

## Research Paper

# Implementation of Differentiated Instruction in a Maldivian Primary School

Jasmine Jain

*School of Education, Taylor's University, Malaysia*

*Education for All Impact Lab, Taylor's University, Malaysia*

Aishath Wadheefa and Nahudha Ibrahim

*Zikura International College, Maldives*

© The Author(s) 2024. This article is published with open access by Taylor's Press.

---

**Abstract:** This study aimed to gather insights from primary teachers in Fuvahmulah City, Maldives regarding the challenges they encountered while implementing differentiated instruction (DI) in their classrooms. Qualitative research methodology was employed, with data collection primarily conducted through face-to-face interviews using Zoom, a teleconferencing application. Purposive sampling was utilised to select a total of five participants from one primary school who had extensive teaching experience and had experience differentiating their instructions. The collected data was thematically analysed to extract meaningful insights for discussion. The research findings reveal three challenges faced by the teachers, namely (i) resources and support, (ii) classroom and class structures, and (iii) teachers' pedagogical content knowledge. This study extends the current understanding to include the need for technological support and context-based pedagogical knowledge on DI for teachers to effectively differentiate their instructions.

**Keywords:** Differentiated instruction, Maldives, primary school

**Suggested citation:** Jain, J., Wadheefa, A., & Ibrahim. N. (2024). Implementation of differentiated instruction in a Maldivian primary school. *Asia-Pacific Journal of Futures in Education and Society*, 3(3), 1–17. <https://doi.org/10.58946/apjfes-3.3.P1>

---

\*Correspondence: Jasmine Jain, Taylor's University, Email: [jasmine.jain@taylors.edu.my](mailto:jasmine.jain@taylors.edu.my)

## Introduction

### Background of the Study

Over the years, the education system of Maldives has witnessed some challenging but important reforms. This includes the implementation of a competency-based curriculum, and a new assessment policy focusing on continuous assessment. The main aim of this reform is to prepare the students for life by focusing on their individual needs, abilities, and skills. To achieve this broad goal of education, new teaching pedagogies have been introduced with the new curriculum. As such, differentiated instruction (DI) is one of the pedagogical dimensions recommended and implemented in schools of Maldives to provide inclusive education and to cater to a diverse group of students, who differ in their cognitive abilities, learning competencies, preferred learning needs, and background knowledge (Saeed et al., 2023). During the initial stage of this curriculum implementation, school leaders were empowered to observe the teaching and learning process and give immediate feedback regarding the extent to which the practice of differentiated instruction in the classrooms was taking place. Lesson plan formats were renewed, and teachers were informed to write activities for three levels of students which include average, below average, and gifted.

Differentiated instruction (DI) is a teaching philosophy and practice that places student at the centre of educational decisions and uses different teaching instruction, learning activities, and assessment methods (Tomlinson, 2001). This allows teachers to cater to the diverse needs of the students and maximise the individuals' cognitive growth and success. Hence, rather than segregating the lower-ability students or students with learning difficulties, teachers are encouraged to include all the students, emphasising inclusivity and DI in teaching, thereby creating a welcoming atmosphere for a diverse group of learners to be engaged in the learning process and progress academically (Jain et al., 2023). This provides opportunities for students to excel in their competencies from where they are, rather than having to adapt themselves to the learning situation.

Though research on DI acknowledges its importance in the teaching-learning process and student's academic success, some studies highlighted the challenges teachers face in its implementation. Ruys et al. (2013) revealed that teachers generally feel unprepared to use this new approach in their teaching as they have not received sufficient training on DI. Moreover, Aldossari (2018) and Avgousti (2017) found that their teacher participants did not get enough administrative and professional support, making DI lessons more difficult to implement. Apart from this, teachers are overwhelmed with other responsibilities, making it much more challenging for them to commit to class preparations (Jager, 2016; Merawi, 2018). When it comes to the classroom, teachers' comments reveal that classrooms are not provided

with facilities that support DI (Aldossari, 2018; Jager, 2016; Merawi, 2018). These challenges may result in an ineffective implementation of DI leading to failure in achieving the curriculum objectives as well as more students with poor academic performance. Therefore, the need to explore differentiated teaching as a practice is valid as there is limited research in this area.

