

**BELIEF REPRESENTATIONS AND
DIFFERENTIATED INSTRUCTION AMONG
MAINSTREAM TEACHERS IN INCLUSIVE
SCHOOLS IN BISHA CITY SAUDI ARABIA**

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MAINSTREAM TEACHERS IN INCLUSIVE
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by

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LIST OF ABBREVIATIONS

DI	Differentiated Instruction
IDEA	Individuals with Disabilities Education Act
IEP	Individualized Education Programs
SPSS	Statistical Package for the Social Sciences
TEIP	Teacher Efficacy for Inclusive Practices
TPB	Theory of Planned Behaviour
USA	United States of America

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**KEPERCAYAAN DAN PEDADOGI TERBEZA DALAM KALANGAN GURU
ARUS PERDANA DI SEKOLAH INKLUSIF DI BANDAR BISHA ARAB
SAUDI**

ABSTRAK

Pendidikan inklusif, yang bertujuan untuk memenuhi keperluan semua pelajar tanpa mengira latar belakang dan kebolehan mereka, menghadapi cabaran kerana definisi dan pelaksanaan yang berbeza-beza di peringkat global. Kepercayaan guru terhadap peranan dan efikasi sendiri mereka serta amalan pedagogi terbeza adalah faktor penting dalam menggalakkan amalan inklusif, terutamanya bagi pelajar bermasalah pembelajaran. Walau bagaimanapun, penyelidikan tentang kepercayaan guru dan amalan pedagogi terbeza dalam tetapan arus perdana untuk pelajar bermasalah pembelajaran adalah terhad. Kajian ini bertujuan untuk mengkaji kepercayaan guru dan pelaksanaan amalan pedagogi terbeza. Hubungan antara faktor-faktor ini serta faktor demografi guru juga disiasat. Kajian ini menggunakan reka bentuk kaedah campuran yang mengandungi tinjauan keratan rentas menggunakan soal selidik dalam talian yang melibatkan sejumlah 162 guru sekolah Saudi melalui persampelan mudah. Kedua, temu bual separa berstruktur dengan lapan guru telah dijalankan untuk menyokong dapatan soal selidik. Statistik inferensi, seperti ujian-T, ANOVA, Korelasi, dan Regresi, digunakan untuk analisis data tinjauan, manakala analisis tematik digunakan untuk analisis data temu bual separa berstruktur. Dapatan kajian secara khusus menekankan kepentingan kepercayaan guru tentang pendidikan inklusif, terutamanya pemahaman mereka tentang tanggungjawab sebagai komponen penting. Mereka juga mempamerkan kepercayaan yang kukuh dalam peranan pelindung mereka terhadap pelajar bermasalah pembelajaran dan mempamerkan

keyakinan dalam memotivasikan pelajar untuk bekerjasama. Di samping itu, dapatan kajian menunjukkan bahawa guru mahir dalam melaksanakan amalan pengajaran berbeza mereka. Tambahan pula, dapatan menunjukkan bahawa kepercayaan terhadap keberkesanan pengajaran inklusif, kerjasama, pengurusan tingkah laku, dan persepsi peranan dikaitkan dengan amalan pedagogi terbeza. Faktor seperti demografi, termasuk umur dan pengetahuan mengajar pelajar bermasalah pembelajaran, memberi kesan kepada pelaksanaan amalan pedagogi terbeza oleh guru. Penemuan ini membayangkan bahawa meneroka kepercayaan guru dan amalan pedagogi terbeza dalam hal ini, guru dan penggubal dasar boleh meningkatkan mekanisme sokongan, menyediakan sumber yang diperlukan, dan menggalakkan strategi yang berkesan untuk memupuk pendidikan inklusif untuk semua pelajar.

**BELIEF REPRESENTATIONS AND DIFFERENTIATED INSTRUCTION
AMONG MAINSTREAM TEACHERS IN INCLUSIVE SCHOOLS IN BISHA
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ABSTRACT

