

Beyond 'One-Size-Fits-All' Teaching: Embracing the Learner-Centered Paradigm Through Differentiated Instruction

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Abstract:

It is widely recognized among researchers and practitioners that one-size-fits-all teaching is less effective in meeting learners' diverse needs than learner-centered approaches. Therefore, the shift toward a learner-centered paradigm through differentiated instruction has become a transformative teaching practice that addresses this issue. By tailoring their instruction to individual needs and differences, teachers can create inclusive, learner-centered environments where every learner can thrive. Through reviewing the literature, this article aims to provide a comprehensive understanding of differentiated instruction by exploring its core concepts and fundamental principles in light of the learner-centered paradigm. Drawing on existing research and best practices, it also seeks to provide teachers with insights and practical strategies to implement differentiated instruction effectively in their classrooms.

Keywords: differentiated instruction, differences, inclusive, learner-centered, needs

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1. Introduction

Throughout the last four decades, the field of language education has undergone a significant paradigm shift in teaching methodologies, embracing learner-centered approaches as a viable alternative to traditional one-size-fits-all instruction. This transition has been driven by lacunae identified in schools and classrooms worldwide. In this context, it has been observed that most schools prioritize standardization, meaning that students often advance with the class regardless of whether they have fully grasped the material, resulting in learning gaps and increased dropout rates (Watson & Reigeluth, 2008). Additionally, classrooms often lack the flexibility to accommodate variations in student needs (Tomlinson & Allan, 2000). In essence, many teachers overlook the diversity among learners and struggle to provide experiences that align with their developmental levels and paces. Despite extensive research on the myriad characteristics of individual learners, teachers still face challenges in appropriately addressing these differences (Ellis & Shintani, 2014). Crafting approaches that adeptly cater to the multifaceted aspects of learners' academic, linguistic, cultural, and social diversity remains a continual challenge for educators (Whitley et al., 2021).

In contemporary educational discourse, Differentiated Instruction (DI, henceforth) has gained momentum as a learner-centered approach that addresses learner heterogeneity in today's classrooms. DI seeks to cater to learner differences by adapting the curriculum, customizing the learning/teaching environment, and implementing various differentiated instructional strategies. In other words, DI represents a deliberate educational endeavor to bridge the gap left by traditional teaching in effectively fulfilling the diverse needs of all learners. Accordingly, this article explores the benefits of moving beyond one-size-fits-all teaching and argues for adopting DI as a learner-centered approach. It also discusses the theoretical foundations of DI and illustrates, through practical examples, how to put it into practice. The article provides teachers with differentiated instructional strategies to implement and, therefore, create inclusive, learner-centered environments where learners can achieve their potential. Additionally, it addresses some challenges and barriers that may impede the implementation of DI and suggests relevant solutions to overcome them.

2. Learner-Centeredness and Paradigm Shift

The inadequacy of one-size-fits-all instruction in accommodating learner diversity has prompted a shift toward a learner-centered paradigm where individual learning needs are prioritized. This educational shift aligns with the principle of equity in education, a fundamental tenet of learner-centered learning, which emphasizes that active learner involvement necessitates the provision of fair and equal opportunities (Erben et al., 2009, p. 56). In line with this, McCombs and Whisler (1997) define learner-centeredness along two interrelated dimensions:

- [1] a focus on individual learners (their heredity, experiences, perspectives, backgrounds, talents, interests, capacities, and needs) with [2] a focus on learning (the best available knowledge about learning and how it occurs and about teaching

practices that are most effective in promoting the highest levels of motivation, learning, and achievement for all learners). (p. 11)

In student-centered environments, instructors relinquish some of their control and share it with their students, allowing them to explore, experiment, and discover independently (Nunan, 1988). Learners are thus empowered in their educational journey (Jonassen, 2000) as they become involved in generating, comprehending, and connecting to knowledge (McCombs & Whistler, 1997). In contrast to those who rely on one-size-fits-all instruction, learner-centered teachers typically foster positive personal connections with students, cater to individual preferences and learning needs, and encourage self-regulated learning (McCombs & Lauer, 1997, as cited in Gheysens et al., 2020).

