Recontextualizing Differentiated Instruction in Singapore

Contents

Online Exclusives
KNOWLEDGE RESOURCE BANK

Envisioned as a one-stop repository of evidence-based knowledge and classroom resources, Knowledge Resource Bank (KRB) covers NIE research over a range of education themes and academic subjects.

Differentiated Instruction (DI)

Local Evidence Synthesis on SkillsFuture for Educators

Easy Dive into Research
RESEARCH BITES

Bite-sized insights, big ideas. Research Bites distills key takeaways from academic research into concise, engaging summaries—making it easier for teachers to stay informed and inspired. Dive in, explore, and let curiosity lead you to the full articles!

Navigating Differentiated Instruction in Singapore

Your Voice Matters
SINGTEACH READER SURVEY

Help us better understand your preferences and interests! In our efforts to improve our contents and features, we would like to invite you to take part in our survey.

Scan the QR code below to start the survey! The survey will run from 30 April to 31 May 2025.

Making Differentiated Instruction "Work":

Uniquely Singaporean Perspectives and Practices

Differentiated Instruction (DI) has become popularized not just in Singapore schools but across other Asian countries such as China, Indonesia and Malaysia. How can countries adopting educational ideas from abroad make it "work" for them? In this issue, we learn about uniquely Singaporean ways in which DI is (re)interpreted and implemented.

Tomlinson's (2014) scholarship on Differentiated Instruction (DI) in the United States has been touted as the "leading model" (Griful-Freixenet et al. 2020, p. 2) given its popularity, history and framing. Tomlinson's (2014) DI is premised on three pillars: philosophy, principles and practices. Yet, DI, when adopted by educational institutions and systems worldwide, is often interpreted as mere instructional practices and strategies, divorced from its attendant philosophy and principles. Further complicating the adoption are barriers arising from differences between the borrowee and borrower countries. In my previous research, I found that teachers in Singapore encountered technological

(structural), cultural and political barriers (Heng, 2023), prompting me to reconsider how we approach DI. Given that pedagogy is deeply intertwined with a country's culture and history, I was concerned about the values and beliefs we may be trading off and how our society changes, if we uncritically borrow educational approaches from abroad. Thus, rather than seeking to understand the fidelity with which we implement DI, I reframed my thinking, asking instead if DI has been localized, and if a unique East-meets-West version has been created in Singapore. These questions are driven by the belief that as a nation, we should have the confidence to customize educational approaches for our own needs. To this end, I researched how 11 primary school teachers in Singapore (re)interpreted and made DI work for them. This article shares some preliminary findings from my research and compares it with the insights of contributors to this *SingTeach* issue, which I hope will catalyze curricular and pedagogical conversations in Singapore and beyond.

Scan the QR code to find out more about **Tomlinson's (2014) "Pillars of Differentiation".**

UNIQUELY SINGAPOREAN INSIGHTS FROM PRELIMINARY RESEARCH FINDINGS

Teachers' interpretations and implementations of DI practices appear to reflect philosophy premised upon pragmatism, balance, collectiveness and fairness, showing some departure from the philosophy defined by Tomlinson (2014). Teachers are pragmatic in choosing principles and practices that work for both themselves and their students as they juggle various academic and non-academic outcomes of education. Teachers often choose practices or teaching strategies that are multi-functional. For instance, they are highly intentional in how they seat or group students, considering factors such as student readiness, temperament, gender and ethnicity concurrently so that they can achieve both academic (e.g., uplifting weaker and stronger students' learning, circumventing large class size via peer teaching) and non-academic (e.g., gender and ethnic mixing to foster inclusion) goals.

Balance is another recurring concept that teachers allude to. They shared about having to balance learning goals with students' needs—which differ according to readiness, interests or preferences—as best as they can, without losing sight of curriculum outcomes. They also balance whole-class with small-group instruction while attempting individual remediation. Further, they balance traditional with modern teaching methods: to illustrate, worksheets are provided physically and online, to balance between ease of physical referral and online access.

Teachers are cognizant of how education socializes students to the collective. They emphasize non-academic outcomes—such as turn-taking, respect for others, peer support—educating students about inclusivity and awareness of the larger community. Finally, their instructional decisions and actions reflect a belief of fairness through uplifting weaker students without capping stronger ones. To ensure that all students can meet MOE stipulated learning goals, teachers use scaffolding and multiple learning modalities to uplift less-ready students while offering extensions to more-ready ones who are often also held responsible for peer teaching, exhibiting, once again, the philosophy of collective responsibility.

Teachers here do still mirror some of Tomlinson's (2017) principles as they subscribe to offering a quality curriculum, using assessment to inform instruction and creating a conducive classroom environment. Teachers follow the prescribed MOE syllabus closely: they use the syllabus outcomes to inform lesson pitching and appreciate the clarity in expected outcomes. For less ready students, they create scaffolding (e.g., more teacher or peer support, fill-in-the-blank questions); for more ready students, they offer less support or more complex tasks. While prevailing sentiments cluster around the belief that a centralized curriculum is a barrier to DI, my research found that teachers leverage the centralized curriculum by using it as a "starting point" and capitalizing on the provided resources.

