

**Investigating differentiated practices during the educational process
with hearing impaired students before and after their training in
differentiating teaching from IEP**

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Abstract

Differentiated teaching is a fundamental educational philosophy that responds to the needs of all students, especially those with hearing impairments. The choice of this specific topic is based on current global educational trends and research findings that highlight the importance of an individualized approach to promoting inclusion and equal participation in the regular classroom. Differentiation facilitates access to knowledge, tailored to the specific needs of each student. In addition, the interest in the topic stems from the researcher's extensive teaching experience and his long-term involvement in teacher education, through the Educational Policy Institute, which provides him with substantial knowledge and understanding of the practical challenges and possibilities of implementing differentiated practices in practice. This study examined the impact of a training program on teachers' practices and shows the importance of the teacher's training. Emphasizes also the importance of equipping teachers with practical tools and strategies through structured training programs.

Keywords: Differentiated Teaching, Primary Teachers, hearing impairment, IEP

Introduction

In recent years, the concept of differentiated teaching has gained increasing attention as an essential approach for promoting inclusive education, particularly for students with hearing impairment. As education systems worldwide shift toward more student-centered and equitable practices, the need to adapt teaching strategies to meet diverse learner needs has become more pressing. This article explores differentiated practices of teachers during educational process with hearing impaired students before and after their training in differentiated teaching from IEP. Drawing on international research and the professional experience of educators actively engaged in teacher training, this work highlights the importance of systematic teacher support and training. It aims to inspire educators to critically reflect on their practice, embrace collaboration, and incorporate new technologies to enhance their instructional methods. Ultimately, it advocates for a flexible, responsive teaching model that acknowledges the uniqueness of each student—and each teacher.

Differentiated teaching

Differentiated teaching is a pedagogical approach designed to address the diverse learning needs, interests, and abilities of students within a classroom. Although widely discussed and implemented in modern education, the conceptual boundaries remain broad, often leading to varied interpretations and implementations. It is a proactive instructional approach that involves tailoring teaching methods, materials, and activities to suit individual student needs. Tomlinson (2014) defines it as a model that modifies content, process, and product based on students' readiness levels, interests, and learning preferences. The goal is to create engaging and appropriately challenging learning experiences that maximize each student's potential. Eikeland (2022) highlights that the term "differentiated teaching" is broad and often used interchangeably with other instructional strategies, making its conceptual boundaries

somewhat fluid. The various terms, rationales, and applications across different subjects and education systems contribute to the complexity of the concept. Despite this ambiguity, the core of differentiated teaching lies in its commitment to equity and inclusion in the classroom by meeting students where they are academically and emotionally. Recent studies explore both the benefits and limitations in real-world classrooms. Pozas, Letzel, and Schwab (2020) conducted a study involving secondary teachers in Germany and found that while most educators valued differentiated teaching, their practical application of it varied significantly. This variation was influenced by teachers' confidence, subject matter, time constraints, and institutional support. Smets, De Neve, and Struyven (2020) focused on how teachers develop the skills necessary for differentiated teaching through professional learning communities and ongoing training. They reported that while professional development helped teachers better assess student differences and adapt instruction, many still struggled with effectively managing diverse classroom needs simultaneously. In Indonesia, Hasanah et al. (2022) developed a conceptual model based on teachers' experiences. This model emphasized the importance of reflective practice, contextual sensitivity, and teacher agency in implementing effective differentiation strategies. The study also reinforced that cultural context plays a critical role in shaping how differentiation is understood and practiced. The primary benefit of differentiated teaching is its focus on meeting the unique academic and social-emotional needs of each student. When teaching is personalized, students are more engaged, motivated, and successful. According to Tomlinson and Imbeau (2010), differentiated teaching cultivates a classroom culture that values diversity and fosters student confidence. Nevertheless, significant challenges remain. Teachers frequently cite time constraints, lack of resources, and large class sizes as barriers to effective differentiation (Pozas et al., 2020). Moreover, differentiated teaching is also based on the concept of student motivation and interest. The student's interest is related to his attraction to specific academic subjects. Teachers, by connecting the content of their teaching with the interest of the students, make the teaching more attractive and effective. Thus, they should focus on the centers of interest and have the possibility of utilizing a variety of educational materials, ask a variety of questions to the students and, now having knowledge of their interests, organize various activities (Koutselinis, 2015). Students, on the other hand, discovering and cultivating their inclinations, create new knowledge on topics that concern them and this helps them to participate actively during the teaching. e Panteliadou, S., & Antoniou, F. (Eds.). (2023) emphasized the importance of differentiating the content according to the interest of the students, as through this process the students discover the relationship between the school and their interests, make use of the already existing knowledge and feedback their motivation for learning.