One of the most effective approaches that fall under the umbrella of student-centeredness is differentiated instruction, which offers multiple pathways to address the varying needs of learners in multi-ability classrooms (Gheysens et al., 2020; Gibbs, 2023; Whitley et al., 2019). While the concept itself is not recent (Woolfolk, 2016), this teaching practice has garnered significant interest, especially in language education (Erben et al., 2009), because of its perceived ability to cater to student diversity (Heng & Song, 2020). Following the Salamanca Statement and Framework for Action on Special Needs Education by UNESCO in 1994, which advocated for adapting curricula to children's needs rather than the opposite, educational systems worldwide have sought to ensure access and participation for learners from diverse backgrounds and abilities in inclusive schools (Graham et al., 2020). Consequently, DI has gained global prominence as many countries have integrated it into their educational policies and resources across diverse classroom levels, including preschool, elementary, secondary, and post-secondary (Whitley et al., 2019).

The demand for DI has been heightened by several advancements in the field of education, such as the increasing heterogeneity of modern classrooms and initiatives for inclusive education, in addition to the recognition that a one-fits-all approach is no longer effective in addressing learners' diverse needs (Smale-Jacobse et al., 2019; Tomlinson, 1999). In this vein, Schwab and Woltran (2023) claim that DI outperforms traditional one-size-fits-all approaches as contemporary educational directions progress toward inclusive teaching. DI acknowledges the increasing diversity among today's students and plays a progressively vital role in catering to their unique learning differences (Bi et al., 2023) while promoting inclusivity and equitable learning opportunities (Whitley et al., 2021).

The shift toward DI has been further catalyzed by research demonstrating its positive impacts on students' learning across diverse educational settings (Gheysens et al., 2020). Maximizing student growth and individual success by tailoring instruction to meet diverse learning needs is the main aim of DI (Tomlinson & Allan, 2000). Researchers suggest that learning outcomes can improve when teachers address students' diversity effectively (Tomlinson, 2005). In their review of twenty-three studies exploring the benefits and

challenges of implementing DI, Mirawati et al. (2022) found that differentiated instruction has several advantages, including motivating low-achieving students, increasing students' achievement, promoting student participation, interaction, and cooperation, and strengthening teacher-student relationships.

Numerous studies have also shown that DI has the potential to enhance classroom engagement, learning interest, enthusiasm, self-confidence, and academic performance (Bi et al., 2023; Yuen et al., 2023). Commitment to learning tasks can improve when systematic and purposeful planning for DI is based on students' interests and readiness levels (Mcgarvey et al., 1997). Furthermore, researchers have found that DI enhances not only academic outcomes but also contributes to non-academic areas, such as social-emotional development (Scarparolo & Subban, 2021; Schwab & Woltran, 2023). However, it is worth noting that the impact of DI may not always be straightforward, as studies have highlighted several intricate variables, both at the teacher and contextual levels, which can affect its implementation (Bi et al., 2023).

Differentiated instruction rests upon recognizing and accommodating the diverse needs of students while teaching. Understanding DI's conceptual foundation is inevitable in drawing a perspicuous view of the concept and its effective classroom implementation to optimize the possible favorable outcomes of the learning process. Consequently, the next title is devoted to providing definitions of the concept and an account of its theoretical underpinnings.

3. Differentiated Instruction: Concept Definition and Theoretical Underpinnings

3.1 Concept Definition

Throughout its history, differentiated instruction has been viewed differently by various scholars. The term was originally used to describe curriculum adaptations tailored for gifted students (Scarparolo & Subban, 2021). Over time, its meaning has broadened to encompass all forms of adjustments and adaptations in curriculum, instruction, and assessment made by teachers within mainstream or inclusive classrooms to ensure that the individual needs of every student are met (Gibbs, 2023; Scarparolo & Subban, 2021). The concept is now widely used in many countries to convey the idea of adaptive instruction (Westwood, 2008) intentionally planned and implemented by teachers in their lessons to facilitate students' learning (Tomlinson et al., 2003). DI is often regarded as a pedagogical-didactic approach offering teachers a foundational basis for addressing the varied learning needs of students (Smale-Jacobse et al., 2019) or a pedagogical strategy enabling students to collaboratively engage in meaningful activities appropriate to their levels and individual progress (Erben et al., 2009). However, current perspectives (e.g., Tomlinson, 2017) extend beyond conceptualizing DI merely as a teaching approach or a strategy *per se*.