Teachers also make consistent attempts at using formal and informal assessment data to inform instruction. They frequently used MOE's proprietary learning management system, Student Learning Space (SLS), to collect assessment information and feedback. At the same time, they set aside time for one-on-one conversations with students to better understand them. To create a conducive classroom environment, teachers focus on emotional safety and motivational support. They avoid highlighting differing task difficulty and often change group compositions to downplay students' readiness disparity and thus protect students' esteem by reducing unhealthy comparison. Additionally, teachers design learning opportunities to increase students' motivation. They regularly increase scaffold or re-set learning goals that are achievable so that weaker students can experience success. Conversations also allude more to students' progress rather than learning gaps.

Learner-centredness—a cornerstone of DI—however, appears to be recontextualized. Preliminary findings reveal teacher-directed learner-centredness. Teachers make curricular and instructional decisions that foreground achievement of prescribed "learning" objectives and less on the "learner". Learner variance and needs are considered when it can be instrumental in achieving the learning goal. During lesson planning, teachers begin with the learning goals in mind and consider learners' needs as a means to the learning goal through enhancing, for example, student engagement

via interest or student agency via choice. As a result, curricular choices tend to be teacher directed where attempts to support learner-centredness and self-directedness have to be structured within curricular constraints. To demonstrate, during a Science lesson on life cycle of animals, rather than giving free choice, students can only choose to study about animals within a mandated list stipulated by the syllabus.

UNIQUELY SINGAPOREAN INSIGHTS FROM THIS ISSUE'S ARTICLES

Coincidentally, some of the abovementioned patterns overlap with perspectives of contributors to this *SingTeach* issue. I was pleasantly surprised to observe these overlaps with my preliminary research findings even as data collection was still underway.

In terms of the philosophical take on DI, the themes of valuing community and balance recur across the articles. In the "In Their Own Words" article, Wong referenced "communitarian values" of the Singapore society, where success is not merely defined by individual achievement but by uplifting the "common good." Likewise, in the "Research in Action" article, both Chew and Wang talked about a culture of "collaborative learning" amongst students and teachers, while Hairunisa, from the "In Their Own Words" article, reminds us that even though students are individuals, they fit together to make a larger whole. Their references to collaboration, the larger community, and collective responsibility reflect values that we hold dear to our hearts and which drive how we approach teaching and learning. In alluding to balance, be it via weighing "individual preferences with collective responsibility" (Wong), balancing structure with flexibility (Hairunisa), or whole class with smaller group instruction (Kan, from the "People" article), we are reminded that harmony and balance permeate our values.

Interpretations and applications of DI principles—support for formative assessment, clear learning objectives, and safe classroom environments—mirror my preliminary research findings. Contributors emphasized the importance of formative assessment, be it via self-assessment or peer feedback (Hanif, from the "In Their Own Words" article), pre-assessment (Wang; Kan), accessible feedback (Devi, from the "People" article) or using technology for formative assessment and feedback delivery (Unity Secondary, from the "Classroom Perspectives" article)—all a stark reminder of how vital assessment is in DI. Relatedly, clear learning goals are essential as Devi, Wong and Unity Secondary teachers assert that learning objectives drive lessons and unit planning. Fostering a learning environment that is safe and open, not only for students but teachers, is also a valued principle.

Interestingly, technology is seen as a unique tool or strategy for implementing DI principles and practices. SLS has been quoted as a "unique feature of DI" (Chew) in Singapore as it offers not just assessment capabilities and opportunities to create instructional options, but multimodal ways of reaching learners (Chew, Hairunisa, Unity Secondary, Wong).

Importantly, DI goes beyond being mere instructional strategies. Instead, contributors (re)interpret the philosophies and implement the principles with sensitivity to the Singapore context. Wang, for instance, cautions us against equating DI to tiered worksheets and reminds us of the need to change our perception of low progress learners. Unity Secondary's instructional model reflects an organic synthesis of various educational ideas of which DI is one of several adopted in any unit of instruction. The instructional model also reminds us of the importance of unit—not just isolated lesson—planning, educators are engaged in curriculum design when they adopt DI.

Just as DI is premised on the assumption that one size does not fit all, the articles in this issue remind us that there is no one "right" way to adopt DI. As you savour these articles, I encourage you to contemplate other creative ways to "charting (y)our own path(s)" to make DI work for you and your students in your contexts, be it Singapore or elsewhere. ∎

REFERENCES

Griful-Freixenet, J., K. Struyven, W. Vantieghem, and E. Gheyssens. 2020. "Exploring the Interrelationship Between Universal Design for Learning (Udl) and Differentiated Instruction (DI): A Systematic Review." *Educational Research Review 29:* 100306. doi:10.1016/j.edurev.2019.100306.

Heng, T. T. (2023): Lessons on educational borrowing and change: teachers' implementation of differentiated instruction in Singapore. *Pedagogy, Culture & Society*. DOI: 10.1080/14681366.2023.2166094

Tomlinson, C. A. 2014. *The Differentiated Classroom: Responding to the Needs of All Learners.* Virginia: ASCD.