Inclusive education, which aims to cater to all students regardless of their backgrounds and abilities, faces challenges due to varying definitions and implementations globally. Teachers' beliefs towards inclusion and their beliefs in their roles and self-efficacy as well as practices of differentiated instruction are crucial factors in promoting inclusive practices, especially for students with learning difficulties. However, research on teachers' beliefs and practices of differentiated instruction in mainstream settings for students with learning difficulties is limited. This study aimed to examine teachers' beliefs and their implementation of differentiated instruction practices. The relationship between these factors as well as teachers' demographic factors were also investigated. This study employed the mixed methods design that contains a cross-sectional survey using an online questionnaire in which a number of 162 Saudi school teachers were purposefully sampled. Second, semi-structured interviews with the eight teachers were conducted to support the questionnaire's findings. Inferential statistics, such as the T-test, ANOVA, Correlation, and Regression, were employed for the analysis of survey data, whereas thematic analysis was utilized for the analysis of semi-structured interviews data. The findings specifically emphasized the importance of teachers' beliefs about inclusive education, particularly their understanding of responsibilities as a crucial component. They also displayed strong beliefs in their protective role for students with learning disabilities and exhibited confidence in motivating students to collaborate. Additionally, the

results indicated that teachers were proficient in implementing their practices of differentiated instruction. Furthermore, the findings illustrated that beliefs in the efficacy of inclusive instruction, collaboration, behavior management, and role perceptions were associated with differentiated instruction practices. Factors such as demographics, including age and knowledge of teaching students with learning difficulties, impacted teachers' execution of differentiated instruction practices. The findings imply that exploring teachers' beliefs and differentiated instruction practices in this regard, teachers and policymakers can enhance support mechanisms, provide necessary resources, and promote effective strategies to foster inclusive education for all students.

CHAPTER 1

INTRODUCTION

1.1 Introduction

The landscape of special education has indeed evolved significantly over the years, with a growing emphasis on promoting inclusive education for students with disabilities (Bi et al., 2023; Cabatay & Hermanto, 2022). The right to education for individuals with disabilities has been recognized in various international instruments, highlighting the need for inclusive educational practices (Wearmouth, 2022). Inclusive education aims to cater to the needs of all students to realize equal educational opportunities as their peers in regular schools (Almalky & Alrasheed, 2023; Sharma et al., 2021). The most well-known use of the concept of inclusive education is tied to the Salamanca statement of 1994 (Unesco, 1994), linking inclusion to the participation of children with a disability in regular education. The Salamanca statement increased the pressure on many countries to carry out reforms in their education systems, particularly about inclusive education (Almalky & Alwahbi, 2023). To address the international call for more inclusion, Saudi Arabia has initiated the shift from offering special needs pupils separate education to integrating them into regular schools, with the backing of Ministry of Education policies and program initiatives (Battal, 2016).

A growing number of students with disabilities, particularly those with learning and physical challenges, are enrolled in general education classes as a result of significant changes to legislation and programs for inclusive education (Ministry of Education, 2019). Students with intellectual disabilities, autism spectrum disorder, and other moderate to severe developmental disabilities have not been included in

inclusive education, despite its implementation in a small number of schools (Aldosari, 2022; Ministry of Education, 2019).

Given that "all children learn together regardless of any difficulties or differences they may have" (UNESCO, 1994, p. 11) is the essential principle of inclusive education, more advancements in inclusive education in Saudi Arabia are necessary (Almalky & Alwahbi, 2023). An expedient approach to designing instruction fitting diverse classrooms is differentiated instruction (Roose et al., 2024). Ultimately, the successful practice of differentiated instruction depends on teachers' beliefs, and it is, therefore, necessary to understand the underlying variables that influence their differentiated instruction practice (Bi et al., 2023; Roose et al., 2023). More specifically, many researchers have reported that teachers' beliefs including belief about inclusive education, belief about teachers' roles, and self-efficacy belief are strongly associated with their differentiated instruction practice (e.g., Bi et al., 2023; Zaier & Maina, 2022). However, such research in Saudi Arabia has rarely been conducted. Furthermore, research investigating the relationship between school location and differentiated instruction practice remains rare. The current study aims to explore the impact of mainstream teachers' belief about inclusive education, roles, and self-efficacy on their practice of differentiated instruction, and thus to provide new empirical evidence from the Saudi context and valuable suggestions for teaching practice, training, and future research.

1.2 Background of the Study

The increasing diversification of classrooms has been a global phenomenon since this time and, increasingly, schools are allowing a greater diversity of learners to attend their local school of choice (Ainscow, 2020; Bi et al., 2023). However, inclusive

education is a complex issue that reflects the right to include all learners with their different needs to access education. Thus, teachers must have the requisite skills, knowledge, attitudes, and self-efficacy to successfully implement an inclusive approach to teaching and learning (Avramidis et al., 2019; Yada et al., 2022; Woodcock et al., 2023). Recent research has identified pertinent factors in the implementation of inclusion, finding that teachers' attitudes toward inclusion and levels of belief in their teaching capabilities can predict teachers' use of inclusive practices (Alsolami & Vaughan, 2023; Hutner & Markman, 2016; Woodcock et al., 2023). As such, the examination of teachers' beliefs related to inclusion is paramount to the planning and delivery of inclusive education, as the previous finding provides insight into the mainstream teachers' thinking as they teach students with learning difficulties in inclusive classrooms (Dignath et al., 2022; Ismailos et al., 2019).