Tomlinson, the foremost US proponent of DI (Westwood, 2008), is credited with coining the term (Gheyssens et al., 2020) and for her efforts in popularizing and systematizing DI in inclusive classrooms during the 1990s (Heng & Song, 2020). She has put forward the most widely recognized definitions of the term (Bondie & Zusho, 2018; Scarparolo &

Subban, 2021). Tomlinson defines DI as “a teacher’s response to learner’s needs guided by general principles of differentiation such as respectful tasks, flexible grouping, and ongoing assessment and adjustment” (Tomlinson, 1999, p. 15). She further argues that DI is based on a philosophy that attempts to reduce student labeling by focusing on the learning needs of specific students or small groups rather than assuming that all learners in the class are the same (Tomlinson, 2017; Tomlinson & Allan, 2000). In this vein, she (2017, p.10) states that “the teacher proactively plans and carries out varied approaches to content, process, and product in anticipation of and response to student differences in readiness, interest, and learning needs.”.

Differentiated instruction can be regarded as the result of an ongoing decision-making process that involves teachers’ active observation of and listening to variations in students’ academic abilities, which may either enhance or hinder learning effectiveness and efficiency (Bondie & Zusho, 2018). Differentiation involves incorporating flexibility in teaching (Graham et al., 2020). Teachers can implement adaptable whole-class instruction, allowing various ways to receive information and demonstrate learning rather than making individual adjustments (Tomlinson, 2001). Nonetheless, some researchers warn that teachers may perceive DI as equivalent to individualized learning due to broad interpretations of the term, implying that they must work round the clock to provide each student with unique materials (Bondie & Zusho, 2018). To clarify the ambiguity around the concept’s definition, Erben et al. (2009, p. 57) provide further details (see Table 1) to distinguish between what differentiated instruction is and what it is not.

Table 1. What differentiated instruction is and is not

DI is	DI is not
1. Having a vision of success for our students. 2. Providing a variety of assignments within units of instruction, realizing that students do not all learn in the same way. 3. Recognizing the variance in learning styles of our students. 4. Allowing students to choose, with teacher direction, the route to their learning. 5. Providing opportunities for students to demonstrate proficiency in an area they already know and allowing them to move forward. 6. Offering tiered lessons, of varying degrees of difficulty, dealing with similar content.	1. Individualization. It is not a different lesson for each student each day. 2. Giving all students the same work or even identical assessments all of the time. 3. Assuming that all students learn by listening. 4. Merely having centers in the classroom. 5. Assigning more work to students who have demonstrated mastery in an area. 6. Only for students who demonstrate a need for acceleration.

Source: Erben et al. (2009, p. 57)

One might argue that differentiated instruction is based on a teaching philosophy that values learners' differences by providing them with learning opportunities appropriate to their unique needs and developmental paths. Giving learners choice and voice in their educational journey is integral in DI because it allows them to demonstrate their learning in various ways. In part, this requires teachers' ongoing assessment and decision-making to ensure more flexibility in the classroom. It is essential, however, to note that DI is not similar to other instructional approaches like individualized or personalized teaching, nor should it become a free-for-all practice.

3.2 Theoretical Underpinnings

Differentiated Instruction is grounded in a socio-constructivist paradigm (Gheysens et al., 2020, p. 255), encompassing various teaching approaches that advocate for active, student-centered, meaning-making learning (Tomlinson & Allan, 2000). As a learning theory, constructivism posits that learning is an active process wherein meaning evolves through experience. Additionally, cognitive growth develops through meaning negotiation, perspective sharing, and collaborative learning, leading to changes in internal mental representations (Merrill, 1991).

DI is theoretically rooted in the Zone of Proximal Development (ZPD) introduced by Russian psychologist Lev Vygotsky (Tomlinson & Moon, 2013). Vygotsky, a pioneer of the constructivist movement in education, suggests that learning experiences should be presented to learners just beyond their current abilities without causing failure or frustration (Graham et al., 2020). ZPD relies on the belief that there exists a given area identified by the distance between the learner's current developmental stage, determined by their problem-solving abilities, and the potential developmental stage, defined by problem-solving with support from adults or collaboration with peers with advanced capabilities (Vygotsky, 1978, as cited in Pritchard & Woollard, 2010). However, due to variations in both development and experience among learners of the same age, zones of proximal development are not identical, highlighting the necessity to differentiate instruction to meet each learner's level of readiness (Tomlinson & Allan, 2000).