ABOUT THE GUEST EDITOR

Heng Tang Tang is Associate Professor with the Policy, Curriculum and Leadership (PCL) Department at NIE. Her research interest is situated at the intersection of pedagogy, culture and diversity. One of her research inquiries revolves around educational change and borrowing, examining how Singapore teachers interpret and implement learner-centred approaches borrowed from abroad as well as how contexts shape the opportunities and constraints they face.

ADAPTING DIFFERENTIATED
Instruction for the Singapore Context

What does recent research from Singapore tell us about how Differentiated Instruction (DI) is being understood and practiced in our classrooms? In this issue of *SingTeach*, we speak with Ms Eunice Chew, a secondary school teacher who recently completed her Master's thesis, and Ms Adeline Wang, an educational psychologist and final-year PhD student. Drawing from their respective research, they share thoughtful insights and recommendations on how DI can be meaningfully implemented in the local teaching context.

FACTORS THAT SHAPE EFFECTIVE DIFFERENTIATED INSTRUCTION

"Teachers' beliefs and professional development play a critical role in shaping their use of the Student Learning Space (SLS) for Differentiated Instruction (DI)," Ms Eunice Chew, School Staff Developer at a secondary school, says.

As part of her master's thesis, she researched how Singaporean secondary school teachers have used the SLS for DI. Her research found that years of teaching experience is not a defining factor for a teacher to realize the potential of SLS for DI, but rather depends on a teacher's "will" and "skill".

"Underpinned by existing literature, 'will' refers to a teacher's intentionality in enacting DI using SLS, which include a purposeful SLS lesson design catering to diverse learning needs and use of assessment data. Meanwhile, 'skill' refers to a teacher's proficiency and knowledge in using SLS and enacting DI," she explains.

Ms Adeline Wang, an Educational Psychologist at the Psychological Services Branch, MOE, has embarked on her doctoral research examining how primary school teachers apply DI in lower primary English classrooms and how DI is being used to support students at emergent levels of literacy.

"My research found that many teachers had a limited understanding of DI, often equating it with designing tiered worksheets for students of different levels of readiness," she shares.

DIFFERENTIATED INSTRUCTION IN THE SINGAPORE CONTEXT

Creating Space for Teacher Autonomy

Adeline believes that DI should move beyond tiered worksheets and that more can be done to reframe DI as a holistic teaching philosophy. "A practical starting point could be increasing the use of pre-assessments as a way to better understand what students already know and can do in relation to an upcoming unit. This allows teachers to adjust their teaching more effectively to meet students' needs," she suggests.

She also highlights the need to empower teachers with greater autonomy to experiment with new pedagogical approaches and take thoughtful risks in their teaching.

"There is a common perception among teachers that a classroom should always be quiet, orderly and structured," says Adeline. "However, to enact DI in the classroom, students need the space to move around, speak and be heard, and be given choices in their learning."

For example, teachers can be encouraged to explore more flexible ways of grouping their students other than solely based on readiness. Students can also be given more autonomy in choosing who they want to work with, based on their interests and learning preference.

This necessitates a mindset shift in how we view students with lower readiness; Adeline urges teachers to have more confidence in what these students can achieve. "We often assume they can't make good decisions, but you'd be surprised—many are eager to rise to the challenge," she comments.

Using Technology to Support DI

Eunice views the uniquely Singaporean SLS one-stop portal as "a game changer that can support the enactment of DI locally". The affordance of SLS includes features such as *Interactive Thinking Tools*, *Subgroups*, and *Heat-Map* that facilitate student engagement, cater to diverse learners and provide teachers with useful analytics. She also highlights its multimodal and collaborative capabilities, which allow both teachers and students to upload images, videos and voice recordings, while allowing them to interact and learn from one another.

"SLS supports DI by offering multiple ways for teachers to present content and for students to engage with and express their learning. This promotes learning access as they are not limited to a single mode of learning or expression," she explains.

However, Eunice emphasizes that the effectiveness of DI lies in the teacher's intentional use of these features to meet the diverse needs of learners. This requires not only a solid understanding of DI, but also a keen awareness of each student's preferences, strengths and learning needs.

"The teacher should select specific modes on SLS not just for variety, but to align meaningfully with students' individual profiles and the objectives of the lesson. When used purposefully, technology becomes more than just a set of tools—it supports teachers in enacting DI, deepening student engagement and supporting more effective learning," she says.

A Strong Collaborative Culture

Both researchers highlight the strong culture of collaborative learning within the teaching fraternity in Singapore.

"At my school, for example, teachers work in teams to collaboratively design SLS lessons, supported by knowledgeable others. My school leaders are very supportive in providing opportunities for teachers to share best practices and learn from one another. Teachers also use platforms such as the SG Learning Designers Circle (SgLDC) to learn best practices in using SLS for DI," Eunice shares.

She adds that best practices on the use of SLS for DI can be enhanced with deeper discussions and collaborative efforts between teachers. "Teachers must also receive adequate training and support to use these tools effectively, ensuring technology complements, rather than replaces, human efforts in the classroom," she reminds.