Finally, the differentiation of teaching, as far as the student is concerned, is related to his learning style or learning preference, which is adapted according to his needs and temperament as they are parameters of the personality of each student and are differentiated according to social-cultural context (Matsaggouras, 2018). The student's learning style refers to the particular way in which each student learns (Koutselini & Pyrgiotakis, 2015). In this case, teaching is differentiated, taking into account individual characteristics, but also giving the student room for thought and reflection (Koutselinis, 2010). It is also essential to recognize the different culture of students and to treat children from different cultural backgrounds equally (Koutselinis, 2010). Additionally, without sufficient training, many educators feel ill-equipped to implement the necessary strategies. This highlights the need for ongoing professional development, administrative support, and collaborative planning time. Smets et al. (2020) emphasized that differentiated teaching is a skill that develops over time. Supportive school environments and mentoring from experienced educators are key to helping teachers gain competence and confidence in their differentiation practices. In the modern school classroom, since it includes a diverse student population in terms of their needs and

characteristics, it is necessary to use differentiation practices that will ensure equal learning opportunities for all.

Differentiated teaching and hearing impairment

Differentiated teaching is a vital approach in supporting students with hearing impairment. By recognizing and addressing their unique learning needs, educators can create an inclusive and equitable learning environment that promotes academic success and personal growth. Hearing impairment affects the school performance of students, leading them very often to school failure, but also in the difficulty of their socialization at school, as well the phenomenon of social exclusion is common. For this reason today, it is imperative that children with hearing impairment receive the appropriate educational support to provide equal opportunities to education. The effective teaching of students with hearing impairment presupposes, in addition to the theoretical knowledge of information concerning nature of hearing impairment, the development of skills with the aim of adapting them teaching goals and teaching tools according to their particular needs students (Vernon, M., 2006). It is a demanding process, in which the teacher must take into account, not only the subject to be taught and the student's cognitive level, but also the basic cognitive and motional characteristics of the student. In the area of Special Education, the differentiation of teaching is historically fundamental principle for the effective teaching of all students and mainly students with hearing impairment. Is currently one of the most popular practices in Special Education, which serves in teacher planning programs depending on the particularities and special educational needs every student, in order to achieve equality and social justice. The differentiation of teaching and the partial personalization of teachers programs, it is possible to take place within the environment of the general class, so that the principles of school integration and inclusion are not threatened of students (Stasinou, 2016). Regarding, in particular, students with hearing impairment the use of differentiated teaching practices is considered necessary since teaching and assessment in multiple ways fit together completely in the characteristics of students. In a class where differentiation practices are used, all students may participate in different groups or deal with different materials thus the stigmatization of students with hearing impairment is avoided. The teacher plans it in advance teaching, based on the needs and interests of the students and does not wait to fail the teaching to take corrective action afterwards. As far as the psychological domain is concerned, students develop self-confidence them and feel positive about increasing their performance and achieving their goals. Also, the students' benefits concern their socialization, as they feel in a smaller degree of social exclusion and marginalization and integrate smoothly in the school community. In summary, differentiated teaching refers to a new way management of peculiarities in education, which concerns all students regardless of their characteristics and includes them all equally in educational process and the opportunity to learn and develop their skills. Its application is today a challenge for teachers, who they will have to adapt to this new way.. It is a promising educational strategy, which can lead in equality and justice in school, as well as in school and social inclusion of all students, regardless of their particularities. Particularly hearing impaired students can affected to language development communication skills, and academic performance. Students with hearing impairments often face challenges in accessing auditory information, which can impact their learning experiences.