### **Problem Statement**

Differentiated instruction (DI) has increasingly gained attention in educational debates and conferences due to its importance in catering to today's diversified classroom community. A few studies identified the positive effect of differentiated learning on students' achievement as it provides more opportunities to engage in the learning process, rather than a one-size-fits-all teaching approach. However, the introduction of DI to the education system has introduced many challenges and barriers, though teachers were provided with in-service training on the pedagogical dimensions before and during the initial stage of the new curriculum implementation. Research evidence shows that teachers face many challenges in implementing DI such as the inclusion of mixed-ability students in a classroom with a higher student population, lack of administrative support and resources, lack of pedagogical content knowledge amongst teachers, and lack of professional development for teachers (Huebner, 2010; Joseph et al., 2013). Due to these challenges within the school and in the educational system, many educators in Maldives note that DI is not implemented effectively in classroom teaching. Admittedly, the school management and parents have raised concerns due to the lack of academic progress and poor academic performance of the students. This is evidenced by the NALO (National Assessment of Learning Outcomes) test results which showed a significant decrease in the percentage of passing rates in Mathematics, Science, and English subjects.

There has been limited research in Maldives investigating the challenges of DI from the perspective of primary teachers, despite this being a well-explored domain in other nations. Shareefa et al.'s (2019) study highlighted perceived obstacles to DI. It is imperative to uncover these challenges directly from teachers' experiences. Existing research emphasise impediments that hinder the effective execution of DI strategies, but none of these studies were done in the context of Maldives. Considering the high geographic dispersion of the population in Maldives, the challenge in the cost-effective provision and delivery of basic services of education (Shiyama, 2020) could hinder the successful implementation of DI.

Furthermore, the curriculum in Maldives underwent a major reform in 2015, with a new focus aiming to develop key competencies for lifelong learning, with each key competency built on a combination of cognitive and practical skills, knowledge, values, attitudes, dispositions, as well as other social and behavioural components (Ministry of Education, 2019, p. 2). Given the importance of DI in

the new curriculum as a teaching pedagogy to be implemented and its benefit of more meaningful learning experiences, it is therefore ideal for teachers to implement DI in their teaching. However, there is a knowledge gap in understanding how DI is carried out in schools, and whether teachers are facing challenges in successfully implementing DI.

### **Research Objective and Question**

Given the research gap established above, this study aims to explore the specific challenges faced by primary school teachers at a school in Fuvahmulah City in implementing DI. Hence, the question guiding this inquiry is: “What are the challenges faced by the teachers in implementing differentiated instruction (DI) in their classes?”

## **Literature Review**

### **Differentiated Instruction**

According to Tomlinson (2014), differentiated instruction (DI) is a teaching philosophy and practice that places student at the centre of educational decisions. DI starts from the premise that learners are inherently different and learn in different ways (Tomlinson, 1995). It is a teaching philosophy where teachers give instructions to students according to their differences rather than teaching every student the same way.

Different authors have described differentiated teaching in various ways. Nonetheless, it can be described as differentiating the curriculum to meet the needs of the students (Tomlinson, 2001). While this is the main concept, some definitions focus on differentiating curriculum, while some others emphasise on recognising students and catering to an individual learning style approach. In comparison to the single teaching approach, DI allows individuals to recognise their strengths, limitations, and levels. DI addresses the varied needs of a learner, while a single approach does not work for some of the learners, especially for whom it was intended (Tomlinson & Imbeau, 2010). In a differentiated classroom, students who have already mastered a concept should be assisted and guided to continue learning the curriculum’s content (Rahman, 2018). Slow learners and advanced learners may not be on the same topic during sessions where DI is chosen as a teaching strategy, but all students will be engaged in interesting and appropriate work based on their skills (Tomlinson, 2001).

### **Theoretical Perspectives Underpinning DI**

In this study, the conceptualisation of DI and its implications for teaching are drawn from two main theories. The first is the idea of the Zone of Proximal Development

(ZPD) in Vygotsky's social learning theory, which posits that there is a gap between what a child can do independently and what a child can learn with the help of more capable or skilled peers or teachers (Vygotsky, 1962). Vygotsky stressed the need to scaffold and provide a moderate level of instruction at ZPD to enable the child to move to the next level. Vygotsky, in this regard, viewed learning as knowledge constructed through the interaction of social environment and cultural play.

The second theory drawn from research and the understanding of how the human brain works is Gardner's multiple intelligence theory. Gardner (1983) identified seven different types of intelligence, including verbal/linguistic, logical/mathematical, visual/spatial, bodily-kinaesthetic, musical, interpersonal, intrapersonal, and naturalistic. This theory assumes that intelligence is individualistic, and teachers need to provide various instructional strategies to facilitate the learning of the diverse learners who have different intelligences.