Adeline, meanwhile, notes that since there is already a wealth of DI resources and materials available within the teaching community, it would be more productive to focus on curating existing resources that effectively support teachers in meeting their learners' diverse needs.

"Instead of investing more time and effort into creating new resources, there should be more opportunities for teachers to come together to discuss and exchange useful resources related to DI as well as to share their experiences of implementing DI in their classrooms," she advises.

BELIEVE THAT ALL STUDENTS CAN LEARN

For Adeline and Eunice, DI begins with the belief that all students can learn and progress. High readiness students can be stretched with more complex tasks or opportunities to dive deeper into content, while those with lower readiness should never be underestimated—many thrive as self-directed learners when given the right support.

Thus, this calls for a renewed focus on every student's learning experience. "Learning outcomes matter, but we also need to balance that with creating joyful learning experiences. DI can be a pathway to bring that joy into the classroom," Adeline says.

Eunice believes that technology plays a key role in designing learning that inspires and motivates. At her school, the use of SLS is continually evolving to meet the needs of diverse learners. "It's an ongoing conversation—how we can better leverage SLS to apply DI principles or practices in meaningful ways," she explains. ■
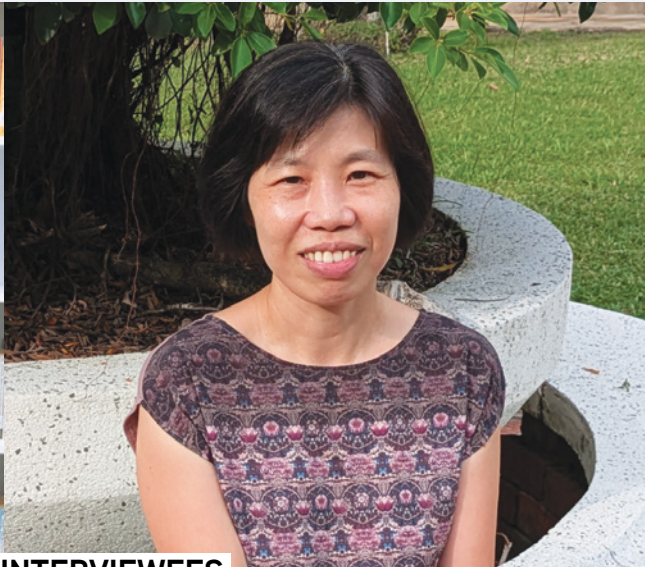
ABOUT THE INTERVIEWEES

Eunice Chew (left) is a School Staff Developer at a secondary school. She holds a Master's Degree in Curriculum, Teaching and Learning. *Adeline Wang* (right) is an Educational Psychologist at the Psychological Services Branch, MOE. She is currently pursuing a PhD.

RPIC

REDESIGNING PEDAGOGY INTERNATIONAL CONFERENCE 2026

Education Research for Impact

Scan the QR code to indicate your interest!

NIE
NATIONAL INSTITUTE OF EDUCATION SINGAPORE

An Institute of

NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE

Enabling Teachers, Empowering Learners:

A Whole-School Approach to Active Learning and Differentiated Instruction

At Unity Secondary School, lessons are intentionally designed to keep students cognitively engaged at every stage of their learning experience. Recognizing that learners have diverse needs, the school has invested in building teacher capacity to effectively enact Differentiated Instruction (DI) in the classroom. In this article, we speak with three teachers from the school who share how DI principles guide their lesson design, from tailoring learning activities and scaffolding tasks to embedding formative assessment. They highlight how thoughtful planning and reflective teaching practices can make learning more inclusive, engaging and meaningful for every student.

ACTIVE LEARNING DRIVEN BY DIFFERENTIATED INSTRUCTION PRINCIPLES

Ms Jacqueline Tan, Lead Teacher for Biology at Unity Secondary, highlights the critical role of thoughtful learning design in fostering student engagement. "Students are more likely to be cognitively engaged when learning experiences are intentionally structured to meet their learning needs," she shares.

At Unity Secondary, learning design follows the three phases of the Active Learning Process: *Activating Learning* (surface learning), *Promoting Thinking and Discussion* (deep learning) and *Demonstrating Learning* (transfer of learning). Each phase plays a vital role in supporting students' learning experience.

"Our teachers are guided by the school's instructional model, which clearly defines the roles of both teachers and students at each phase of the active learning process," she explains. "This fosters a shared understanding of what meaningful engagement looks like for all participants in the learning journey."

Establishing goal clarity is a crucial starting point in the design process. It enables teachers to craft success criteria that clearly articulate what students should be doing to be considered competent in meeting the learning outcomes.

The school is also strategic in selecting the necessary pedagogical approaches that will align with the intended learning outcomes.

"To shape learning experiences that meet students' diverse learning needs, our teaching approach is guided

From left to right: Liang Yen Shan, Jacqueline Tan and Sumitha

by the key principles of Differentiated Instruction (DI): (1) *Quality Curriculum*—for goal clarity, engagement and understanding; (2) *Formative Assessment*—the persistent use of pre- and ongoing assessment to know where students are in relation to the learning targets; and (3) *Instructional Options*—addressing students' varied readiness levels," she explains.