Purpose and importance of the research

The primary aim of this research is to compare the implementation of the principles of differentiated teaching for students with hearing impairment before and after teachers receive training provided by the Institute of Educational Policy (IEP) under the auspices of the Greek Ministry of Education. The training program implemented by the Institute of Educational Policy of Ministry of Education co-funded by Greece and the EU. The program

titled “Training in Practices for Supporting Students within the Framework of Differentiated Teaching ”, was designed to equip educators with practical strategies for applying Differentiated Teaching in heterogeneous classrooms (IEP, 2022). The seminar was structured into five thematic units: Introduction to Differentiated Instruction and Theoretical Framework, Differentiation of the Social Learning Environment, Differentiation for Students with Disabilities and/or Special Educational Needs, Differentiation for Roma Students, Differentiation for Students with Refugee or Migrant Backgrounds. This structure reflected a holistic approach to inclusion by addressing diverse learner profiles (IEP, 2022). Training was delivered via synchronous online sessions, totaling 14 hours, supported by scenario-based exercises and practical case studies. Approximately 25,000 teachers across primary, secondary, and special education participated, marking the seminar as one of the most extensive DT training efforts in Greece (IEP, 2022). The primary objectives included improving the quality of instruction in diverse classrooms, reducing school failure and dropout rates, and promoting equity through inclusive pedagogical practices. The program emphasized flexible grouping, adaptation of content, process, and product, and highlighted the use of assistive technologies for students with disabilities, aligning with the principles of Universal Design for Learning. The impact of the seminar is twofold: First, it contributed to building teacher capacity in designing inclusive, differentiated lessons informed by UDL guidelines. Second, it established a framework for embedding DT practices across Greek schools through ongoing professional development (IEP, 2022). This initiative demonstrated the alignment between national policy, teacher training, and international best practices for inclusive education. The study seeks to assess the effectiveness of this training in equipping teachers with the skills, knowledge, and confidence required to apply these strategies regarding the teaching content, teaching process and teaching resources in inclusive classrooms, particularly when supporting students with hearing difficulties.

Hypothesis formulation

The research questions and hypotheses that guide this study are derived from the core objectives of the research and are grounded in the theoretical framework established through an extensive review of the relevant literature on differentiated teaching and inclusive education. The study aims to explore the relationship between teacher training and the implementation of differentiated teaching, particularly in the content, process and resources of educating students with hearing impairment. The study is guided by the following key research questions and hypotheses:

1. Teacher Training and Implementation of Differentiated Teaching. *Research Question:* Does teacher training affect the implementation of differentiated teaching in everyday classroom practice? *Hypothesis (H1):* Teachers who have received specific training in differentiated teaching are more likely to apply differentiation strategies effectively in their daily teaching practices.
2. Extent of Differentiation for Students with Hearing Impairment. *Research Question:* To what extent do teachers differentiate instruction for students with hearing impairment in the following areas: content, process, resources, product, assessment, and classroom management? *Hypothesis (H2):* The level of differentiation in each of the identified instructional domains is positively correlated with the level of training the teacher has received in differentiated or inclusive teaching.
3. Teachers training and use of differentiated teaching resources. *Research Question :* Are there statistically significant differences in teachers’ use of differentiated teaching resources, particularly technological tools to enhance student motivation, before and after training? *Hypothesis(H3):* After participating in relevant training, teachers are expected to increase their use of differentiated teaching resources, particularly technological tools to enhance student motivation.

Sample

The research sample for this study will comprise ten teachers working in both public and private schools located in the prefectures of Thessaly, Greece. This selection ensures representation from diverse educational environments, allowing for a broader understanding of current practices and perceptions related to differentiated teaching, particularly in inclusive classroom settings. These 10 teachers participated in the course about differentiated teaching from IEP and worked with hearing impaired students the previous school years. The sample structure has been carefully designed to include a wide range of demographic and professional characteristics. Specifically, data will be collected on each participant's gender and age, which may provide insights into generational or gender-based perspectives on differentiated teaching. In addition, the employment relationship—whether permanent, temporary, or part-time—will be documented to explore how job stability might influence teachers' engagement with inclusive education strategies. Academic and professional background is also considered a key variable. Special attention will also be given to participants' education or training in differentiated teaching, which is central to the focus of this study.

Research tool

To collect the necessary data for this study, a questionnaire was designed, drawing upon the instrument developed by Karam Siam and Mayada Al-Natour (2016), which was originally used to assess teachers' perceptions and practices. The reliability of the instrument was ensured through its foundation on the validated questionnaire developed by Karam Siam and Mayada Al-Natour (2016), which demonstrated robust psychometric properties in previous research. Particular attention was given to maintaining construct validity and internal consistency during the adaptation process. In the present study, reliability will be examined using Cronbach's alpha to confirm internal consistency across the different dimensions of the questionnaire. This approach guarantees that the tool provides stable and dependable results, suitable for both descriptive and inferential analysis. Their validated tool served as a foundational reference, ensuring both relevance and reliability in the formulation of the current questionnaire items. The questionnaire was structured to include both closed-ended questions using Likert-scale formats and demographic items to gather background information about the participants. To ensure accessibility and ease of distribution, the questionnaire was administered electronically. Participants received the link to the online form via email and Google Forms, allowing them to respond at their convenience. The use of an online platform ensured timely responses, automatic data entry, and easier integration with data analysis tools such as Excel and SPSS.

