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In Pursuit of Equal Access to Quality Education: A Guide to the Implementation of Differentiated Teaching for Diverse Minds

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Abstract

Tomlinson & Moon (2013) defines differentiation as the common belief that educators, by understanding their learners, can perceive the world from their standpoint. This open discussion explores the practical challenges confronting educators in the area of differentiated teaching, a pedagogical approach designed to accommodate the diverse needs of learners. Key challenges explored include the identification of individual learners' starting levels, conducting needs analyses, tailoring content to varying proficiency levels, and adeptly managing the dynamics of a diverse classroom. Effectively addressing these challenges necessitates ongoing professional development initiatives and collaborative efforts among educators. This paper underscores the significance of considering prior knowledge, Zone of Proximal Development (ZPD), curriculum, and the horizon as potential starting points for meaningful learning experiences. Additionally, it introduces a visual classification tool designed to assist educators in the differentiation of learning for each learner. The propositions in this paper represent a partial attempt to alleviate the complex challenges encountered by educators in their classrooms, paving the way for more effective and inclusive teaching practices.

Keywords

Differentiated Learning, Zone of Proximal Development, Teachers' Professional Development

1. Introduction

Differentiated learning is an instructional approach that tailors teaching methods, content, and assessment to meet the diverse needs, abilities, and learning styles of individual learners (Rashidov, 2020). It recognizes and accommodates

variations in prior knowledge, interests, and readiness, fostering a personalized and inclusive educational experience.

From the early stages of teacher training, educators have been warned about the heterogeneous nature of learner groups, highlighting the necessity for tailored instruction (Abduramanova, 2021; Cernilec et al., 2023). It has been acknowledged that group learning, when executed correctly, is the most productive method for both learning and teaching in mixed ability classes (Loes et al., 2018). Group work involves collaborative learning experiences where learners work together on the same assignment (Marzano et al., 2001). Engaging in group work can foster a positive and interactive learning environment through peer instruction and learning. Encouraging peer interactions can have a beneficial impact on learning experiences by preparing learners for real-world endeavors. When learners collaborate to tackle problems, they construct knowledge collectively rather than simply absorbing information passively. Learners tend to learn more effectively when working cooperatively in diverse groups rather than in a homogenous class, in competition with peers, or individually (Hattie, 2012). The advantages of group work include the opportunity to collaborate in dissecting and resolving complex tasks, enhancing understanding and addressing misconceptions with peer assistance. Additionally, it can assist learners in developing essential 21st-century skills such as self-regulation and reflection, communication, time management, project management, and conflict resolution.

Marzano et al. (2001) contended that successful learning within supportive and collaborative environments requires certain key elements. These include: involving every group member in the task, assigning each member a meaningful role with defined criteria for completion, ensuring each member is committed to achieving the task or learning objective, and holding each member accountable individually and collectively. This framework helps prevent scenarios where a single learner or a minority end up shouldering the majority of the group's workload (Sadykovna, 2021).

2. General Features of Differentiated Learning

In simple terms, and for the purpose of this report, a heterogeneous class is one where learners with different levels of learning abilities are mixed together. On the other hand, homogeneous groups consist of learners assumed to have similar abilities (Loes et al., 2018). For instance, in a homogeneous group, all learners in the same grade level are presumed to be in the same class.

Heterogeneous grouping provides learners with the chance to gain advantages from the diverse backgrounds and abilities of their peers. It encourages interactions with a variety of individuals and allows fast-learners to assume mentoring roles for their classmates (Tomlinson, 2017).

Within a community of practice, the emphasis on individuality contributes to a collaborative and supportive learning ecosystem. Learners are encouraged to share their unique perspectives and insights, enriching the collective knowledge of the community. This strategy not only nurtures inclusivity but also equips

learners for the complexities of the real world, where a range of skills and perspectives are highly regarded.

However, educators encounter challenges in addressing the varied needs within these mixed-ability groups. This underscores the pressing need for educators to implement effective strategies that can accommodate the diverse learning requirements of learners in heterogeneous settings (Rashidov, 2020).