Scan the QR code to find out more about **Unity Secondary's instructional model and how the school applies instructional strategies for DI.**

WHAT DIFFERENTIATED INSTRUCTION LOOKS LIKE

Engaging Students through High Quality Curriculum

At Unity Secondary, teachers design lessons with the goal of deepening students' understanding of subject content while integrating real-world applications to make learning more meaningful. Jacqueline shares her experience in designing an inquiry-based Biology lesson.

As part of a lesson on carbon sinks, students worked in groups to investigate how much carbon dioxide a tree can absorb. One of the key learning activities involved using varied methods of collecting data, such as the girth and height of trees around the school, and then comparing findings across groups to identify patterns and trends in carbon absorption.

"To make the data more meaningful, the activity was connected to real-world issues," she shares. "Students visited the SP Group website to estimate how many trees would be needed to offset their carbon footprint. This led to a discussion on Singapore's One Million Trees Movement—a nationwide effort to plant a million more trees by 2030."

"One of the key goals in designing the lesson was to encourage students to think critically about their environmental impact and reflect on how individual actions contribute to global sustainability efforts," she adds. "It also challenged students to consider that what may seem like a massive national initiative might, in reality, not significantly reduce Singapore's overall carbon emissions—prompting deeper thinking about the scale of change needed."

A Selection of Instructional Options

Ms Sumitha, Level Head Science, comments that Subject-Based Banding (SBB) starts from Primary 5 and 6. SBB allows students to take subjects at standard or foundation levels, based on their strengths and aptitudes.

"Students are familiar with SBB during their primary school years and when they enter secondary school, full SBB is already a familiar concept to them," she notes. "Thus, they have a more positive view towards scaffolded assignments and learning activities, and are more open to try them."

Ms Liang Yen Shan, Acting HOD Science, agrees and states that this eases teachers' role in enacting DI. She shares an example of how tiered assignments and learning activities have been applied in her classroom.

"Last year, there was a Science lesson where students mixed chemicals and recorded their observations," she shares. "To make the experience more engaging and student-centred, I moved the lesson out of the lab and into the classroom. We used micro volumes of chemicals to safely facilitate the activity in this informal setting."

The students were grouped based on their readiness levels. Those in the higher readiness group were given open-ended questions. They were allowed to experiment by mixing the different chemicals together and writing their own observations. In contrast, those in the lower-readiness group were assigned two specific chemicals to mix, with helping words provided for guidance.

"The students in the lower readiness group found the scaffolding to be useful as they felt supported in their learning experience," she remarks.

During the school's professional development on DI, staff were briefed on the importance of intentional groupings. One key consideration is the use of neutral, engaging group names to avoid stigmatizing students based on their readiness levels.

"Students should perceive their group activities as being tailored to support their learning, not as a sign they're struggling," Sumitha explains. "This approach encourages collaboration and reduces negative comparisons or self-doubt."

Embedding Formative Assessment

The school has invested much of its effort in seamlessly integrating formative assessment into the learning process. Jacqueline highlights that the SLS platform helps make students' thinking visible, enabling teachers to provide timely, targeted and actionable feedback.

Yen Shan shares how at the end of a Chemistry lesson on acid properties, teachers consolidated students' observations and explanations submitted on the (Student Learning Space) SLS platform so that they can address any misconceptions and reinforce key concepts in a timely manner.

"Teachers provided clear and specific actions that the students can take to refine their understanding," she shares. "Each student was then tasked to create a graphic organizer which served as an exit ticket that demonstrate their understanding of the key concepts."

SLS also plays an important role in encouraging student reflection and self-assessment.

Jacqueline shares a Biology lesson where students dissected a sheep's heart. They began by setting personal learning goals—such as overcoming their fear of handling heart tissue—then worked in groups to carry out the dissection and created videos explaining the blood flow through the heart using the specimen. The videos were uploaded to the SLS platform for peer assessment and review. It was followed by self-evaluation, in which students reflect on how well they have worked interdependently as a team and supported their reflections with evidence.

"I was heartened to see many students articulating their learning and making meaningful connections to their personal growth," she remarks.

Scan the QR code to find out more about **how Yen Shan has utilized the SLS platform for the Chemistry lesson.**

THE SCHOOL'S PROFESSIONAL DEVELOPMENT STRATEGY

"Our professional development strategy is centred on deepening and enhancing teachers' teaching and learning practices," Jacqueline explains. "It's about strengthening teachers' competencies to create more effective learning experiences for all students."

Professional development at Unity Secondary is anchored in the PLC@Unity Process and guided by the 5Cs approach—Calibrate, Curate, Create, Collaborate and Connect. Each year, teachers engage in a rigorous and reflective design process, where they adopt, or adapt, existing SLS Active Learning lessons and integrate new strategies, such as DI, that align with their department's baseline pedagogical approach.