Teachers' belief representations encompass teachers' perceptions, attitudes, and convictions regarding various aspects of education and teaching practices (Luo, 2023). Teachers' belief representations reflect teachers' teaching strategies and methodologies of teaching and learning impact their classroom management, curriculum, and instruction planning, as well as the expectations of learners. Teachers develop a personal understanding, beliefs, and representations about the direction, mission, planning, and objective of their teaching for all students (Santos & Miguel, 2019). The focus is on teachers' beliefs about teaching diverse learners, involving the intersection between beliefs about diverse learners and the instructional context. In addition, teachers' role beliefs are hypothesized to be amongst the innate core constructs, which would impact how teachers perceive and select knowledge and approaches to teaching. Teachers' beliefs about their roles play a crucial role in

providing effective inclusion practices for students with diverse needs in the school environment (Abrol, 2023).

Teacher self-efficacy is a sub-category of self-efficacy and is influenced by educators' behavior and environment (Sharma et al., 2016). Consequently, teacher self-efficacy influences decision-making in an educational context and is a determining factor in the quality and practice of teaching (Lukáčová et al., 2018). Mainstream teachers' self-efficacy beliefs in teaching students with learning difficulties, encompassing aspects like instruction, motivation, and classroom management, are crucial for successful inclusion (Wilson et al., 2018). These findings underscore the importance of supporting mainstream teachers' self-efficacy through training, resources, and collaborative efforts to enhance the educational experience for students with learning difficulties (Woodcock et al., 2023). This advances understanding of how teacher self-efficacy belief is fostered and the role of the school environment. Engaging with teacher belief systems may cultivate a school climate that promotes inclusion.

The teacher's role belief is part of their identity formation, which has a strong impact on their professional behaviors and actions (Vidović & Domović, 2019). Teachers' role beliefs refer to teachers' beliefs about their role identity. A teacher's role identity is a construct of professional personality that is formed in the career of teaching (Karabay, 2016). In this regard, Domović et al. (2017) identified protective orientation, facilitating orientation, behavioral orientation, and self-centered orientation as key aspects of beliefs about teachers' roles such as protective orientation, facilitating orientation, behavioral orientation, and self-centered orientation. Glenn (2018), viewed that the varying beliefs about teaching roles and responsibilities among teachers in inclusive education are closely related to their

beliefs about teaching and learning (Glenn, 2018; Metsala & Harkins, 2020). The roles and responsibilities of teachers become critical in classrooms where the attitudes, concerns, and supporting values held by the teachers decide that they are willing to support this reform effort regarding inclusion (Abrol, 2023). Belief about teachers' roles is one of the belief representations that potentially influence differentiated instruction. Thus, this study extends from the prior works by exploring the extent to which teachers' role beliefs about inclusive education

Educational provision for students with special needs has been influenced by various movements and legal amendments since the early 1900s. The Individuals with Disabilities Act and the No Child Left Behind Act are two significant legislative frameworks that govern educational programs for students with special needs (Christy, 2021). These laws impose specific requirements on public schools to deliver a free appropriate public education in the least restrictive environment for students with disabilities. The primary objective of the No Child Left Behind Act (NCLB) was to guarantee that every child has a just, equitable, and substantial chance to acquire a top-notch education and achieve, at the very least, proficiency in rigorous state academic standards and state academic assessments as stated by the U.S. Department of Education in 2005. Despite the impact of these laws on special education, states retain complete autonomy in the allocation of funds for special education programs based on their own discretion (Christy, 2021). Thus, No Child Left focused on equal opportunities for students in poverty, and students with special needs.