Educational psychologists have emphasized that interest is another area of variation among learners and for which teachers need to differentiate their instruction. Interest has been shown to serve as an influential motivational force that stimulates learning, shapes academic and professional pathways, and constitutes a cornerstone in achieving academic success (Harackiewicz et al., 2000). When individuals are interested in some topics, they become part of their focus, which results in increased attention to them. Students' interest can impact learning in a significant way as it boosts their engagement and satisfaction and raises individual challenges. When the teacher cultivates student interest, the learning process becomes more rewarding, leading to greater learner autonomy (Bruner, 1961, as cited in Tomlinson & Allan, 2000).

DI is also underpinned by the belief that learners differ considerably in what Tomlinson refers to as learning profiles, including various elements of learning styles,

intelligence preferences, and influences of gender and culture. Several educationalists and psychologists have contributed to understanding how learning styles and multiple intelligences shape learner educational experiences and lead to different learning pathways. Researchers have also extensively explored how gender and culture can lead to differences among learners in educational settings. For example, gender and culture can significantly impact an individual's perception and interaction in the classroom. Moreover, certain aspects of the educational process can be advantageous to a given gender or cultural group while placing others at a disadvantage. Socialization norms and culturally-bound learning and communication styles that conflict with the dominant classroom beliefs and attitudes can lead to discrepancies, causing misinterpretation of learners' behaviors or the misalignment of learning opportunities (Tomlinson & Allan, 2000).

Upon review, the theoretical underpinnings of DI posit that learners exhibit variations in three interrelated areas: readiness, interest, and learning profiles encompassing learning styles, intelligence preferences, and influences of gender and culture. In this sense, it is safe to claim that DI acknowledges the value of recognizing student diversity and its importance in meeting their individual needs. Teachers are, hence, tasked with designing and aligning their instructional practices accordingly.

4. Differentiated Instruction in Practice

4.1 Dimensions of Differentiated Instruction

To cater to learners' individual needs and differences through a differentiated approach, teachers can essentially target three dimensions of the curriculum: content, process, and products.

a) Content Differentiation

Teachers in a differentiated classroom can adapt content that includes facts, attitudes, concepts, principles, and skills related to a subject. Content also encompasses materials that contain these elements, which serve as resources for teaching and learning (Tomlinson & Allan, 2000). Content acts as the input for both teachers and learners. Differentiating it can be approached in either of two ways: adjusting what teachers teach their students and what they want them to learn or changing how students are provided access to what they are taught or what learners are required to learn (Tomlinson, 2017). To differentiate access to content, teachers can carry out the following:

- Utilize texts or novels with varying reading levels;
- Employ both whole-to-part and part-to-whole instructional approaches while presenting information;
- Implement diverse reading-buddy arrangements to assist and challenge students when they work on text materials;

- Provide reteaching time for students who require additional demonstrations or exempt those who have already mastered the content;
- Leverage texts, computer programs, recordings, and videos to convey essential concepts to different learners (Tomlinson & Allan, 2000, p. 08).

Adjusting the content of the curriculum may also involve reducing the amount of material covered for students with learning difficulties and simplifying or deleting complex concepts. For gifted students, it may conversely involve engaging them in more extensive work and fostering autonomy in their tasks. This differentiation practice is known as curriculum compacting (Westwood, 2008).

b) Process Differentiation

Teachers can adjust the learning process, which involves making sense, comprehending, and internalizing essential information and skills. This process can also be described as a sense-making activity, highlighting that the activity is most effective when key aspects of what students need to learn, comprehend, and accomplish are directly targeted (Tomlinson, 2017; Tomlinson & Allan, 2000). In this case, the learning activities assigned to different students or groups may vary, with some being more complex than others, with the teacher tailoring the resource materials accordingly (Westwood, 2008). Other examples of process adjustment may include:

- Offering different options at various levels of difficulty or based on different individual student interests;
- Providing varying amounts of assistance from teachers and students for a task;
- Allowing choice for students on how they demonstrate what they grasped during a research activity (Tomlinson & Allan, 2000, p. 8).