"Teachers seek peer feedback to refine their designs and, during lesson enactment, conduct classroom observations to gather evidence of student learning," she adds. Insights garnered from student work inform ongoing review and refinement, with teachers encouraged to share successful practices beyond the school.

"Collaboration, sharing and continuous learning are at the heart of refining our teaching practices," she says. "We're in this for the long haul—committed to deliberate and purposeful professional development for every teacher, no matter where they are in their professional journey." ∎

ABOUT THE INTERVIEWEES

*Jacqueline Tan i*s *Lead Teacher for Biology,* **Sumitha** *is Level Head Science and* **Liang Yen Shan** *is Acting HOD Science at Unity Secondary School.*

Implementing Differentiated Instruction in Singapore Classrooms

I n every classroom, students bring a diverse range of learning abilities, experiences and needs. How can educators ensure that each student receives the support they need to thrive? Differentiated Instruction (DI) offers a solution. Assistant Professor Delia Kan Dang Dang, from the National Institute Education's Psychology and Child & Human Development Department, shares insights on DI, its implementation in the United States, and how Singapore's special education (SPED) classrooms have adopted this approach. She also highlights key takeaways that mainstream schools in Singapore can consider to better cater to the diverse learning needs of students.

WHAT IS DIFFERENTIATED INSTRUCTION?

Differentiated Instruction (DI) is a framework designed to support teachers in addressing the diverse needs of students within a classroom. While DI shares similarities with other educational frameworks like Universal Design for Learning (UDL), it differs in its approach. Both UDL and DI attempts to maximize students' learning through offering multiple ways to access content, demonstrate knowledge and engage students—the key difference is in when and how the changes are made to address the students' needs.

"DI involves tailoring instruction based on student needs identified in their class through formative assessments, making modifications as needed. In contrast, UDL emphasizes designing lessons to be accessible to most/all students from the outset, recognizing and planning for classroom diversity in advance," Delia explains.

DI operates within the broader Multi-Tiered System of Support (MTSS) framework at Tier 1, where teachers incorporate these strategies in a typical classroom environment. By incorporating DI, teachers create learning environments where students can access content in multiple ways, demonstrate their understanding through different means and remain engaged in their learning journey.

HOW DIFFERENTIATED INSTRUCTION WORKS IN THE CLASSROOM

A well-structured classroom that enacts DI relies on thoughtful physical organization and manpower support. Designated learning spaces for small-group instruction, independent work and peer collaboration help ensure that students receive the targeted support they need.

In an inclusive elementary classroom in the United States, for instance, lessons typically begin with whole-group instruction, where teachers introduce key concepts to all students. This ensures that everyone receives a common foundation before transitioning into smaller, ability-based groups. Pre-assessments determine student readiness, allowing educators to form ability-based groups.

Once students transition into differentiated learning experiences, the teacher provides targeted instruction to learners struggling academically in a small-group setting, offering additional targeted support (e.g., repetition, errorless prompting) and scaffolding to help them grasp the material. Meanwhile, other students engage in independent or peer activities in other parts of the classroom, with classroom assistants available to guide them when needed. Classroom support staff play a crucial role, assisting with behaviour management and providing additional guidance during academic lessons. This ensures that all learners can receive guidance even while the main classroom teacher works with students in the small group.

"By implementing these differentiated strategies, teachers create an inclusive and effective learning environment that accommodates diverse student needs while promoting engagement and independence," Delia says.

DIFFERENTIATED INSTRUCTION IN SPECIAL EDUCATION CLASSROOMS

In Singapore's SPED classrooms, DI is a familiar approach, ensuring that teaching strategies align with the diverse abilities and learning needs of students.

Many SPED classrooms operate within a co-teaching model, where at least two teachers work together to provide instruction. This model allows for small-group learning, where one teacher leads a focused session with students requiring intensive support, while the other teacher facilitates independent or peer-assisted activities in structured learning spaces. These setups can include spaces dedicated to sensory activities, communication skill development or functional academics.

A lesson incorporating DI practices in a SPED classroom may start with whole-class introduction, using multimodal teaching strategies like visual supports, storytelling and hands-on demonstrations. Students then move into smaller groups, ensuring that learning activities align with their individual needs. Some classes may begin in these smaller groups from the outset, where a teacher each take a small group for instruction, especially if students in the class struggle with joint attention in a larger group setting.

Aligning with the DI framework, teachers then adapt content, processes and outcomes to suit the varied needs of students. For example, in a literacy lesson, students with emergent literacy skills might engage in tactile letter formation activities, while those with more advanced skills practice sentence construction with teacher guidance.

LESSONS FOR MAINSTREAM CLASSROOMS IN SINGAPORE

While DI is a familiar term to teachers in SPED classrooms, mainstream schools in Singapore can learn from these strategies to better support diverse learners in their class.

Purposeful Classroom Organization

A classroom enacting DI can be enhanced by flexible furniture arrangements to support different types of instruction. Teachers should create quiet areas for independent work, collaborative spaces for group activities and designated areas for teacher-guided learning.