The aim of this article is to initiate a broader conversation on how to put differentiated learning knowledge and ideas into practice.

3. Differentiated Learning Needs

In the realm of education, the imperative for differentiated learning and recognizing each learner as a unique individual within a community of practice is paramount (Cernilec et al., 2023; Dumont & Ready, 2023; Rashidov, 2020; Tomlinson, 2017). The conventional notion of learners as a homogeneous group is antiquated and fails to acknowledge the diverse cognitive, emotional, and experiential backgrounds that learners bring to the learning environment (Dumont & Ready, 2023).

Differentiated learning involves tailoring instructional methods, content, and assessment strategies to accommodate the varied learning styles, abilities, and interests of learners. By embracing differentiation, educators can create an inclusive environment where each learner is equipped with the tools and resources best suited to their individual needs, fostering a more effective and engaging learning process.

In essence, the call for differentiated learning and recognizing learners as distinct individuals within a community of practice is a response to the evolving landscape of education. It is a commitment to nurturing the multifaceted potential within each learner, fostering a more equitable and enriching educational experience. Fostering an effective learning ecosystem involves encouraging open communication and interaction among participants, creating a cohesive educational focus through shared goals and objectives, enhancing collaborative efforts through the integration and accessibility of technology, and providing guidance and encouragement from both educators and peers.

4. The Role of the Learner in Differentiated Learning

Tomlinson & Moon (2013) argue that connecting familiar knowledge with unfamiliar information is crucial in learning, given that previous knowledge stands out as a key determinant in learners' learning. Employing comprehension strategies involves evaluating learners' existing understanding, referencing previous lessons, or incorporating relatable real-world examples.

Cultivating an inclusive and diverse atmosphere is crucial to ensuring that every learner feels valued, thereby contributing to a positive and enriching learning experience. Learners within an inclusive group remain distinct, and it is important to tailor their learning experiences based on differentiation. Understanding

the importance of differentiated learning requires recognizing that learners are not blank slates (Menzel & Bennett, 2023), rather, they come to the educational setting with a rich reservoir of prior knowledge acquired through diverse experiences in both formal and informal curricula, as well as influenced by economic, religious and social backgrounds. This existing knowledge forms a foundation that may significantly vary among individuals within the same classroom.

Recognition of the diversity in learners' prior knowledge is a critical factor in effective teaching. Their starting points are different. Each learner brings a unique blend of experiences, skills, and understandings into the classroom. To comprehend and extract meaning from new content, learners must establish connections between what is familiar to them, and what is not. This cognitive process is essential for authentic and deep learning, as it allows individuals to anchor new information within the framework of what they already understand.

Acknowledging the distinctiveness of each learner's prior knowledge underscores the need for personalized teaching strategies. Educators must tailor their approaches to accommodate the varied cognitive landscapes of their learners, ensuring that instruction aligns with their individual starting points. By doing so, educators can create an inclusive and engaging learning environment that respects the diversity of perspectives and experiences present within the classroom.

In essence, recognizing and valuing the prior knowledge of learners is fundamental to fostering a dynamic and effective educational experience. It emphasizes the importance of individualized approaches, enabling educators to build upon the existing cognitive foundations of each learner, thereby promoting deeper understanding and meaningful connections with new academic content.

Learners actively participate in their learning process by interacting with the curriculum in ways that suit their individual learning styles, preferences, and needs. They take responsibility for exploring content, asking questions, seeking clarification, and engaging in meaningful activities that promote understanding and mastery of concepts.

Learners communicate their learning preferences, strengths, and areas for growth to their educators. They should take an active role in collaborating with educators to deconstruct and reconstruct knowledge and learning experiences that address their unique needs and interests. By doing this, learners empower themselves to take ownership of their education and ensure that their learning environment supports their individual growth and success.

Additionally, each learner should be ready to assume specific identities and roles as prescribed by the facilitator or by the needs of the hosting ecosystem, for the benefit of the community.