### **Challenges in Implementing Differentiated Instruction**

A substantial amount of literature on differentiated instruction has been written. The effects of difficulties in these studies are very comparable. The following discussions detail the various challenges reported in the literature which were reviewed.

#### *Teaching Mixed-Ability Students*

Joseph et al. (2013) explored the biggest challenge of delivering DI within a time limit — planning for the mixed ability of the desired learning style of the student and not meeting the educational material expertise of the teacher (Huebner, 2010).

The capacity of teachers to provide successful differentiated instruction is often influenced by students from diverse backgrounds, ethnic races, and socio-economic groups (Melesse, 2016). The key challenge in teaching a mixed-ability classroom is unclear goals. According to Tomlinson (1995), teachers are less excited about teaching various levels of students at the same time, which causes the instruction to become more teacher-centred than student-centred.

#### *Lack of Administrative Support and Resources*

There has also been a shortage of administrative support for distinguishing instruction as an obstacle. Leadership support is necessary for teachers to provide gifted students differentiated teaching in the daily classroom (Melesse, 2016). This suggests that school management needs to systematically track teaching and learning and subsequently, provide support and motivation for teachers to use appropriate methods to meet the needs and interests of students with mixed abilities. This includes provision of resources and technology, teacher professional development, parent awareness programs, and a positive learning environment (Melesse, 2016).

Teachers mainly depend on administrators to guide them by serving in an inclusion classroom once they join a school. However, teachers complain that their administrators are unable to assist them since they require appropriate information to train them (Orr, 2009). Administrators usually provide professional development, but if they are not properly prepared to serve students with different learning styles in a classroom, they will be unable to support the teachers in catering to those students (McHatton et al., 2010).

#### *Lack of Pedagogical Content Knowledge*

Another challenge identified by researchers is the lack of pedagogical content knowledge. Teachers must have suitable knowledge of pedagogical material to effectively deliver lessons to meet the needs of the learner. However, a lack of this fundamental ability and capability among teachers has been described by many researchers as an obstacle to effectively implement differentiated instructions (Millen & Gable, 2016). Lack of pedagogical content knowledge leads to other issues related to classroom management, curriculum adaptation, learning environment, and adapting to diverse audiences (Millen & Gable, 2016). Shareefa et al. (2019) also supported this notion of DI and reported that classroom management is one of the primary issues educators face in implementing DI.

#### *Lack of Professional Development*

To teach diverse groups of students, teachers must have excellent subject knowledge, so they can help students explore and develop ideas as well as receive meaningful learning. A 2013 report by The United Nations Educational, Scientific and Cultural Organization (UNESCO) indicated that professional development must be conducted continuously in schools for successful education. According to Sadioglu et al. (2013) and Jager (2016), the lack of DI implementation in inclusive classrooms can be attributed to teachers not feeling prepared to teach in a mixed-level classroom due to a lack of training. Many teachers have stated that they are unprepared to teach in classrooms with mixed-ability learners because they have not been given sufficient or comprehensive training (Sadioglu 2013). These teachers admitted that they require more training right from the beginning (Glazzard, 2011). For that reason, teacher self-efficacy is linked to a lack of teacher preparation, as teachers may feel incapable teaching children in an inclusion classroom. Their resolve may weaken, and this affects the classroom environment (Sharma, 2012).

According to Moosa and Shareefa (2019), many general education teachers have not received much special education training, and this impacts their attitude about the inclusion of students with disabilities. Therefore, these teachers in general education need to learn how to effectively manage a classroom of learners with

diverse learning styles (Lunsford, 2017). Also, they need more training on how to deal with the difficulties of learners with impairments while still fulfilling classroom standards (Moosa & Shareefa, 2019).

## **Methodology**

### **Research Design**

A qualitative case study design underpinned by an interpretivist paradigm was employed in this study intending to understand the challenges through the experiences of those affected. A qualitative research design was used for the study to gain a better picture of the issue and its objectives naturally (Creswell, 2013). The school is in a unique context — the only one island atoll consisting of a single island in the Maldives which is geographically isolated from other atolls. Due to the high geographic dispersion of the population in Maldives, the challenge in the cost-effective provision and delivery of basic services of education has been widely documented and acknowledged (Shiyama, 2020). High teacher attrition and shortages experienced by Maldivian schools further hampers the provision of quality education experience to learners (UNICEF Maldives National Bureau of Statistics, 2018). Hence, employing a case study would provide nuanced findings on the challenges faced in implementing DI in the classroom.