c) Product Differentiation

A teacher can adjust the product of the curriculum, which refers to what the student can utilize to showcase proficiency with fundamental knowledge, understanding, and skill at the end of an extended period of study, as well as their ability to apply and transfer that into real-world contexts outside the classroom. Product adjustment is essentially summative, involving grading (Tomlinson, 2017). What students produce can be tangible, such as a written work, a diagram, or an object, or it can take other types of outputs, like an oral report, a performance, a presentation to the group, participation in a discussion, or answering oral questions. The amount, type, or quality of each student's work is not necessarily similar to that of other students in class. Additionally, individual students can negotiate what to produce and how they will produce it (Westwood, 2008). A well-designed product should stimulate students to reflect on their learning, apply their abilities, expand their understanding and skills, and engage in critical and creative thinking (Tomlinson & Allan, 2000). Teachers can differentiate products by:

- Letting students assist in creating products aligned with key learning goals;
- Encouraging students to showcase what they have learned in different formats;

- Allowing flexibility in working arrangements, like individual or group work, to complete the product;
- Offering or encouraging the utilization of different types of resources to prepare the products;
- Providing product assignments at various levels of difficulty to match learners' readiness;
- Utilizing a range of assessment types;
- Collaborating with learners to create quality rubrics that showcase both class-wide and individual goals (Tomlinson & Allan, 2000, p. 09).

Researchers suggest that differentiation in education may extend beyond content, process, and product to include classroom management strategies, teacher-student interactions, classroom environment, and arrangement, as well as assessment and evaluation practices (Westwood, 2008). In differentiating the previously mentioned elements, teachers can employ various strategies to cater to learners' readiness, interest, and learning profiles. Consequently, scholars have proposed different taxonomies and typologies covering a range of instructional strategies.

4.2 Suggested Instructional Strategies

Pozas and Schneider (2019) proposed the most comprehensive taxonomy of DI practices currently available in the literature. Drawing on existing research on DI theory and practice, they identified six categories: tiered assignments, intentional composition of student groups, tutoring systems within the learning group, staggered nonverbal learning aids, mastery learning, and open education/granting autonomy to students.

a) Tiered assignments

It is the most common form of DI and involves adjustments in the learning materials, worksheets, and tasks in quantity and complexity to push students to access information differently. This DI practice benefits low-achieving students by enabling them to participate in meaningful activities, leading to improved academic performance. Additionally, high-achieving students can enlarge and deepen their knowledge and transfer their understanding to other content areas. Differentiation through tiered assignments can be achieved by:

- Providing additional assignments to high-achieving students;
- Offering less complex assignments to low-achieving students;
- Designing activities with varying levels of complexity;
- Allowing faster students to advance to the next assignment (Pozas & Schneider, 2019, p. 79).

b) Intentional composition of student groups

Teachers can utilize two types of intentional grouping of students: homogeneous and heterogeneous within-class grouping. For homogeneous grouping, the teacher provides, either implicitly or explicitly, focused attention and individual assistance to the weaker groups while fostering autonomy within the more competent groups as they work independently on more challenging tasks. This grouping strategy naturally requires tiered assignments as the varying readiness levels require adjustments to the teaching process to accommodate this diversity. Teachers may also group students based on their academic characteristics, such as self-academic concepts, interests, and motivation, as an alternative technique.

c) Tutoring systems within the learning group

Incorporating tutoring systems, or learning by teaching or peer tutoring, is an essential DI practice related to the previously mentioned heterogeneous within-class grouping. In this instructional setting, high-ability students temporarily take on the role of teacher assistants to tutor their lower-ability peers. On the one hand, the tutees will gain by being provided additional individualized instruction. On the other hand, explaining and teaching the content in their own words will benefit the tutors and result in increased responsibility in their learning process.

d) Staggered nonverbal learning aids

Nonverbal learning aids are a specific type of scaffold in the form of help cards (Collins et al., 1989, as cited in Pozas & Schneider, 2019) that students utilize to receive assistance during an assignment. The cue cards enable students to focus on applying the prompt instead of trying to recall it (Rosenshine & Meister, 1992, as cited in Pozas & Schneider, 2019). Nonverbal cues can also promote self-regulation as students can monitor and control their academic development while working on assignments (Conderman & Hedin, 2015, as cited in Pozas & Schneider, 2019). Staggered nonverbal learning aids are deliberately designed series that vary from simple explanations to more complex clarifications or representations of procedures required to accomplish the task students are working on. To optimize the effectiveness of staggered nonverbal learning aids, teachers should strike the right balance of the amount of information or assistance provided. It is necessary to offer enough support to assist students in overcoming learning difficulties without undermining their efforts.