The Individuals with Disabilities Education Act (IDEA) is a law that makes available free appropriate public education to eligible children with disabilities throughout the nation and ensures special education and related services to those children (Christy, 2021). IDEA, initially signed into law as P.L. 94-142 by President

Gerald Ford on November 29, 1975, was first called the Education for All Handicapped Children Act of 1975 (Christy, 2021). The IDEA of 1975 emphasizes equal access to public education for all learners, including those with disabilities, aligning with the principles of differentiated instruction (West et al., 2024). The original driver of the IDEA could be considered ensuring access to the public school system, with a secondary mission of supporting states and locals in carrying out their responsibilities (West et al., 2024). IDEA mandates that students with disabilities receive a free and appropriate public education tailored to their individual needs, which resonates with the concept of differentiated instruction that aims to address diverse learning styles and needs (Adebisi, 2024; Govero Chipika et al., 2023). Students' needs and outcomes are significant, instead of a system focusing on general and special education, a more inclusive pedagogy can personalize learning, cater to different paces and contents, and assess outcomes individually (Wolfe et al., 2013).

In 1997, the reauthorization of IDEA shifted the focus from simply having access to services to the quality of the instruction, evaluation of programs, and link to outside agencies to ensure quality transitions (Christy, 2021). The requirement of placement under IDEA must have three prongs present: (a) the student must have one of the 14 disability categories, (b) the disability must substantially limit access to the curriculum, and (c) the student must require specially designed instruction (U.S. Department of Education, 2019a). Differentiated instruction recognizes the importance of modifying content, processes, and products to accommodate individual learner differences, promoting equality in educational environments by catering to the unique needs of each student (Adebisi, 2024). By acknowledging and accommodating diverse learning profiles, differentiated instruction supports the inclusive practices

advocated by IDEA, ultimately striving to provide equitable educational opportunities for all learners (Govero Chipika et al., 2023).

Differentiated instruction is widely considered an effective method to teach diverse learners and meet the needs of every student (Onyishi & Sefotho, 2020; Roose et al., 2024). Through differentiated instruction, each student can have the opportunity to work with multiple options, alternatives, and avenues to what they learn, how they can learn, and how they express what they have learned (Onyishi & Sefotho, 2020). According to Tomlinson and Imbeau (2010), teachers can differentiate classroom instruction in four ways; namely content, process, product, and learning environment. The four domains have been extensively explained in many studies (Farris & Werderich, 2019; Lavania & Mohamad 2021; Mofield, 2020; Zaier & Maina, 2022). It contains all the efforts that teachers make to satisfy learners' individual learning needs (Magableh & Abdullah, 2021). Differentiated instruction is therefore not a single teaching strategy. Instead, it entails a wide range of efficient techniques, like adapting learning objectives, giving students choices, flexible grouping approaches, offering individual support, or evaluating students using a variety of assessment techniques (Bondie et al., 2019). The quality of differentiated instruction therefore depends not only on the methods used but o but on the degree to which these methods are tailored to the specific needs of a student group (Roose et al., 2024).

In the environment differentiation, teachers create a responsive and inclusive classroom that caters to students' readiness levels, interests, and learning profiles. The differentiation of the learning environment requires flexibility in rearranging classroom settings to meet the needs of each student. When creating culturally responsive classroom environments, teachers use the look and feel of their classrooms as ways to promote student engagement and progress (Lavania & Nor, 2020). In real

classroom environments, teachers can achieve differentiation by tailoring lessons to individual learning styles or by grouping students according to common interests, topics, or abilities (Zaier & Maina, 2022).

Content differentiation involves adjusting what students learn, process differentiation focuses on how students learn, and product differentiation pertains to the ways students demonstrate their understanding (Benjamin, 2020). Product differentiation, which refers to the output produced by students after a lesson to showcase their mastery of content, necessitates the differentiation of both the outcome and the structure of learning achievements (Zaier & Maina, 2022). Within the realm of education, product differentiation encompasses a variety of tasks such as assessments, projects, reports, and other assignments that are customized to cater to diverse learning preferences and enhance student proficiencies (Zaier & Maina, 2022). Process differentiation, as elucidated by Tomlinson and Imbeau (2010), is characterized as how students grasp and interpret the content they are presented with. Through process differentiation, educators facilitate student engagement in activities that enable them to internalize the content by comprehending its relevance and applicability in real-world contexts beyond the confines of the classroom. Therefore, mainstream teachers of students with learning difficulties must fortify their understanding and competencies about the four dimensions of differentiation (content, process, product, and learning environment) through prolonged exposure and focused practical experience.

Meanwhile, Magableh and Abdullah (2021) revealed that differentiated instruction is an excellent way for teachers to provide each student with equal opportunities to succeed in the classroom. Magableh and Abdullah in a different study (2020) investigated the effectiveness of differentiated instruction on elementary school

levels from grades 4 to 8 and proved the effectiveness of differentiated learning to enhance students' achievements. Ginja and Chen (2020) also highlighted positive outcomes, such as enhanced student motivation, improved relationships between learners and educators, and reduced achievement gaps. Cagapea et al. (2023), also highlighted teachers' insights on the importance of using differentiated instruction in promoting inclusive education and meeting the diverse learning needs of students by promoting learners' engagement, addressing individual differences, and promoting student resilience.