5. The Role of the Educator in Differentiated Learning

The educator remains central in mixed ability learning platforms and differentiated learning environments. They hold a pivotal position in crafting cognitive and affective-motivational environments conducive to effective learning. As po-

sited by Barbier et al. (2023), learners' achievement is intricately intertwined with the interplay between individuals and their surroundings. Thus, educators wield the responsibility of cultivating environments that not only stimulate cognitive development but also foster positive emotional states. By doing so, they significantly impact learners' learning experiences and overall academic performance. According to Abduramanova (2021), learners can be categorized into three groups: high-level, at-level, and low-level learners based on their proficiency levels. The teacher might divide the class into predetermined groups considering their level of abilities, prior knowledge, and teachability. The educator would then need to adapt the lessons and activities accordingly for each group to enhance learning outcomes. This necessitates the availability of supportive pedagogic tools, tasks tailored to specific needs, and lessons emphasizing higher-order cognitive skills rather than drills. To ensure the effectiveness of these methods, instruction should vary in content, pace, presentation method, and style (Pozas et al., 2020).

Educators must tailor their teaching methods, materials, and assessments to accommodate the diverse needs and abilities of learners in the classroom. This involves adapting the content, pace, and level of complexity of lessons to ensure that all learners can access and engage with the curriculum effectively. By employing various instructional strategies, such as flexible grouping, tiered assignments, and scaffolding, educators can provide appropriate support and challenge for learners at different skill levels.

Educators should foster a collaborative and inclusive learning environment by encouraging peer interactions and support among learners with varying abilities. This may involve organizing cooperative learning activities, peer tutoring sessions, or group projects where learners can learn from and assist one another. By promoting peer collaboration, educators not only reinforce learning through teaching but also cultivate a sense of community of practice, and mutual respect among learners regardless of their academic proficiency.

Recognising Learner's Learning Capability

In every educational setting, it is essential to embrace the unique learning abilities of learners. Tailoring teaching methods to accommodate the specific requirements of each learner necessitates a nuanced understanding of two factors: the learner's ability to comprehend work unassisted and their ability to develop when assisted (teachability). The bandwidth between these two factors, that is, the difference between what a learner can do on their own and what they can do beyond their unassisted efforts with the assistance of a more knowledgeable other is referred to as the Zone of proximal development (Mahan, 2022) in literature.

Coined by the prominent psychologist Lev Vygotsky, the zone of proximal development (ZPD) delineates the developmental stage at which a learner can engage in tasks with assistance from a knowledgeable source, be it a peer, educator, or any other mediating tool or materials. Each learner possesses their unique zone of proximal development, which is not solely determined by the

amount of prior knowledge but takes into account the potential for growth and the ideal level of challenge for an individual.

The identification of each learner's ZPD is pivotal in establishing an environment conducive to growth without inducing learned helplessness. Should the pace, quantity, or expectations of instruction exceed a learner's proximal development, it may lead to feelings of inadequacy and helplessness and frustration, ultimately impeding the learning process. Consequently, educators must fine-tune their teaching methodologies to align with the distinctive needs and capabilities of each learner, ensuring that the learning experience is both challenging and achievable.

Adapting instruction based on the ZPD fosters a more supportive and effective educational milieu. It enables educators to find a delicate balance, presenting tasks that are neither too simplistic nor overly complex, encouraging learners to expand their cognitive capacities without succumbing to frustration. This approach transforms the educational journey into a dynamic and personalized process, instilling a sense of accomplishment and self-efficacy among learners.

Fundamentally, comprehending and addressing the diverse learning capacities of learners through the perspective of the zone of proximal development is a crucial element of effective teaching. By tailoring instruction to the unique developmental stage of each learner, educators can cultivate an environment that encourages optimal learning, mitigating the risk of learned helplessness and fostering a positive, growth-oriented mindset among learners.