e) Mastery learning

According to Pozas and Schneider (2019), Bloom's (1968) mastery model is the foundational conceptual framework of mastery learning. This model proposes that ongoing progress in learning requires teachers to target the needs of the weaker students, ensuring they achieve at least a basic level of competence. Although lower-performing students are the main focus of mastery learning, higher-performing students can also take advantage. For instance, teachers can incorporate enrichment activities that engage advanced cognitive processes and higher-order thinking skills. Academic games or puzzles, multimedia and technology projects, mind maps, and developing research are some examples of enrichment activities.

Reis et al. (1992, as cited in Pozas & Schneider, 2019) suggested that teachers could adapt their instruction to align with mastery learning principles through curriculum compacting, i.e., reducing the curriculum. Niggli (2013, as cited in Pozas & Schneider, 2019) recommended cooperative mastery learning strategies like group tournaments or competitions where the whole group's performance is assessed and graded rather than individual accomplishments. This strategy fosters an environment where high achievers are encouraged to assist weaker group members, and the weaker peers present the work products to gain rewards or tokens for the whole group. It is also essential to ensure that the activities made available for high-achieving students while incorporating any strategy should be engaging and motivating, ensuring that these students do not perceive them as a burden but as a rewarding experience (Erben et al., 2009).

f) Open education/Granting autonomy to students

Opening involves granting autonomy for learners to decide on the tasks and assignments to work on independently, allowing them to select what best matches their needs. Hence, Tomlinson (2001) suggested using learning centers or stations adjusted to students' ability levels, enabling them to advance at their own pace. Erben et al. (2009) highlighted that learners can explore, discover, create, practice, and apply skills through implementing this strategy. Moreover, learning centers nurture skills in critical thinking, autonomous learning, and cooperative learning strategies. Teachers can design centers around themes, student interests, subject areas, literacy skills, and research topics. Scholars have proposed other types of open education, including project-based learning, learning journals and portfolios, the jigsaw puzzle, think-pair-share, and interest-based centers (Pozas & Schneider, 2019).

It is worth noting that numerous instructional strategies are available in the literature to practice DI; the broad categorization mentioned so far only aims at offering teachers an overview of how they can incorporate DI into their classrooms. It is also crucial to remember that teacher decisions of when and how to differentiate instruction constitute the foundational step for DI implementation. In this respect, several scholars advocate for continuous assessment and data-driven decision-making to guide flexible grouping practices and implement differentiated instruction effectively (Smets et al., 2022). Nevertheless, while adhering to this can smooth their path toward differentiation, some challenges and barriers may hinder teachers' effective practice of DI.

5. Challenges and Barriers to Effective DI Implementation

While DI is widely acknowledged and promoted by several studies considering its beneficial outcomes and positive impacts on students' learning, recent research has indicated that some barriers can impede its implementation (Scarparolo & Subban, 2021; Schwab & Woltran, 2023). As a result of these challenges, many schools and educators remain hesitant to adopt this approach in the classroom (Yuen et al., 2023), and teachers in many countries rarely adjust their teaching to address student individual needs (Schleicher, 2016, as cited in

Gibbs, 2023). The literature discussing the barriers that challenge DI implementation across many countries and settings is limited (Whitley et al., 2019), but it has revealed that internal and external factors can hinder DI practice (Gibbs, 2023; Lavania & Nor, 2020). Internal factors are teacher-related, while external factors are beyond their control.