Differentiated instruction has been identified as the most effective means of addressing the various learning, cultural, ethnic, and socio-economic differences within inclusive classrooms (D'Intino & Wang, 2021). Differentiated instruction intends to maximize learning growth by catering to the needs of every student (individually and in small groups) via multiple means of expression and offering sufficient avenues for learning by varying approaches to teaching content and skills (Gibbs, 2023). Hence, meeting the needs of a diverse student population requires teachers to provide learning experiences that recognize and utilize these differences. The current study aims to assess mainstream teachers' practices of differentiated instruction such as environment, content, and process/product differentiation in teaching students with learning difficulties.

Despite the considerable literature that highlights the benefits of differentiated instruction, some teachers find implementing differentiated instruction in heterogeneous classrooms challenging (Gibbs, 2023). The last major determining factor in ensuring effective differentiated instruction implementation is the limited time available for planning and instruction, a commonly reported barrier in schools (Gibbs, 2023). Lavinia and Nor (2020) explain that teachers encounter challenges

beyond their control when implementing differentiated instruction. External factors like time, students, and resources can be controlled. Demographic factors include gender, specialization and school level, age, education, teaching experience, subject matter, training in differentiated instruction or special education, and the type of school—private or public—that determine how differentiated instructional strategies are implemented (Papanthymou & Darra, 2022). It remains uncertain if the differentiated instruction practice is influenced by mainstream teachers' demographic factors when teaching students with learning difficulties.

Teachers' beliefs in their teaching capabilities and beliefs in inclusive education are important factors in the implementation of inclusive education for all (Arvelo-Rosales, 2022; Dignath et al., 2022). In turn, given the evidence on the effects of teachers' beliefs on differentiated instruction (Dignath et al., 2022; Ginja & Chen, 2020), one important open question is if and how belief about inclusive education, belief about teachers' roles, and self-efficacy belief influence differentiated instruction practices. Consequently, it is imperative for teachers to comprehend the significance of inclusive education for all learners and to receive adequate support to enhance their confidence in their ability to create inclusive learning environments that benefit their students (Woodcock et al., 2022).

Before 1958, the provision of educational services for children and individuals with disabilities in Saudi Arabia was non-existent. The period from 1960 to 1971 witnessed a significant expansion in special education initiatives, transitioning from limited services catering to specific disabilities to the establishment of the Special Education Agency within the Ministry of Education, as highlighted by Aldabas (2015). Subsequent progress in the realm of special education occurred between 1987 and 2000, resulting in an increase in the total number of specialized educational institutions

to 54. Moreover, a shift in the educational placement of students with disabilities occurred between 1990 and 2000, moving from segregated schools to integrated special education classrooms within public schools. By 2015, an estimated 746 public schools across the nation were equipped with special education classrooms tailored for students with mild to moderate disabilities, encompassing intellectual disabilities, multiple disabilities, and inclusive programs for individuals with mild to moderate autism spectrum disorders (Aldabas (2015). Table 1.1 outlines the dates and special education services that were provided.

Table 1.1 Summary of Historical Time Line of Saudi Arabia in Inclusive Education

Year	Types of Disability	Placement	Note
1958	Blindness (men)	Private Place/ Nonprofit group	A blind man started to learn to use the Blind System. Small group training in Braille.
1960	Blindness (boys)	Special School	Day Sponsored by the Ministry of Education Special schools for blind males (Al-Noor Institute) of various ages.
1962	-	-	The administration of special Education established by the Ministry of Education
1964	Blindness (girls)	Special School	Day Sponsored by the Ministry of Education-Administration of Special Education Special school for blind girls (Al-Nor Institute) of various ages.
1964	Deafness (boys)	Special School	Day Sponsored by the Ministry of Education-Administration of Special Education Special schools (Al-Amal Institute) various ages