### **Participants**

The population of interest for this study was Key Stage 1 teachers at a selected school who have been adapting the new pedagogy in teaching. A primary school located in one of the southern islands of Maldives was chosen to collect data for the study. The school is among the first batch of schools that have started implementing the new pedagogy. A total of five teachers teaching from Key Stage 1 were purposely selected. Since the new curriculum was implemented starting from Key Stage 1, these teachers were expected to have more experience and training in implementing the new pedagogy. Purposive sampling is a form of non-probability sampling technique in which participants to be included in the sample are selected by the researcher, based on certain criteria (Oliver, 2006). Hence, this sampling method allowed the researchers to identify participants who are more informed and experienced in DI to provide more accurate answers to the research questions.

Since this study was intended to identify the challenges faced in implementing DI, teachers who have been in the field during the last four years and have experience in implementing the DI were selected for the study. In addition, the participants selected for this study had teaching qualifications ranging from bachelor's to master's degree.

## Data Collection

Data for the study was collected through interviews via the Zoom Teleconferencing application. The interview format allowed participants to express their viewpoints, opinions, observations, and fears on the benefits of physical activities in the social and emotional development they apply in classrooms for their students. A semi-structured face-to-face interview was conducted for each participant enabling them to share their experiences regarding the challenges teachers encounter in using DI in class.

To maintain validity and trustworthiness, certain strategies were adopted. One such strategy was rich, thick descriptions. A detailed description of the methodology and data was provided in this research. According to Thomas et al., (2011) a rich, thick description describes the research setting and context as it happens. Likewise, in this research, all interviews were transcribed as the participants talked without any interruptions and the transcriptions were reviewed by the participants to ensure that the responses were written as intended by the participants. Moreover, a pilot interview was carried out and a few modifications were made to the questions based on the feedback obtained from the pilot interview. In the same way, in this study, different participants' interviews were compared in such a way that it triangulated interview to interview.

## Data Analysis

After the data collection process, the interviews which were recorded were then transcribed and saved. At the same time, the recorded interviews were saved separately. This made it easier to begin the analysis process. The gathered data was analysed using an inductive thematic analysis approach. As the first stage of the analysis, the interviews were listened to and transcribed into written forms. Following that, the transcripts were read to identify trends and patterns in them. The trends were then coded, and the codes were cross analysed to find similar patterns. Subsequently, those codes were categorised and organised into themes and patterns.

## Findings

From the data analysis, all five teachers highlighted challenges they faced in the implementation of DI in their classroom, despite recognising its importance. The challenges are reported based on the three themes teased out from the interview data with the participants.

### Theme 1: Insufficient Resources and Support

This theme encapsulates the notion related to insufficient resources and support in implementing DI in the classroom. The dominant responses were related to the

limited materials accessible to teachers for the implementation of DI. For example, one teacher mentioned:

*We don't have sufficient resources to make the materials.* [Teacher C]

This sentiment resonated with Teacher A and Teacher E, who further elaborated that they could have implemented level-appropriate DI which is interesting, but they could not due to insufficient materials.

*In terms of the resources, there are so many different types of activities and the games that we plan, not according to the level of the students or to the lesson, because we don't have those materials.* [Teacher A]

*If it is differentiated instruction that means the teacher is trying to make the lesson, trying to make the lesson attractive to all the students. That means the teacher have to use different types of materials in the classroom. Currently, our school cannot afford to give us what the teachers are demanding.* [Teacher E]

Other than physical materials, there were some references to the shortage of support for accessing digitised materials. Teacher C highlighted the poor connectivity and worn-out computers and television which exacerbated the whole situation,

*Resources, mostly we are relying on either textbooks that we get from the ministry or online resources. So, because of the poor connection, and it's really difficult to search materials, and the maintenance of a PCs and other like electronic gadgets at school is really low. And a sometimes the TV's won't be functioning, we don't have any IT technician and like, all the teachers on are very familiar with technology, and IT stuff. So it's also very difficult for us.* [Teacher C]

Teacher C's view on the connectivity issue was consistent with Teacher E who further added that the existing computers do not have the necessary supporting software which allows them to prepare relevant materials for DI. She proposed that each teacher should be equipped with at least one computer to aid their material preparation. She mentioned the following:

*In our classrooms, we don't have a very stable Wi-Fi...sometimes if the PCs are available also they face difficult, because of in the PCs do not have the software teachers need to make teaching aids. I think, in this era of technology, we would need at least a computer, a teacher would need a computer to*

*prepare materials that also we don't have. Our computers are not available for us, or either they don't have the software's that we need.* [Teacher E]

Consistent with this view, Teacher D further elaborated that the requirement for a computer is not just for material preparation, but also as part of the DI activity itself, in helping students become acquainted with the use of digital tools. This, according to her, prepares them for the current century better. She said,

*A computer system is a resource that is very helpful, right, as we are trying to develop students for the 20th century as we are saying, so it's very important that the students are focused in a way that they can use all the new technological stuff in their education.* [Teacher D]

In essence, the findings revealed a prevalent challenge among teachers is the lack of resources and support necessary for implementing DI in their classrooms. A significant portion of the discussion revolved around the scarcity of materials essential for effective DI delivery. Teachers lamented the insufficient diverse teaching aids, citing constraints in creating level-appropriate and engaging activities. Furthermore, the absence of digital resources and inadequate technical support exacerbated the situation, with issues ranging from poor internet connectivity to outdated computers and limited access to necessary software. Teachers emphasised the necessity for digital tools not only in material preparation but also in integrating technology into instructional activities to equip students for the demands of the 21st century. Ultimately, this theme underscores the critical role of adequate resources and support, both physical and digital, in facilitating the successful implementation of DI in classrooms, thereby highlighting areas where schools and administrations need to improve their provision of essential resources and technological infrastructure.

## **Theme 2: Limitations related to classroom and class structures**

This theme focused on the structure of teaching and learning which poses a limitation for teachers to implement DI. Under this theme, the main issue highlighted was the time limit allocated to the subject taught, also referred to as the “teaching period”.

For example, Teacher C and D said that 35 minutes per period is too short a time to cater to the learning needs of all the diverse learners in their classroom:

*First of all, there is a set time given for each subject. So, I think the time is not sufficient for us to help like all the kids in the classroom.* [Teacher C]

*I feel that 35 minutes is not enough to teach all the students in the class because they are all of different kinds and different levels of learners in the classroom.* [Teacher D]

This issue was raised by all five participants, but teacher A, as quoted below, particularly mentioned that extra time is needed to diversify the learning activities and aid learners who are struggling with the content.

*Aah... The first and the most the challenge that I found is the lack of time. Sometimes I said, I think that the slower learners are not getting enough time for them to do their tasks..[sic].. When conducting some lessons, sometimes we get the attention of all the students and sometimes we might not get the attention of the all the students. To include different types of activities, we need time.* [Teacher A]

Other than the class duration, the teachers also pinpointed the big class size. They felt that the high number of students per class hindered them from carrying out DI effectively.

*... and the number of students. If in a class of 30 students or 25 students, it's very hard to do it. To differentiate, it's a huge challenge.* [Teacher A]

Under the same theme, another challenge shared by the teachers was the lack of academic space. Due to the small classrooms and space-sharing with other grades, they were not able to set up stations and classroom corners for activities during DI.

*Our classrooms are not very spacious, and we share our classrooms with other grades. So that means we cannot use the whole class for our class, our grade students need. We cannot make corners and working stations in the way we want. And yeah, also that is also there when it comes to infrastructure.* [Teacher E]

Due to the high volume of students and small spaces, the logistic arrangement for DI to take place becomes a challenge to these participants. This can be inferred from the responses by Teacher C and D below as well.

*Then, about the infrastructure like we don't have, like sometimes, because there are a lot of students in one class, and we don't have the proper space to carry out activities or to like arrange the class in the way that we want.* [Teacher C]

*Because as we are talking about differentiated instructions, I think that we should create corners for the students so that the different students are catered in different corners. And also, they can move around the class comfortably while learning and they can go through different activities.* [Teacher D]

In summary, this theme delved into the limitations associated with classroom and class structures, revealing significant barriers to the effective implementation of DI. The primary concern within this theme was the restrictive time allocated for teaching subjects, commonly referred to as “teaching periods.” Teachers expressed unanimous dissatisfaction with the standard 35-minute time period, arguing that it is insufficient for the diverse learning needs of their students. This sentiment was echoed by all other participants, with particular emphasis from Teacher A on the necessity for additional time to facilitate varied learning activities and support struggling learners.