Additional Classroom Support

Mainstream classrooms may not require a full co-teaching model, but having classroom support staff—such as teaching assistants—can enhance the effectiveness of DI. In SPED classrooms, both staff in the classroom should have similar levels of instructional expertise to provide both academic and behavioural support. In mainstream schools, these support staff could focus on managing classroom dynamics while teachers work with smaller groups who need more targeted instructional support.

Encouraging Student Independence

Establishing clear routines, setting expectations for independent learning and fostering a growth mindset help students take ownership of their learning. For example, routines that allow students to receive or find support—when teachers are busy with other students and cannot support them immediately as they are engaged with the other small groups—are important. Schools can also provide professional development for teachers to equip them with strategies for implementing DI more effectively.

"By integrating these strategies, mainstream schools can create more inclusive learning environments, ensuring that every student is able to receive the level of support they need and has the opportunity to succeed," Delia shares. ∎
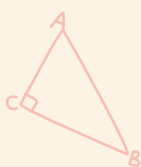
P Durka Devi, an NIE Teaching Fellow, also shares her insights on DI and assessment. Scan the QR code to read the article!
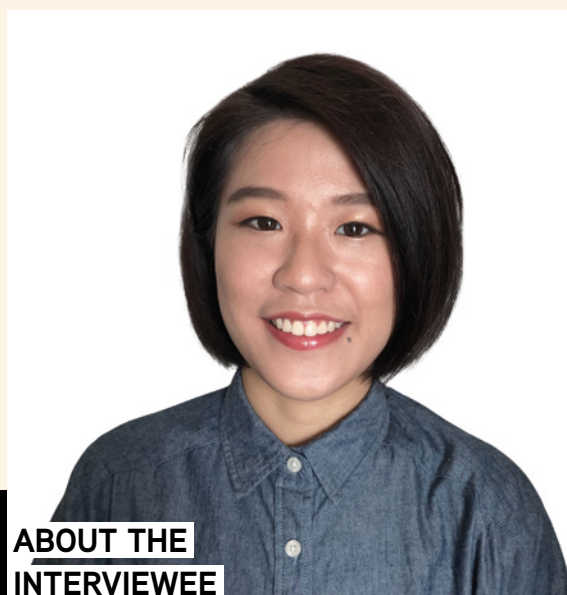
ABOUT THE INTERVIEWEE

Delia Kan is an Assistant Professor with the Psychology and Child & Human Development (PCHD) Department at NIE. Her research focuses on supporting individuals on the autism spectrum and/or intellectual disability in postsecondary transitions, emphasizing self-determination. She is dedicated to participatory research approaches that centre the voices of individuals with disabilities; one of her current projects explores how technologies—such as large language models—can be co-designed to support employment transitions and foster inclusive workplace practices for autistic adults. She is also committed to supporting inclusive education by equipping educators with accessible, evidence-based resources grounded in universal design.

Integrating Differentiated Instruction in Singapore's Classroom: SINGAPORE PRACTITIONERS' PERSPECTIVES

Hairunisa D/O Syed Ibrahim
Teacher at CHIJ (Kellock)

FITTING THE PIECES: DI IN SINGAPORE'S CLASSROOMS

Singapore's classrooms are unique—where else would we find nearly 40 students in a room, each with diverse learning needs, yet working within a structured system that values flexibility? With large class sizes, a wide range of abilities and a culture of inclusivity, I have always believed that DI is not just beneficial—it is essential.

Singapore's students come from different backgrounds, with varying academic strengths, language proficiencies and cultural experiences. It's a bit like a classroom full of different puzzle pieces that, when put together, make the bigger picture even more exciting. For DI to work, it must address the unique needs of each student—no two pieces are exactly the same.

Making DI Work in Singapore

Effective DI in Singapore balances structure, flexibility, peer collaboration and technology to support diverse learners. A structured yet flexible seating approach fosters both collaboration and stability. While students benefit from engaging with different peers, assigned seating remains crucial for order and peer learning. Flexible seating also allows students who need closer teacher support to be positioned accordingly.

Mixed ability grouping further enhances DI by ensuring students of varying strengths work together. Those who grasp concepts quickly deepen their understanding by explaining ideas to peers, while others receive support in a natural and encouraging setting. This approach not only enhances academic learning but also nurtures interpersonal skills, fostering a classroom environment where students actively support one another.
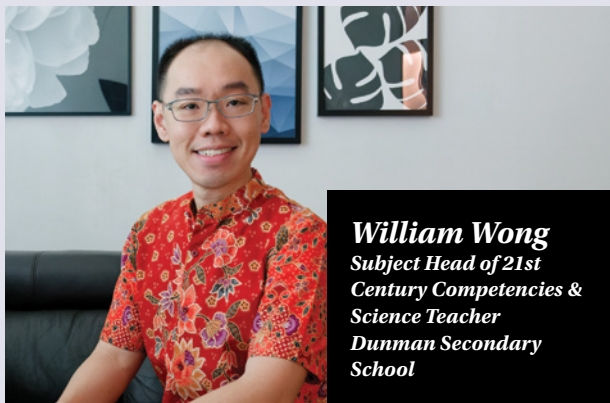
Classroom setup and inclusivity are key. Seating arrangements should ensure every student feels valued, regardless of background or ability. Group discussions and projects help students express ideas, challenge assumptions and build confidence. In Singapore's multicultural classrooms, these interactions foster a supportive and inclusive environment—where students teach, learn and grow together!