6. Classroom Scenarios

In pursuit of equal access to quality education for all, educators must navigate learners' prior knowledge and Zone of Proximal Development (ZPD). These two key variables guide educators in tailoring instruction to meet individual needs in concordance with Abduramanova's (2021) posit on learner's three categories of learning proficiency (i.e. high-level, at-level, and low-level learners). The diagrams below illustrate the diverse starting points and ZPDs within a classroom. It is important to emphasize that the four scenarios provided serve as examples rather than an exhaustive representation. In real classroom situations, the stages can be as many as the number of learners within a specific classroom. Furthermore, ZPDs vary for each learner across different activities.

Possible Learning Preparedness Scenarios

The four stages represent levels of readiness in the process of learning and development as explained below. The broken lines show the unrestrictive and fluid nature of learning.

1) Learner's prior knowledge frame (most inner brown eclipse)

"Learner's prior knowledge" refers to learners' existing understanding and skills before new learning experiences. It pertains to the diverse range of understanding and skills that learners possess before engaging in new learning experiences. These pre-existing knowledge and abilities serve as the foundational building blocks upon which new information is constructed. Each learner brings

a unique set of experiences, insights, and comprehension to the educational context, and this individualized reservoir of prior knowledge becomes the gateway for accessing and assimilating new information. The significance lies in how this prior knowledge forms a scaffold, creating connections and linkages that facilitate the acquisition of fresh insights. It acts as a cognitive bridge, allowing learners to relate new concepts to what they already know, fostering a deeper and more meaningful understanding of the subject matter. Recognizing and leveraging learners' prior knowledge becomes essential in tailoring effective teaching strategies that bridge the gap between what learners already understand and the new knowledge they are acquiring. In essence, it is a dynamic interplay between existing cognitive foundations and the continuous expansion of knowledge in the learning journey.

2) Zone of proximal development (ZPD) frame (grey eclipse with a yellow frame)

"ZPD" stands for Zone of Proximal Development. It is a concept introduced by psychologist Lev Vygotsky, referring to the range of tasks that a learner can perform with the help of a more knowledgeable person, such as an educator or peer, but cannot yet do independently (Gehlot, 2021). The ZPD is considered a crucial area for learning and cognitive development, as it identifies the tasks that are within a learner's reach with appropriate guidance and support (Tomlinson, 2017). The zone varies individually and across subjects, influenced by factors such as prior knowledge, cognitive abilities, and other relevant factors specific to each learner.

3) The Curriculum frame (third eclipse with a green frame)

"Curriculum" is used in the diagram to represent a comprehensive structure or blueprint for a particular subject at a specific point in the learning process. Curriculum typically comes from curriculum designers, and in certain nations like South Africa, the Department of Education provides Annual Teaching Plans (ATPs) at the start of each academic year, shaped by national examinations. Educators perceive the curriculum as a predetermined framework.

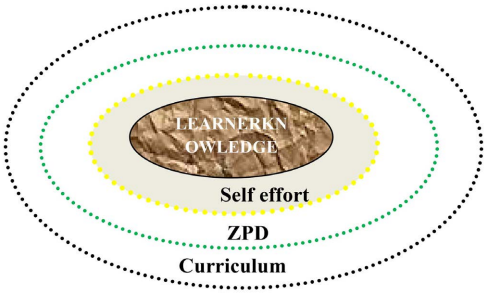
4) The Horizon frame (outer eclipse with a black frame)

"Horizon" encompasses the knowledge that lies ahead, extending beyond the current learning stage and encompassing content intended for subsequent academic levels, such as the material covered in the next grade. This concept goes beyond merely what is examined, as it may also incorporate non-examinable content that contributes to a more comprehensive and enriched understanding of the subject matter. In essence, the horizon in education represents a broader scope of knowledge and learning, reaching beyond immediate academic requirements and encompassing a holistic view of the educational journey. It is not open ended.