1964	Deafness (girls)	Special School	Day	Sponsored by Ministry of Education-Administration of Special Education Special Schools (Al-Amal Institute) for Various ages
1971	Intellectual disabilities	Special School. Residential School.	Day	Sponsored by Ministry of Education – Administration of Special Education
Between 1960-1987	Blindness, Deafness, Intellectual disabilities	27 Institutes Special Day Schools and some residential schools		10 for deaf; 6 males/4 females 10 for blind; 7 males/3 females 7 for mental retardation; 4 males/3 females
Between 1987-1990	Blindness, Deafness, Intellectual disabilities	54 Special Schools and some residential schools	Day	Sponsored by Ministry of Education – Department of Special Education
Between 1990-2000	Mild and moderate Intellectual Disabilities, Autism, hard of hearing, Hearing Impairments	Full-time special education classrooms in public schools		Sponsored by Ministry of Education – Department of Special Education
Between 2000-2015	Mild to Moderate Learning Disabilities	General education classrooms with resource room assistance		Sponsored by Ministry of Education – Department of Special Education
Between 2000-2015	Moderate, Profound, and Severe Disabilities including Intellectual Disabilities, Autism Deafness-Blindness, multiple Disabilities. Physical Disabilities	Special day schools		Sponsored by Ministry of Education – Department of Special Education Ministry of Social Affairs

2017	-	-	The Ministry of Education was dedicated to advancing universal education access as shown through the Right to Education Law and the Right to Education Initiative
Currently	-	-	The Ministry of Education in the Kingdom of Saudi Arabia released organizational regulations that confirmed the provision of special needs support services

Source adapted from Aldabas (2015)

In recent years, following the implementation of its Vision 2030 initiative, Saudi Arabia has made major strides in advancing inclusive education. The Kingdom of Saudi Arabia has enacted multiple laws supporting inclusion, particularly in education, and is quickly absorbing inclusive methods from other countries to serve students with disabilities (Aldousari & Dunn, 2022). Like many other nations, Saudi Arabia is still facing numerous obstacles in reaching its goals for inclusive education, even with these developments (Alsolami, 2024). The government is prioritizing teacher recruitment and training, as the shortage of trained special education teachers poses a significant challenge (Alqahtani et al., 2021). There is a growing awareness of the importance of inclusive education and the need to provide appropriate support and resources for students with disabilities (Al-Zahrani & Al-Jaber, 2019). The study, thus, aimed to explore the belief representations and practices of differentiated instruction among mainstream teachers of students with learning difficulties in inclusive schools in Bisha City.

1.3 Problem Statement

In Saudi Arabia, students with learning difficulties are included in regular classes (Schwab et al., 2020). However, according to Schwab et al. (2020), mainstream teachers do not receive any extra help, resources, or support for instructing children with learning disabilities in inclusive classrooms. Furthermore, there is a deficiency in ongoing professional development related to inclusive education, which leads to the prevalence of a teacher-centered approach to teaching methods, unfavorable attitudes among teachers toward inclusive education, and a lack of productive parent partnerships (Khochen-Bagshaw, 2020; Abed & Shackelford, 2021). Additionally, research indicates that many teachers resort to punitive strategies rather than effective and positive methods to manage student behavior (Almutlaq, 2021; Almalky & Alwahbi, 2023). Thus, the beliefs of teachers regarding their self-efficacy to teach in inclusive classrooms were found to be inconsistent, owing to the evident obstacles in Saudi Arabia's efforts to implement inclusive education (Alnahdi, 2020). To effectively meet the different needs of children in inclusive classrooms, teachers must possess the appropriate mentality, knowledge, and abilities.

This highlights a gap in knowledge and experience among teachers in utilizing more beneficial behavior management techniques. Studies show that Saudi teachers tend to have more negative beliefs about educating special education students in regular classrooms than teaching those with other disabilities (Aldosari, 2022; Alnahdi et al., 2019). In practice, the finding is that teachers tend to be more negative about students with disabilities in mainstream classrooms with a higher risk of academic failure. These beliefs are implicitly communicated through teacher behaviors, for instance by seeing poor performance of at-risk students as normal or praising good performance less (Roose et al., 2024). Hence, it is key to take into account how

teachers' belief representations about inclusive education influence their differentiated instruction practices effectively and manage student behavior positively.

To teach students with learning difficulties effectively, a broad understanding of challenges is essential. Gibbs (2023) points out several challenges encountered by Australian mainstream school teachers when implementing differentiated instruction. These challenges include limited school resources, student behavior issues, and insufficient time for planning and execution. School leaders have also noted time constraints as a hindering factor, along with a reluctance among experienced teachers to embrace differentiated instruction. Furthermore, teacher education programs lack clarity on differentiated instruction as a comprehensive teaching framework suitable for diverse student populations. The findings underscore the necessity for further research at the levels of teacher educators, teachers, and school leaders to address existing barriers, limitations, and misconceptions surrounding differentiated instruction, thereby ensuring optimal learning opportunities for all students. The failure to differentiate the teachers is attributed to the following factors: constraint of time, lack of diverse learning facilities, high-class population, and poor knowledge and skills of the teachers (Onyishi & Sefotho, 2020).