Additionally, the challenge of managing large class sizes emerged as a prevalent issue, impeding the ability to implement DI strategies effectively. Furthermore, inadequate academic space, attributed to small classrooms and sharing of facilities with other grades, hindered the set-up of stations and corners for DI activities. The logistical constraints stemming from overcrowded classrooms and limited space further compounded the challenges faced by teachers. Overall, the findings underscored the critical role of classroom and class structures in shaping the feasibility of DI implementation, with time constraints, class size, and space limitations emerging as key obstacles encountered by teachers.

### **Theme 3: Teachers Lacking Pedagogical Content Knowledge**

This theme highlights the challenges related to teachers’ lack of knowledge or skills in the implementation of DI. The teachers acknowledged that they were not well-versed in carrying out DI, despite having the intention to differentiate their instructions. For example, Teacher C noted that DI is a pedagogical skill that evolves, and her understanding of DI may not be up to date as she has not been attending any professional development training on DI.

*Regarding the PD programs, I would say like, it is not done according to it should be done, because this is also an area that keeps on changing. So we are not able to receive the most recent or updated information.* [Teacher C]

Teacher A, on the other hand, mentioned that contextualising the DI skill is important, as it concerns the learners’ demographic and subject matter being taught too. In her related interview response, she mentioned:

*Like not very confident or might actually don't know what to implement in for what lessons. So, it is very important for them to know what strategy will suit to that student.* [Teacher A]

The findings revealed a significant challenge related to teachers' lack of knowledge or skills in implementing DI. Despite their intention to implement DI, teachers acknowledged their inadequacy in this area. For instance, Teacher C highlighted the evolving nature of DI as a pedagogical skill, noting her outdated understanding due to a lack of professional development training. She expressed frustration at the absence of up-to-date information, indicating a gap in professional development programs. Similarly, Teacher A emphasised the importance of contextualising DI skills to fit learners' demographics and subject matter. While this challenge was not unanimously reported among participants, the overall lack of ongoing professional development to keep abreast of the latest developments in DI and its implementation in specific subjects emerged as a barrier to its effective implementation in classrooms.

### Discussion

The findings of Theme 1, related to support and resources, align with the reviewed literature, emphasising the importance of administrative and school support for the successful implementation of DI by teachers. Previous research confirms that the school administration's support, influence, and awareness are crucial for providing teachers with the materials needed to effectively implement differentiated instruction (DI) (Moosa & Shareefa, 2019; Stollman, 2018). Numerous studies investigating support provision have reported that a lack of related support and resources leads to difficulties in implementing new initiatives in classrooms (Avgousti, 2017; Jager, 2016; Merawi, 2018). Aldossari's (2018) study highlighted the crucial need for administrative support in ensuring the success of classroom teaching initiatives. However, the findings of this study extend the current literature, as teachers in this study specifically emphasised ICT support and the need for digital devices in the classroom not only to differentiate their instructions, but also to equip their students with digital skills. This is understandable, given that many lessons critically require internet access and interactive digital materials, especially post-pandemic (UNESCO, 2023).

Previous research also suggests concerns about the potential lack of fairness in implementing DI, as not all students may be engaged in the same tasks (Manning, 2010; Prain, 2013). However, this notion of fairness was absent in this study's findings.

Ensuring equity of space is critical to address this concern so that all students can work at their own pace and space. Theme 2 (Limitations related to classroom and class structures) reveals that both factors are challenges faced by teachers, given

the limited 35 minutes per period, many students, and small classroom size. The constraint of time limitation aligns with literature, which highlights the necessity of ample time, especially when teaching a mixed-ability class (Lee, 2012). Teachers may decide to abandon DI as their focus is often on completing the syllabus by the end of the academic term (Aldossari, 2018; Jager, 2016). However, due to class-sharing and the small space of classrooms, the dominant response in this study was the lack of classroom space, a finding which is less prominent in the literature.

Additionally, teachers feel ill-equipped, primarily due to a lack of pedagogical content knowledge to ensure their lesson learning outcomes are achieved. This finding is consistent with those reported in the literature. For example, Dixon et al. (2014) revealed that teachers might not be prepared to implement DI due to a lack of knowledge related to DI for effective implementation. Subsequently, studies that examined the effects of professional development on pedagogy and student learning found that effective professional development helps teachers acquire the requisite pedagogical knowledge (McHatton et al., 2010). However, it is interesting to find that in this study, teachers wanted to be kept abreast of context-specific DI, not just general DI skills as reported in other studies.