5.1 Internal Factors

To help learners benefit from the advantages of DI, teachers need advanced knowledge and skills in inclusive teaching approaches that place various requirements on both instructors and schools (Schwab & Woltran, 2023). In addition to a solid command of curriculum content and assessment literacy, DI necessitates teachers' ability to build positive teacher-student relationships (Heng & Song, 2020). However, research indicates that many instructors lack understanding and adeptness in practicing DI (Whitley et al., 2019). Moreover, even when they are cognizant of the importance of adapting their approach to fit some students, it may be particularly demanding for them due to the exceptional pressure they experience (Westwood, 2008). Many of them find it exceedingly challenging as it questions their established assumptions and practices about teaching and learning (Tomlinson & Allan, 2000). Additionally, in response to new expectations, teachers may experience fear and uncertainty about their capacity to implement DI (Tobin & Tippet, 2014, as cited in Gibbs, 2023). The pressure exerted by external factors can also complicate the situation and put additional pressure on teachers.

5.2 External Factors

Studies have indicated that effectively integrating DI can be challenging due to external factors. In a scoping review, Schwab and Woltran (2023) found that teachers may struggle to fully commit to inclusive teaching practices because of the influence of environmental factors beyond their control. Broadly, these external factors include, but are not limited to, the following:

a) Teacher Preparation Programs

Research has shown that differentiated instruction is insufficiently covered and inadequately addressed in teacher preparation courses (Scarparolo & Subban, 2021). Additionally, some teacher preparation programs lack clarity on the appropriateness of DI as an overarching instructional framework applicable to all learners (Gibbs, 2023). The importance of teacher preparation is further corroborated by Dixon et al. (2014), who revealed that teachers with ongoing professional development opportunities exhibit higher self-efficacy in DI implementation.

b) Students' Factors

The successful implementation of DI is affected by student-related factors, not only by teachers' attitudes and beliefs, which may interrupt teachers' plans to integrate DI in their classrooms. Students' lack of awareness of the importance and benefits of DI strategies, their

familiarity with traditional teaching strategies, and the high heterogeneity of their differences are among the main challenges of DI implementation (Aldossari, 2018, as cited in Lavania & Nor, 2020).

c) Resource Allocation and Organizational Factors

Limited allocation of school resources, including human and physical resources, has emerged as one of the main constraints that impede teacher implementation of DI. In particular, teachers have often struggled with insufficient time for planning and implementing DI instructional strategies (Gibbs, 2023; Scarparolo & Subban, 2021; Whitley et al., 2019), in addition to the substantial effort required from them (Westwood, 2008). Large classrooms and school size have also been frequently cited as obstacles to DI implementation (Bi et al., 2023; Scarparolo & Subban, 2021). DI can raise concerns about behavior management, especially since large classes are naturally heterogeneous (Gibbs, 2023). Teachers likewise encounter difficulties managing the classroom, addressing students' expectations, and implementing equitable practices in differentiated assessment (Scarparolo & Subban, 2021). Moreover, ineffective support from administration and school leaders can pose a challenging barrier when coupled with a high teacher workload and limited resources (Shareefa, 2023).

d) Broad Definitions and Lack of Large-Scale Studies

The ability of teachers to transform the theoretical principles of DI into day-to-day practical strategies has presented another major challenge. According to Bondie & Zusho (2018), the lack of consensus on its definition has made it difficult to draw a clear picture of how to enact DI in the classroom. Despite the efforts of clarification, the concept remains vague due to inconsistent descriptions and misinterpretations, which challenges both research and practice (Graham et al., 2020). On another level, the overall empirical validation of DI is inconclusive as most research comprises small- to medium-scale investigations of teachers' implementation of effective teaching practices combined with DI components (Gheysens et al., 2020). Furthermore, Graham et al. (2020), in their scoping review of 34 studies spanning two decades of research, reported the scarcity of international studies exploring the effectiveness of DI, with only a few focusing on its impact on student outcomes.

6. Key Considerations for Effective DI Implementation

To successfully implement differentiated instruction, it is essential to prioritize enhancing teachers' readiness and skills to overcome manageable obstacles (Wan, 2016, as cited in Yuen et al., 2023). To address this aspect in teacher preparation, Dixon et al. (2014) have advocated for education programs that target pre-service and in-service teachers, equipping them with the processes and procedures required to facilitate effective learning for diverse learners. In such programs, teachers need to develop their knowledge and skills in grouping and evaluation strategies to meet learners' needs. Becoming adept at this requires

teachers to comprehend when and how to differentiate instruction and feedback (Bi et al., 2023).