Scenario A

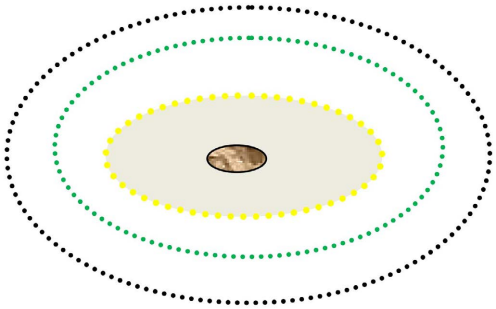
An ideal learning starting point where a learner; possesses substantial foreknowledge, can and is willing to do sizeable work by self, is teachable, and grasps concepts adeptly with the help of a knowledgeable other. This synergy between

prior understanding and new material fosters an ideal learning environment, promoting effective teaching and meaningful learning and comprehension of the subject matter.



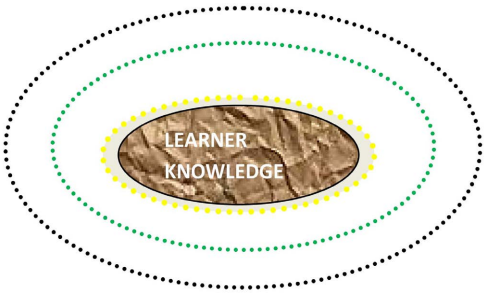
Scenario B

The learner is starting from an unfavourable position with gaps in essential foreknowledge, even if the learner is receptive to instruction, it is essential to address the knowledge deficit by providing targeted skills. This approach aims to enable the learner to access new meanings and build a fresh body of knowledge. This learner may need extra lessons, or extra work for them to catch up.



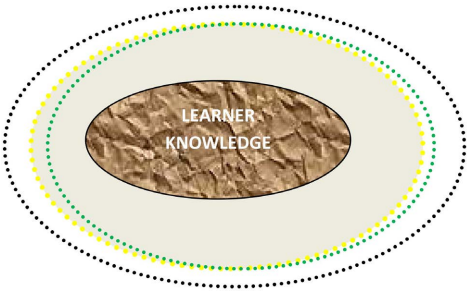
Scenario C

Despite having enough prior knowledge, this learner encounters challenges in grasping concepts without assistance. This learner can benefit from extra assistance from an educator, a subject expert or facilitating technology. While the existing knowledge helps in acquiring new information to some extent, the learning facilitator must tailor appropriate extra-work and pace so that the learner is not left behind.



Scenario D

The learner has sufficient foreknowledge and can grasp the object of learning and possibly more by themselves. The learner is keen to investigate the subject beyond the designated syllabus. They are enthusiastic about further exploration. Educators usually struggle to see the need to help such a learner. In some instances, the educator feels challenged or out of depth. The educator's guidance is still important to facilitate with extended learning that can contribute to a more enriched educational experience. The educator should design varied activities, including real-world applications, to enhance conceptual understanding, procedural fluency, strategic competence, adaptive reasoning, and productive disposition.



7. The Learner Preparedness Matrix

Below, I suggest the Learner Preparedness Matrix—another dynamic framework depicting a learner's prior knowledge and teachability (linked to the Zone of Proximal Development). This matrix is a valuable tool for educators to assess and tailor instructional strategies, offering insights into optimal approaches for individual learners. It serves as a versatile tool, allowing customization of teaching methods, providing targeted interventions, and fostering inclusivity to meet diverse learner needs.

The matrix incorporates two key dimensions:

1) Prior Knowledge:

This refers to the knowledge the learner has learnt from earlier grades and experiences plus what the learner can learn and understand without the help of a knowledgeable other. This requires the educator to examine the width and depth of a learner's existing knowledge on a given subject, and to assess the applicability of the learner's prior knowledge to the current learning objectives. It also requires the educator to make out what the learner can grasp without assistance.

2) Teachability or ZPD:

This refers to the quality of being receptive to instruction, guidance, or learning, demonstrating the ability to be taught, and displaying an eagerness to acquire fresh knowledge, skills, or insights through the educational process. This requires the educator to evaluate the learner's receptiveness and readiness to acquire new concepts or skills, and to identify the appropriate level of challenge that corresponds to the learner's ZPD—the range between what the learners can

do independently and what they can achieve with guidance (Table 1).