### **Conclusion and Recommendations for Future Study**

In conclusion, this study sheds light on the challenges faced by teachers in Maldives in implementing DI during their lessons. The in-depth study yielded three themes that represent the teachers' perceived challenges, namely insufficient resources and support, limitations related to classroom and class structure, and teachers' insufficient pedagogical content knowledge.

The study contributes to the theoretical understanding of DI by elucidating the importance of administrative support and resources, as well as addressing concerns related to fairness and equity in implementation. Furthermore, the exploration of challenges stemming from classroom and class structures enriches the theoretical discourse by highlighting the physical constraints faced by teachers in delivering DI in diverse educational settings.

Practically, the findings emphasise the need for schools and educational institutions to prioritise providing adequate administrative support and resources to facilitate the successful implementation of DI. Additionally, attention should be given to addressing the constraints of time and space within classrooms to create an environment conducive to DI. Furthermore, the integration of context-specific DI skills into professional development programs can better equip teachers to meet the diverse needs of their students effectively.

While this study sheds light on key challenges and considerations in implementing DI, it is not without its limitations. The sample size and specific

context of the study may limit the generalisability of the findings. Future research could explore the efficacy of different models of professional development in enhancing teachers' pedagogical content knowledge and their ability to implement DI effectively. Additionally, longitudinal studies could provide insights into the long-term impact of administrative support and resource provision on teachers' implementation of DI strategies.

Open Access: This article is distributed under the terms of the Creative Commons Attribution License (CC-BY 4.0) which permits any use, distribution and reproduction in any medium, provided the original author(s) and the source are credited.

## References

- Aldossari, A. T. (2018). *The challenges of using the differentiated instruction strategy: A case study in the general education stages in Saudi Arabia*. Canadian Center of Science and Education.
- Avgousti, M. (2017). *One size does not fit all: Understanding differentiated instruction in elementary mixed-ability classrooms* [Unpublished master's thesis]. University of Toronto, Canada.
- Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches*. Sage Publications.
- De Jager, T. (2016). Perspectives of teachers on differentiated teaching in multi-cultural South African secondary schools. *Studies in Educational Evaluation*, 53, 115–121. <https://doi.org/10.1016/j.stueduc.2016.09.004>
- Dixon, F. A., Yssel, N., McConnell, J. M., & Hardin, T. (2014). Differentiated instruction, professional development, and teacher efficacy. *Journal for the Education of the Gifted*, 37(2), 111–127. <https://doi.org/10.1177/0162353214521662>
- Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. Basic Books.
- Glazzard, J. (2011). Perceptions of the barriers to effective inclusion in one primary school: Voices of teachers and teaching assistants. *Support for Learning*, 26(2), 56–63. <https://doi.org/10.1111/j.1467-9604.2011.01478.x>
- Huebner, T. A. (2010). What research says about differentiated learning. *Meeting Students Where They Are*, 67, 79–81.
- Jain, J., Luanan, J., & Panayachi, S. (2023). Challenges and issues of flipping humanities lessons: Investigating teachers' experiences in a Malaysian international school. *Asia-Pacific Journal of Futures in Education and Society*, 2(1), 23–41. <https://doi.org/10.58946/apjfes-2.1.P2>
- Joseph, S., Thomas, M., Simonette, G., & Ramsook, L. (2013). The impact of differentiated instruction in a teacher education setting: successes and challenges. *International Journal of Higher Education*, 2(3), 28–40. <https://doi.org/10.5430/ijhe.v2n3p28>
- Lee, J. (2012). Patterns of interaction and participation in a large online course: Strategies for fostering sustainable discussion. *Educational Technology & Society*, 15(1), 260–272.

