 0.550 | .265 |
| 44. I assess students according to pivotal and referenced indicators. | 3.55 | 0.666 | 2 | 5 | -0.095 | .133 | -0.182 | .265 |
| 45. I adopt individual and group assessments. | 3.88 | 0.565 | 1 | 5 | -1.017 | .133 | 3.449 | .265 |
| 46. I give some students extra time to answer questions. | 4.16 | 0.457 | 2 | 5 | 0.017 | .132 | 4.135 | .264 |
| 47. I take into consideration the homework and testing paragraphs in classifying via Bloom's classic Taxonomy (remembering, understanding and applying). | 3.43 | 0.673 | 1 | 5 | -0.580 | .133 | 0.588 | .265 |

| **Elements of the dimension Differentiation in classroom management** | **Mean** | **SD** | **Min** | **Max.** | **Asymmetry** | | **Kurtosis** | |
|---|---|---|---|---|---|---|---|---|
| | | | | | **Value** | **St. Dev.** | **Value** | **St. Dev.** |
| 48. I distribute the instructions in different ways to avoid chaos. | 4.21 | 0.576 | 1 | 5 | -0.975 | .132 | 5.655 | .264 |
| 49. I distribute students into homogeneous groups in terms of capabilities. | 2.24 | 0.985 | 1 | 5 | 0.292 | .132 | -0.641 | .264 |
| 50. I distribute students into heterogeneous groups in terms of capabilities. | 3.84 | 0.882 | 1 | 5 | -0.263 | .132 | -0.383 | .264 |
| 51. I monitor the achievements and progress of students within the cognitive portfolio of the student. | 3.49 | 0.654 | 1 | 5 | -0.269 | .132 | 0.156 | .264 |
| 52. I prepare a plan for students who need more time than their peers to complete assignments. | 3.39 | 0.651 | 1 | 5 | -0.092 | .133 | 0.122 | .265 |
| 53. I observe the performance of students and direct them. | 4.22 | 0.466 | 2 | 5 | 0.476 | .133 | 1.183 | .265 |
| 54. I identify the special skills and capabilities of each student in order to try to answer two questions: what does each student know? What does each student need? | 3.62 | 0.596 | 1 | 5 | -0.139 | .133 | 0.317 | .265 |
| 55. I clarify to students the permitted mobility limits. | 4.20 | 0.526 | 2 | 5 | -0.186 | .133 | 2.010 | .265 |
| 56. I train students to take responsibility for their learning by doing their schoolwork and homework. | 3.73 | 0.53 | 3 | 5 | -0.162 | .133 | -0.437 | .265 |
| 57. I train students to put classroom furniture back after activities. | 3.66 | 0.65 | 1 | 5 | -0.500 | .133 | 1.075 | .265 |
| 58. I train students on activities, monitoring those activities and learning their outcomes. | 3.67 | 0.588 | 2 | 5 | -0.385 | .133 | 0.085 | .265 |
| 59. I specify a time to carry out primary concepts and design suitable activities per learner. | 3.82 | 0.588 | 2 | 5 | -0.817 | .133 | 1.593 | .265 |
| 60. I plan how the student submits completed work. | 3.65 | 0.622 | 2 | 5 | -0.266 | .133 | 0.007 | .265 |
| 61. I specify the rules and instructions to carry out an activity. | 4.32 | 0.52 | 3 | 5 | 0.207 | .133 | -0.776 | .265 |
| 62. I focus on a limited number of concepts to ensure students have grasped the concepts. | 3.98 | 0.566 | 2 | 5 | -0.895 | .133 | 3.167 | .265 |
| 63. I provide opportunities for group, pair or individual work. | 3.92 | 0.627 | 2 | 5 | -0.089 | .133 | -0.062 | .265 |
| 64. I set out basic ground rules for the students on the basis of which they will start and finish at the beginning and at the end of the lesson, respectively. | 4.20 | 0.494 | 2 | 5 | 0.087 | .133 | 1.896 | .265 |
| 65. I work on building the teaching material according to the needs of the students. | 3.62 | 0.654 | 2 | 5 | -0.055 | .133 | -0.182 | .265 |

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