Limitations of the research

While the findings of this study provide valuable insights into differentiated teaching practices and teachers' perceptions—particularly in relation to students with hearing impairment it is essential to acknowledge the limitations that may affect the generalizability and applicability of the results. One of the primary limitations lies in the geographical scope of the sample. The research was conducted solely among teachers in the prefecture of Magnesia, a specific region of the country. As such, the perspectives, practices, and challenges captured in the data reflect the educational context, policies, and school culture of that particular area. This regional focus means that the findings may not be fully representative of the broader population of teachers across other regions, especially those with different socioeconomic conditions, institutional resources, or levels of training in inclusive education. Furthermore, regional differences in access to professional development, exposure to students with special needs, and support structures for inclusive practices may vary significantly. As a result, caution should be exercised when attempting to generalize the outcomes of this study to national or international contexts. The homogeneity of the sample

also means that variables such as urban versus rural teaching environments or public versus private school settings were not extensively explored. Despite these limitations, the study offers a meaningful contribution to the understanding of differentiated teaching within the specified context. Future research is encouraged to include larger and more diverse samples, incorporating participants from different geographical areas and educational settings. This would allow for more comprehensive conclusions and enhance the external validity of the research.

Results

A total of 10 teachers participated in the study. Regarding their educational background, 60% held a basic degree, 30% held a postgraduate degree, and 10% held a doctoral degree. In terms of their work placement, the majority 80% were employed in public schools, while 20% worked in private institutions. Furthermore, 60% of the participants reported being familiar with differentiated teaching or having received relevant training. Notably, 50% stated that they had attended seminars or specialized training programs related to differentiated instruction.

Table 1. Demographics of 10 teachers who participated in the study

		v	%
Education	Degree	6	60.0%
	Postgraduate	3	30.0%
	PhD	1	10.0%
Work Placement	Public	8	80.0%
	Private	2	20.0%
You were familiar with differentiated teaching or trained in differentiated practices	Yes	6	60.0%
	No	4	40.0%
What kind of studies have you done about differentiated instruction?	Seminars-Training in	5	50.0%
	Special education		

Table 2. Data regarding the age and work experience

	Average	TA	Min	Max
Age	48.8	7.6	37.0	60.0
Work Experience	21.9	5.6	13.0	30.0

Table 2 shows the results of the analysis regarding the age and work experience of the teachers who participated in the study. The average age of the sample was 48.8 years while the age range among the 10 teachers ranged from 37 to 60 years. Additionally, the average length of service of the teachers who participated in the study was 21.9 years while the range of work experience among the 10 teachers ranged from 13 to 30 years.

Table 3. Effect of Training on Teachers' Differentiation Practices Regarding Teaching Content

#	Statement	Before Avg	Before SD	After Avg	After SD	Z	p
1	I plan lessons well in advance of each lesson	2.5	0.7	2.6	0.5	-1.000	0.317
2	I incorporate differentiated instructional processes when planning instruction	2.4	0.7	2.9	0.3	2.236	0.025
3	I set clear and specific course objectives	2.7	0.7	2.9	0.3	-1.414	0.157
4	I determine the appropriate amount of time per learning objective	2.5	0.8	2.7	0.5	-1.414	0.157
5	I consider individual differences and variations among students due to their impact on classroom behavior	2.6	0.5	2.8	0.4	-1.414	0.157
6	I adapt educational content to suit needs, e.g. tying content to skills a student wishes to learn	2.5	0.7	2.8	0.4	-1.732	0.083
7	I provide support to students and encourage problem solving	2.7	0.5	2.8	0.4	-1.000	0.317
8	Content selection: I identify main ideas of a topic or section	2.7	0.5	2.9	0.3	-1.414	0.157
9	I consider scope aligned to different students' capabilities	2.5	0.7	2.8	0.4	-1.732	0.083
10	I do not deviate from the standard level every student should reach	2.4	0.7	2.6	0.7	-1.000	0.317
11	I present content at different speeds and do not engage all students at the same time	2.6	0.5	2.9	0.3	-1.732	0.083
12	I summarize content rather than isolating main ideas	2.7	0.5	2.9	0.3	-1.414	0.157
13	I offer activities that stimulate attention and engagement	2.7	0.5	2.9	0.3	-1.414	0.157
14	I vary how I present content (discussions, audio-visuals, projects) based on students' levels and abilities	2.6	0.7	2.9	0.3	-1.732	0.083
15	I tailor content to cognitive levels (e.g., reading levels, multimedia aids)	2.5	0.7	2.8	0.4	-1.732	0.083