- Lunsford, K. J. (2017). *Challenges to implementing differentiated instruction in middle school classrooms with mixed skill levels* [Unpublished doctoral dissertation]. Walden University, USA.
- Manning, S. (2010). Valuing the advanced learner: Differentiating up. *Journal of Educational Strategies, Issues and Ideas*, 83(4), 145–149. <https://doi.org/10.1080/00098651003774851>
- McHatton, P. A., Boyer, N. R., Shaunessy, E., & Terry, P. M., & Farmer, J. L. (2010). Principals' perceptions of preparation and practice in gifted and special education content: Are we doing enough? *Journal of Research on Leadership Education*, 5(1), 1–22. <https://doi.org/10.1177/194277511000500101>
- Melesse, T. (2016). Differentiated instruction: Perceptions, practices and challenges of primary school teachers. *Science, Technology and Arts Research Journal*, 4(3), 253–264. <https://doi.org/10.4314/star.v4i3.37>
- Merawi, T. M. (2018). Primary school teachers' perceptions of differentiated instruction (DI) in Awi Administrative Zone, Ethiopia. *Bahir Dar Journal of Education*, 18(2), 152–173.
- Millen, R. A., & Gable, R. (2016). New era of teaching, learning, and technology: Teachers' perceived technological pedagogical content knowledge and self-efficacy towards differentiated instruction. *K-12 Education*, 34, 1–29.
- Ministry of Education (MOE). (2019). *Maldives Education Sector Plan: 2019-2023*. Maldives.
- Moosa, V., & Shareefa, M. (2019). The impact of teachers' experience and qualification on efficacy, knowledge and implementation of differentiated instruction. *International Journal of Instruction*, 12(2), 587–604.
- Oliver, P. (2006). Purposive sampling. In V. Jupp (Ed.), *The Sage dictionary of social research methods* (pp. 244–245). Sage Publication.
- Orr, A. (2009). New special educators reflect about inclusion: Preparation and K-12 current practice. *Journal of Ethnographic & Qualitative Research*, 3(4), 228–239.
- Prain, V. (2013). Personalised learning: Lessons to be learnt. *British Educational Research Journal*, 39(4), 654–676.
- Rahman, R. A. (2018). Differentiated instruction; Is it place? *International Journal of Social Research and Innovation*, 2(1), 18–33. <https://doi.org/10.55712/ijrsi.v1i1.16>
- Ruys, I., Defruyt, S., Rots, I., & Aelterman, A. (2013). Differentiated instruction in teacher education: A case study of congruent teaching. *Teachers and Teaching: Theory and Practice*, 19(1), 93–107. <https://doi.org/10.1080/13540602.2013.744201>
- Sadioglu, O., Bilgin, A., Batu, S., & Oksal, A. (2013). Problems, expectations, and suggestions of elementary teachers regarding inclusion. *Educational Sciences: Theory and Practice*, 13(3), 1760–1765.
- Saeed, M., Rajandram, K. V., & Tharumaraj, J. N. (2023). Exploring the masquerade of equality: A preliminary study of pink politics in Maldives. *Asia-Pacific Journal of Futures in Education and Society*, 2(1), 67–81. <https://doi.org/10.58946/apjfes-2.1.P5>
- Shareefa, M., Moosa, V., Zin, R. M., Abdulla, N. Z. M., & Jawawi, R. (2019). Teachers' perceptions on differentiated instruction: Do experience, qualification and challenges matter? *International Journal of Learning, Teaching and Educational Research*, 18(9),

214–226.

- Sharma, U. (2012). Changing pre-service teachers' beliefs to teach in inclusive classrooms in Victoria, Australia. *Australian Journal of Teacher Education*, 37(10), 53–66. <https://doi.org/10.14221/ajte.2012v37n10.6>
- Shiyama, A. (2020). *Primary teacher professional learning in the Maldives: An explorative study of science process skills pedagogies* [Unpublished doctoral dissertation]. The University of Bristol, UK.
- Stollman, S. H. M. (2018). *Differentiated instruction in practice: A teacher's perspective* [Unpublished doctoral dissertation]. Leiden University Graduate School of Teaching, The Netherlands.
- The United Nations Educational, Scientific and Cultural Organization (UNESCO). (2023). *Global education monitoring report summary, 2023: Technology in education: A tool on whose terms?* UNESCO.
- Thomas, J. R., Nelson, J. K., & Silverman, S. J. (2011). *Research methods in physical activity* (6th Ed.). Human Kinetics Publishers.
- Tomlinson, C. A. (1995). Deciding to differentiate instruction in the middle school: One school's journey. *Gifted Child Quarterly*, 39(2), 77–114.
- Tomlinson, C. A. (2001). Differentiated instruction in the regular classroom. *Understanding Our Gifted*, 14(1), 3–6.
- Tomlinson, C. A. (2014). *The differentiated classroom: Responding to the needs of all learners*. Association for Supervision and Curriculum Development.
- Tomlinson, C. A., & Imbeau, M. B. (2010). *Leading and managing a differentiated classroom*. Association for Supervision and Curriculum Development.
- UNICEF Maldives National Bureau of Statistics. (2018). *Analysis of children of the Maldives from Census 2014*. UNICEF.
- Vygotsky, L. (1962). *Thought and language*. MIT Press.