Pozas and Letzel (2020) advised that teacher education programs need to balance theory and practice. They further emphasized the importance of pre-service teachers' ability to enact theoretical understanding into instructional practice in the classroom. According to Gheysens et al. (2020), aligning teachers' habits of mind with instructional practices is indispensable in implementing a student-centered practice such as differentiated instruction. In this regard, teachers' educational beliefs have been identified to be critical. Accordingly, teachers need to perceive DI as a pedagogical philosophy or a way of thinking about teaching and learning rather than a group of instructional practices (Tomlinson & Allan, 2000).

Teachers' involvement in collaborative learning communities, where they engage in shared planning and reflection, is valuable for ensuring in-service teacher professional development. In this context, Pozas and Letzel (2020) highlighted the significance of collaboration among teachers and how it can benefit them by allowing them to learn from and with each other as they share challenges regarding student diversity, which leads to the development of more inclusive instructional practices. It is also fundamental for teachers to engage in regular discussions and collaborations on learner differences, curriculum adjustments, instructional objectives, and subject knowledge to orient teacher perceptions toward putting learners ahead of the curriculum (Bi et al., 2023).

In harmony with what has been mentioned, the continuous development teachers require throughout their educational journey to support every learner's success is enhanced by effective leadership for differentiation (Tomlinson & Allan, 2000). Moreover, Bi et al. (2023) emphasize that establishing an inclusive learning environment where teachers are motivated to implement DI is at the heart of school leaders' responsibilities. Cultivating school cultures that facilitate the adoption of DI can increase teachers' readiness to cater to students' diverse needs and cope with equity issues (Graham et al., 2020). In this line of thought, research has indicated that teachers' capacity and inclination to differentiate instruction can be significantly affected by the nature of school leadership, especially with a strong school culture and a collaborative atmosphere. This perspective necessitates adopting a broader view of leadership when planning the implementation of DI initiatives (Whitley et al., 2021).

Teachers can overcome the obstacles encountered in adopting DI if they are well-prepared and provided the necessary resources. Therefore, reducing teacher workloads, ensuring adequate infrastructure, and fostering an environment that motivates administrators and teachers to maximize each learner's educational potential should be top priorities for future innovative initiatives in inclusive education (Schwab & Woltran, 2023). Allocating time for team teaching, reducing overall teaching hours, and organizing timetables to provide teachers with shared time blocks for collaborative professional learning are examples of establishing the appropriate conditions for DI adoption (Whitley et al., 2021). Additionally, class size should be reduced (Ojong, 2023). Allocating resources for teacher development in DI instructional methods to accommodate learners' diverse needs is also crucial (Schwab &

Woltran, 2023). Administrators and policymakers should, therefore, keep these requirements in mind when planning budgets and distributing funds (Ojong, 2023).

7. Conclusion

Traditional teaching often struggles to provide students with individual learning opportunities that engage them in their educational journeys, as it fails to address their learning needs and preferences. As a result, the shift toward a learner-centered paradigm in education through differentiated instruction has become common practice in many classrooms at various educational levels worldwide, owing to its perceived ability to impact learning outcomes positively. As teaching methodology moves beyond one-size-fits-all traditional approaches in favor of DI, teachers are more likely to meet their students' diverse needs in today's heterogeneous classrooms. By differentiating content, process, and product to address learners' diversity in readiness, interest, and learning profiles, teachers can create conducive learning environments where every learner can thrive.

Implementing DI can be effective through various strategies that foster student active participation, engagement, motivation, and self-directed learning. However, several challenges can arise at both internal and external levels, which may impede DI implementation. Teachers' perceptions of self-efficacy in implementing DI strategies and their lack of understanding of DI and its principles are major teacher-related obstacles. The gap in teacher preparation programs and its failure to balance theory and practice, learners' attitudes, appropriate resource allocation, and organizational factors, including supportive leadership, are some external barriers. Therefore, DI needs to be approached not as a choice or an alternative pedagogical strategy that teachers implement occasionally but as a philosophy that guides day-to-day classroom practices and decisions related to teaching, learning, and assessment. This perspective requires a shared vision and the collaborative efforts of teachers, administrators, leaders, and policy-makers. Future research can address the implementation perspectives and challenges associated with contexts where differentiated instruction does not seem widely practiced. In particular, the Algerian EFL (English as a Foreign Language) context offers high potential for theoretical exploration and practical application.

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