Table 3 presents the findings of the analysis regarding the extent to which teachers used differentiation practices in the teaching content, before and after the training. The findings showed that of the 15 practices, a statistically significant difference was recorded after the training compared to before only in whether teachers incorporate differentiated instructional processes when planning instruction. The results show that after the training teachers incorporate to a greater extent differentiated teaching procedures when planning teaching compared to before the training. In the remaining 14 practices, no statistically significant difference was recorded after the training compared to before the training at the 5% significance level. On the contrary, we observe that at a significance

level of 10% the results show that the teachers after the training adapt the educational content to a greater extent to fit the educational needs, take into account to a greater extent the scope to be in line with the capabilities and needs of different students, present the content to the students to a greater extent at different speeds present the content to a greater extent in different ways and examine to a greater extent cognitive levels between students. These findings show that although these differences are not verified at the 5% significance level, they can be verified at the 10% significance level. A major limitation in verifying differences at the 5% significance level is the small sample size.

Finally, Table 3 shows that there is a statistically significant difference after the training compared to before in the degree to which teachers make use of differentiation practices in the content of their teaching. The results show that after the training teachers make use of differentiation practices in the content of their teaching to a greater extent compared to before the training.

Table 4: Changes in Teachers’ Use of Differentiation Practices Before and After Training

#	Statement	Before (M)	Before (SD)	After (M)	After (SD)	Z	p
1	I use activities that are compatible and appropriate with the skills students have	2.8	0.4	2.9	0.3	-1.000	0.317
2	I implement special plans for the students (regular activities in the classroom and supplementary activities for students with hearing problems)	2.6	0.7	2.9	0.3	-1.732	0.083
3	I prepare special assignments for the students	2.7	0.7	2.9	0.3	-1.414	0.157
4	I adjust the amount of time students may need to complete certain tasks	2.6	0.7	2.7	0.5	-1.000	0.317
5	I provide additional support for hearing impaired students	2.7	0.7	2.9	0.3	-1.414	0.157
6	use technology-based learning that reduces attention deficits, memory difficulties, and low motivation in some hearing impaired students	2.6	0.7	2.9	0.3	-1.732	0.083
7	I usually form small groups to explain the necessary ideas and skills	2.6	0.7	2.9	0.3	-1.732	0.083

Table 4 presents the findings of the analysis regarding the extent to which teachers used differentiation practices in the teaching process, before and after the training. The findings that in all 8 practices no statistically significant difference was recorded after the training compared to before the training at the 5% significance level, but three significant differences were recorded at the 10% significance level. The results show that after the training teachers implement to a greater extent special plans for students use learning to a greater extent based on technology that reduces the range of distraction and form more small groups to explain the necessary ideas and skills.

Finally, Table 4 shows that there is a statistically significant difference after the training compared to before in the degree to which teachers use differentiation practices in their teaching process. The results show that after the training teachers use differentiation practices in their teaching process to a greater extent compared to before the training.

Table 5: Changes in Teachers’ Use of Differentiation Practices in Teaching Resources Before and After Training

#	Statement	Before (M)	Before (SD)	After (M)	After (SD)	Z	p
1	I use technology resources to increase student motivation: reading and writing programs, word processors, spelling and grammar tools	2.5	0.7	2.8	0.4	-1.732	0.083
2	I use writing and text programs (word processors), spelling and grammar tools, and reading aids such as audio recorders	2.6	0.7	2.7	0.5	-1.000	0.317
3	I use audio-visual systems that allow texts to be read aloud	2.5	0.8	2.7	0.7	-1.414	0.157
4	I use different learning resources that serve the environment in a pleasant and engaging way	2.7	0.5	2.9	0.3	-1.414	0.157
5	I use different types of learning resources that engage students (videos, computers, and websites)	2.7	0.5	2.9	0.3	-1.414	0.157

Table 5 presents the findings of the analysis regarding the extent to which teachers used differentiation practices regarding teaching resources, before and after the training. The findings showed that in all 8 practices no statistically significant difference was recorded after the training compared to before the training at the 5% level of significance, but a significant difference was recorded at the 10% level of significance. Results show that post-training teachers use technological resources to a greater extent to increase student motivation.