In Saudi Arabia, there is a significant emphasis on the necessity for educators to be equipped to instruct students with special needs, as indicated by research findings (Alzemaia, 2019). Mainstream teachers who lack formal training in special education may demonstrate a lack of responsibility and dedication in educating students with learning challenges (Hayes & Bulat, 2017). The challenges encountered by Mainstream teachers in assisting students with special needs persist in practice, potentially due to the inadequacy of available training programs (Alqahtani, 2019).

The major challenges to differentiated instruction include those related to students, the school environment, differentiated instruction, and teachers (Aldossari, 2018).

Indeed, studies by Alzemaia (2019), Aldossari (2018), and Almalky and Alwahbi (2023) in Saudi Arabia reported that the use of differentiated instruction among Saudi teachers was limited owing to several factors such as teaching large numbers of students in inclusive classrooms made it more challenging for them to implement the learning program and to manage the classroom effectively. Research on Saudi teachers' perspectives and roles with inclusive teaching, however, is limited (Almalky & Alwahbi, 2023). As such, additional research conducted in the same nation is required to establish a trustworthy and definitive understanding (Guillemot et al., 2022).

Alnahdi and Schwab (2021) highlighted that one challenge in the education Saudi system is preparing teachers for new responsibilities and supporting students with special education needs. The authors also showed that teacher attitudes toward inclusion education are strongly linked with teachers' self-efficacy to work in inclusive classrooms. Moreover, although studies have explored teachers' self-efficacy in various countries, there is limited research on this topic in Saudi Arabia (Alnahdi & Schwab, 2021). Therefore, it is imperative to explore the beliefs and perceptions of Saudi Mainstream teachers and their level of self-efficacy to teach in inclusive education.

In a multinational study by Sharma et al. (2021), the use of inclusive education practices among teachers from different countries (i.e., Australia, India, Canada, and Hong Kong) was evaluated. Sharma et al. (2021) stated that teachers in these countries showed unsatisfactory use of inclusive practices in their classrooms. Moreover,

although international policies on inclusive education are encouraging, their practical adoption can prove difficult (UNESCO, 2020). Given that the whole notion of inclusive education relates to teachers' attitudes and self-efficacy, providing evidence about the use of these practices is an initial step in implementing inclusive education (Nilholm, 2021). It has been reported that higher teacher efficacy is related to more positive attitudes toward inclusion; however, many preservice teachers report feeling ill-prepared for teaching in inclusive settings (Metsala & Harkins, 2020). The distinct roles that general education and special needs teachers have in their respective educational contexts pose a barrier to the successful implementation of inclusive education in Saudi Arabian schools (Gibbs & Bozaid, 2022). To ensure inclusion and equity in education, both teacher beliefs and practice are cited as influential. However, the connection between beliefs on the inclusive practice of differentiated instruction is often more complex than straightforward (Roose et al., 2024). Moreover, teachers' beliefs about teaching and learning, teachers' role beliefs are surprisingly very minimally researched; even though a teacher's role belief can be considered as an innate element of 'heart' in teaching. In particular, this study focused on (1) belief about inclusive education, (2) belief about teachers' roles, and (3) self-efficacy belief, as well as the influence of these belief representations on the practices of differentiated instruction.

In terms of demographic factors, there are differences in the implementation of differentiated instructional strategies as a function of gender, specialty and school level (Filippatou & Vendista, 2017), alongside age (Bellou, 2019), education level (Yetnayet, 2020), as well as years of teaching practice (Bellou, 2019; Yetnayet, 2020), while where gender does not affect the degree of implementation of differentiated instructional strategies (Bellou, 2019). Papanthymou and Darra (2022) found that there

is a statistically significant correlation between the frequency of implementation of differentiated instruction and the variables: school district, gender, age, teaching experience, school's organization, employment status, qualifications and training on special education and differentiated instruction. In Saudi Arabia, Aldossari (2018) showed that these were not statistically significant for the variable of the educational stage (primary, intermediate, and secondary), although there were significant differences for the gender variable in favor of males. The inconsistencies in the earlier research on how demographic factors affect the practices of differentiated instruction in teaching students with learning difficulties are inconclusive. According to Woodcock et al. (2023), differences across teacher demographics raised several questions, including the role of additional qualifications and the potential influence of social attitudes towards inclusion over time on teachers' own beliefs, each of which warrants investigation. Therefore, this study investigates how demographic factors affect the teachers' practices of differentiated instruction in teaching students with learning difficulties.