Quadrant 1 (Quadrant HH)

High Prior Knowledge and High Teachability (ZPD): Learners in this quadrant may benefit from advanced or accelerated content. The challenge level can be adjusted to align with their readiness to learn, fostering engagement and deeper understanding.

Quadrant 2 (Quadrant LH)

Low Prior Knowledge and High Teachability (ZPD): Learners in this quadrant are receptive to new information but may require additional support to bridge the gap in prior knowledge. Educators can provide targeted interventions to build foundational understanding.

Quadrant 3 (Quadrant HL)

High Prior Knowledge and Low Teachability (ZPD): While learners may have a solid foundation, they might show resistance or disinterest in new material. Here, educators can employ strategies to enhance motivation and make the content more engaging.

Quadrant 4 (Quadrant LL)

Low Prior Knowledge and Low Teachability (ZPD): This quadrant suggests a challenging scenario where both prior knowledge and teachability are limited. In such cases, educators may need to employ differentiated instructional strategies, breaking down complex concepts and providing additional support.

8. Socratic Questioning

I also suggest another powerful method to involve learners across diverse cognitive and emotional continua. Socratic questioning, named after Socrates, probably first by his student Plato, is an approach that attempts to transform dialogue into an art, shifting the traditional dynamic from teacher-centric instruction to a collaborative exploration. As elucidated by Zare and Mukundan (2015), both educator and learner contribute to advancing the discourse and uncovering deeper truths. This involves processes such as seeking clarification, challenging assumptions, evaluating evidence and reasoning, considering alternative perspectives, reflecting on implications and consequences, and even questioning the initial inquiry

Table 1. Learner preparedness matrix.

		Depth of Understanding and Relevance to the Topic	
		Low Prior Knowledge	**High Prior Knowledge**
Readiness to Learn and Level of Challenge	**High Teachability (ZPD)**	**Quadrant 2: (LH)** Low prior knowledge and high teachability (ZPD).	**Quadrant 1: (HH)** High prior knowledge and high teachability (ZPD).
	Low Teachability (ZPD)	**Quadrant 3: (LL)** Low prior knowledge and low teachability (ZPD).	**Quadrant 4: (HL)** High prior knowledge and low teachability (ZPD).

Table 2. Socratic questioning.

Question type	Examples
Clarification	- Can you elaborate on your meaning when discussing this concept? - Could you provide further explanation on that point? - Can you offer an example to illustrate?
Challenging assumptions	- Are there differing perspectives we should consider? - What assumptions underlie our current thinking? - Are you suggesting...?
Evidence and reasoning	- Can you share an example that bolsters your argument? - Is the evidence we are relying on verifiable? - Do we possess all necessary information?
Alternative viewpoints	- Are there other viewpoints worth exploring? - How might someone else react, and why?
Implications and consequences	- How might this impact individuals? - What potential long-term consequences should we consider?
Challenging the question	- What significance do you see in that question? - How could we rephrase the question for improved clarity?

itself. Table 2 gives examples of questions that can be asked. The categorised questions give equal access to the object of learning to all participants, albeit at different levels. The table was adapted from Chew et al. (2019).

9. Conclusion

Educators are encouraged to use two crucial variables to navigate the complexity of a differentiated learning approach. The two variables are: a learner's prior knowledge and Zone of Proximal Development (ZPD). The discourse explores the impact of these two variables on crafting differentiated lessons and their interaction with the implemented curriculum and its horizon. To assist educators in classifying each learner's learning preparedness, a visual matrix is introduced, offering a practical tool to enhance the understanding and application of differentiated teaching strategies in the classroom. Educators and their learners are also encouraged to engage in teaching and learning dialogues that seek to uncover deeper truths by seeking clarification, challenging assumptions, evaluating evidence and reasoning, considering alternative perspectives, reflecting on implications and consequences, and even questioning the initial world views.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

References

Abduramanova, D. V. (2021). Teaching Heterogeneous Classes. *Academic Research in Educational Sciences, 2,* 966-970.