Given the dominance of Differentiated Instruction (DI) in conversations in schools, this article gives voice to three educators working from and with the ground. Their insights shed light on the uniquely Singaporean ways in which DI has been (re)interpreted and enacted to accommodate the structures and cultures of our local context. Their sharing offers creative and practical ideas—reflecting flexibility, technological integration, and sensitive balancing of group vs. individual needs—for how they have approached DI.

Customizing learning tasks is crucial in Singapore's classrooms, as a one-size-fits-all approach does not effectively meet the diverse needs of students. Tiered assignments help students engage with the same content at different levels. For example, in a Primary 5 Social Studies lesson on the Physical Environment of Southeast Asia, students may demonstrate their understanding in different ways —some might create an infographic on river features, others may analyse how rivers impact human settlements and economies, while a few may engage in a debate on river conservation. This ensures that all students are challenged and engaged, allowing them to express their learning in ways that align with their strengths.

Technology plays a key role in DI. Digital tools like self-paced quizzes and interactive platforms allow students to learn at their own pace, giving teachers real-time insights into progress. In Singapore's classrooms, with large class sizes and diverse needs, this ensures targeted support and eases the teacher's workload—because even superheroes need a little help now and then!

Towards A More Inclusive and Engaging Future

Ultimately, DI in Singapore is about providing multiple access points to learning, ensuring every student can succeed within our structured yet adaptable system. By balancing structure with flexibility, fostering peer learning and integrating technology, we can create an inclusive and engaging learning environment that meets the diverse needs of our students. And who knows? We just might discover a few more puzzle pieces that fit perfectly together.

William Wong
Subject Head of 21st Century Competencies & Science Teacher Dunman Secondary School

A DISTINCTLY SINGAPORE APPROACH TO DI

We need to move beyond a narrow view of DI that reduces it to individual achievement and self-directed learning. To develop an effective model, DI in Singapore must reflect our nation's educational strengths and cultural values; our success stems from a system of centralized long-term planning that values both personal excellence and collective responsibility. A distinct Singapore DI model would harness three strengths: **communitarian values**, **whole-class instruction** and **technology-enabled personalization**, to meet diverse student needs while preserving instructional coherence and collective responsibility.

Communitarian Values

Singapore's communitarian culture emphasizes balancing individual preferences with collective responsibility. A uniquely Singaporean approach to DI should not promote isolated learning but encourage students to engage with learning from different perspectives, guided by common learning objectives. For example, in a project-based learning experience on environmental sustainability, students could take on different roles while working together to create an integrated proposal. The teacher facilitates the integration of ideas, ensuring that each student's contribution strengthens the overall project. This reflects Singapore's social ethos, where success is defined by both individual achievement and contributing to the common good.

Whole-Class Instruction

Whole-class instruction provides a strong foundation for differentiation, especially in Singapore's large classrooms where instructional efficiency is important. Teacher-led instruction enables all students to develop an understanding of foundational content before engaging in complex tasks where they support one another to deepen their collective understanding.

In this approach, students engage with the same task at varying levels of complexity, with more ready students clarifying concepts for peers while those needing support benefit from collaboration. All students work toward shared learning goals, with teachers providing targeted scaffolding to ensure each student contributes meaningfully to the group's success.

Technology-Enabled Personalization

Our state-sponsored Student Learning Space (SLS) enables personalized learning at scale which is critical in Singapore's large classrooms. SLS allows teachers to create virtual "learning stations" with tasks tailored to students' readiness and learning profiles. Through varied learning pathways and scaffolding, students navigate content at their own pace while working toward shared goals, empowering them to take ownership of their learning while ensuring appropriate support.

A uniquely Singaporean approach to DI balances personal growth with collective responsibility, ensuring that differentiation supports both individual success and the broader social fabric. To be true to the spirit of DI, we must have the courage to critically examine Singapore's strengths and cultural values and be willing to forge a path different from others. Only when we ground teaching and learning in our local context will we truly be practicing *differentiated* instruction. ■

Hanif Abdul Rahman, Principal Master Teacher at PESTA, also shares his insights on DI. Scan the QR code to read more about it.

Join an NIE research study!

Educator-Researcher Connect

The Educator-Researcher Connect (or ER Connect) is a platform that aims to bridge researchers from the National Institute of Education (NIE), Singapore, and local teachers and school leaders in an effort to deepen, enhance and advance education research in Singapore. If you are interested to collaborate and be part of any NIE research project(s) listed in the ER Connect, based on your school's or your needs, please get in touch with the relevant Principal Investigator directly.

The list of research projects on the ER Connect page will be refreshed periodically. We encourage you to share about ER Connect with your fellow colleagues in your school. We hope that providing such information will serve to reduce the research-practice gap and inspire you to embark on an education research journey alongside NIE experts.

Find out more

SCAN

EDUCATOR-RESEARCHER CONNECT