Finally, Table 5 shows that there is a statistically significant difference at a 10% level of significance after the training compared to before in the degree to which teachers use differentiation practices in teaching resources. The results show that after the training, teachers make use of differentiation practices in teaching resources to a greater extent compared to before the training.

Conclusions

The demographic analysis of the participants provides important context for interpreting the findings of the study. A total of 10 teachers participated, with an average age of 48.8 years ranging from 37 to 60 years. This indicates that the sample comprised mid- to late-career educators with considerable life and professional experience. In terms of teaching experience, participants reported an average of 21.9 years in the profession, with individual experience ranging from 13 to 30 years. These figures suggest that the teachers in this study are seasoned professionals, potentially more reflective and receptive to adapting their pedagogical practices in response to professional development. Research indicates that experienced educators often show increased willingness to engage in differentiated instruction when they perceive it as relevant and effective for addressing student diversity (Valli & Buese, 2007; Goodnough, 2010). Their long-standing familiarity with the classroom environment may have enabled them to integrate new strategies more effectively after participating in the training. Furthermore, the high average experience level of participants adds depth to the study, as changes in teaching behavior following training can be seen as particularly meaningful when they occur among veteran teachers, who may otherwise be less inclined to alter long-established instructional routines. This study examined the impact of a training program on teachers’ differentiation practices regarding teaching content, the instructional process, and

the use of teaching resources. Despite the small sample size (N=10), the results suggest a generally positive effect of the training, particularly in lesson planning, the use of technology, and adjustments for students with hearing impairments. A statistically significant improvement was observed in the extent to which teachers incorporated differentiated instructional processes during lesson planning. Additionally, several other practices showed positive trends at the 10% significance level, including adapting content to student needs, presenting content at different paces, using various methods, and considering students' cognitive levels. These findings align with previous research that highlights the role of professional development in improving differentiated instruction practices (Tomlinson, 2014; Brighton et al., 2005) and the results support the hypothesis 1 that training contributes to more effective implementation.

Although no statistically significant differences were found at the 5% level, meaningful improvements were noted at the 10% level. These included the implementation of specialized plans for students with hearing difficulties, greater use of assistive technology to address attention and motivation challenges, and the increased formation of small instructional groups. This indicates enhanced responsiveness to the diverse needs of learners, consistent with inclusive teaching strategies (Mastropieri & Scruggs, 2018). Teachers reported increased use of technological tools to enhance motivation and engagement after the training. The results suggest that teachers became more confident and consistent in using various multimedia resources and assistive technologies, a finding that echoes the growing emphasis on Universal Design for Learning (CAST, 2018). Taken together, the findings support the hypothesis 2 that targeted training can effectively enhance teachers' differentiated instruction practices. The statistically significant improvements in specific teaching behaviors and the broader positive trends suggest a beneficial impact, even though the small sample size limited the statistical power. These results are consistent with the broader literature advocating for sustained, focused professional development in differentiated teaching (Tomlinson, 2014; Reis et al., 2011). This study emphasizes the importance of equipping teachers with practical tools and strategies through structured training programs. The modest but meaningful improvements observed post-training underscore the potential of even short-term interventions to enhance inclusive and differentiated teaching. Future research should: Include larger and more diverse samples to increase generalizability and statistical power. Employ qualitative methodologies (e.g., interviews or classroom observations) to gain deeper insight into how teachers implement differentiation. Investigate the long-term retention and application of differentiation strategies following training. As far as hypothesis 3 the findings showed that in all 8 practices no statistically significant difference was recorded after the training compared to before the training at the 5% level of significance, but a significant difference was recorded at the 10% level of significance. Results show that post-training teachers use technological resources to a greater extent to increase student motivation. After the training teachers make use of differentiation practices in teaching resources to a greater extent compared to before the training. Overall, the data indicate a meaningful trend toward improvement, even if significance at the stricter level was not always achieved. The results are consistent with the broader literature that suggests training can increase teacher confidence and application of differentiation (Goodnough, 2010; Tomlinson, 2014).

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