Barbier, K., Struyf, E., Verschueren, K., & Donche, V. (2023). Fostering Cognitive and Affective-Motivational Learning Outcomes for High-Ability Students in Mixed-Ability Elementary Classrooms: A Systematic Review. *European Journal of Psychology of Education, 38,* 83-107. https://doi.org/10.1007/s10212-022-00606-z

Cernilec, B., Cotic, M., Felda, D., & Doz, D. (2023). Differences in Students' Mathematics Knowledge in Homogeneous and Heterogeneous Groups. *European Journal of Science and Mathematics Education, 11,* 15-32. https://doi.org/10.30935/scimath/12431

Chew, S. W., Lin, I. H., & Chen, N. S. (2019). Using Socratic Questioning Strategy to Enhance Critical Thinking Skills of Elementary School Students. In *The 2019 IEEE 19th International Conference on Advanced Learning Technologies (ICALT)* (pp. 290-294). IEEE. https://doi.org/10.1109/ICALT.2019.00088

Dumont, H., & Ready, D. D. (2023). On the Promise of Personalized Learning for Educational Equity. *npj Science of Learning, 8,* Article No. 26. https://doi.org/10.1038/s41539-023-00174-x

Gehlot, L. (2021). Cognitive Development by Zone of Proximal Development (ZPD). *The Journal of Education, Culture, and Society, 12,* 432-444. https://doi.org/10.15503/jecs2021.2.432.444

Hattie, J. (2012). *Visible Learning for Teachers: Maximizing Impact on Learning*. Routledge.

Loes, C., Culver, K., & Trolian, T. (2018). How Collaborative Learning Enhances Students' Openness to Diversity. *The Journal of Higher Education, 89,* 935-960. https://doi.org/10.1080/00221546.2018.1442638

Mahan, K. R. (2022). The Comprehending Teacher: Scaffolding in Content and Language Integrated Learning (CLIL). *The Language Learning Journal, 50,* 74-88. https://doi.org/10.1080/09571736.2019.1705879

Marzano, R. J., Pickering, D. J., & Pollock, J. E. (2001). *Classroom Instruction That Works: Research-Based Strategies for Increasing Student Achievement*. Association for Supervision and Curriculum Development.

Menzel, K., & Bennett, B. (2023). There Is No Such Thing as a Blank Slate: Accountability in Decolonising Universities. In B. Carlson, M. Day, S. O'Sullivan, & T. Kennedy (Eds.), *The Routledge Handbook of Australian Indigenous Peoples and Futures* (pp. 103-123). Routledge. https://doi.org/10.4324/9781003271802-9

Pozas, M., Letzel, V., & Schneider, C. (2020). Teachers and Differentiated Instruction: Exploring Differentiation Practices to Address Student Diversity. *Journal of Research in Special Educational Needs, 20,* 217-230. https://doi.org/10.1111/1471-3802.12481

Rashidov, A. (2020). Use of Differentiation Technology in Teaching Mathematics. *European Journal of Research and Reflection in Educational Sciences, 8,* 163-167.

Sadykovna, M. M. (2021). Advantages and Disadvantages of Pairs and Group Work in the Classroom. In *Inventous Mind: A Multidisciplinary International Scientific Conference* (pp. 7-9).

Tomlinson, C. A. (2017). Differentiated Instruction. In C. M. Callahan, & H. L. Hertberg-Davis (Eds.), *Fundamentals of Gifted Education* (pp. 279-292). Routledge. https://doi.org/10.4324/9781315639987-26

Tomlinson, C. A., & Moon, T. R. (2013). Differentiation and Classroom Assessment. In J. H. McMillan (Ed.), *SAGE Handbook of Research on Classroom Assessment* (pp. 415-430). Sage. https://doi.org/10.4135/9781452218649.n23

Zare, P., & Mukundan, J. (2015). The Use of Socratic Method as a Teaching/Learning Tool to Develop Students' Critical Thinking: A Review of Literature. *Language in India, 15,* 256-265.