1.4 Research Objectives

In general, the current study aimed to examine the belief representations and practices of differentiated instruction among the mainstream teachers of students with learning difficulties in inclusive schools in Bisha City, Saudi Arabia. The specific objectives of this study are presented in the following:

- 1) To examine the beliefs of mainstream teachers regarding inclusive education, including their perceptions of responsibilities, learning abilities, and negative aspects when teaching students with learning difficulties.

- 2) To examine the beliefs of mainstream teachers regarding their roles (e.g., protective, facilitative, behavioral, and self-centred) when teaching students with learning difficulties.
- 3) To examine the beliefs of mainstream teachers regarding their self-efficacy (e.g., instruction, motivation, and class management) when teaching students with learning difficulties.
- 4) To examine the perceptions of mainstream teachers regarding the implementation of differentiated instructional practices to support students with learning difficulties.
- 5) To examine the relationships of belief representations (such as belief about inclusive education, belief about teachers' roles, and self-efficacy belief) with the practices of differentiated instruction among mainstream teachers in teaching students with learning difficulties in their class.
- 6) To examine the influence of mainstream teachers' demographic factors on their practices of differentiated instruction in teaching students with learning difficulties.
- 7) To examine the best predictors of mainstream teachers' practices of differentiated instruction in teaching students with learning difficulties.
- 8) To explore mainstream teachers' perspectives of differentiated instruction in teaching students with learning difficulties in inclusive classrooms.

1.5 Research Questions

With respect to the specific objectives, this study addressed the following research questions:

- i) What is the state of belief about inclusive education (such as responsibilities, learning abilities, and negative abilities) among mainstream teachers?
- ii) What is the state of belief about teachers' roles (such as protective, facilitate, behavioral, and self-centered) among mainstream teachers?
- iii) What is the state of self-efficacy belief (such as instruction, motivation, and class management) in teaching students with learning difficulties among mainstream teachers?
- iv) How often do mainstream teachers use differentiated instructional practices such as environment, content, and process/product differentiation to support students with learning difficulties in their class?
- v) Do beliefs about teachers' roles, inclusive education, and self-efficacy affect their differentiated instruction practices to support students with learning difficulties in their class?
- vi) Do demographic factors affect mainstream teachers' use of suggested differentiated instructional practices such as environment, content, and process/product differentiation to support students with learning difficulties in their class?
- vii) What are the best predictors of mainstream teachers' practices of differentiated instruction in teaching students with learning difficulties?
- viii) How do mainstream teachers perceive differentiated instruction in teaching students with learning difficulties in inclusive classrooms?

1.6 Hypotheses

- H1: Belief representations are related to the practices of differentiated instruction among the mainstream teachers of students with learning difficulties in inclusive classrooms.
- a) The beliefs of mainstream teachers regarding inclusive education, including their perceptions of responsibilities, learning abilities, and negative aspects are related to the practices of differentiated instruction among the mainstream teachers of students with learning difficulties in inclusive classrooms.
 - b) The beliefs of mainstream teachers regarding their roles (e.g., protective, facilitative, behavioral, and self-centered) are related to the practices of differentiated instruction among the mainstream teachers of students with learning difficulties in inclusive classrooms.
 - c) The beliefs of mainstream teachers regarding their self-efficacy (e.g., instruction, motivation, and class management) are related to the practices of differentiated instruction among mainstream teachers of students with learning difficulties in inclusive classrooms.
- H2: Mainstream teachers' demographic factors such as gender, age, education level, years of experience, and age group of students influence their belief representations and practices of differentiated instruction in teaching students with learning difficulties.
- H3: Mainstream teachers' demographic factors and belief representations are the best predictors of their practices of differentiated instruction in teaching students with learning difficulties.

1.7 Scope of Study

This study exclusively focused on primary schools under the governance of the Ministry of Education of Saudi Arabia in Bisha City, Saudi Arabia during the academic year of 2020. This study targeted mainstream teachers of students with learning difficulties in inclusive schools. The participating teachers expressed their agreement to be part of this study on belief representations and differentiated instruction. The generalization of findings was subjected to these limitations.

1.8 Significance of Study

In recent decades, Saudi Arabia has demonstrated major success in educational development, such as the implementation of inclusive education concerning the vision of producing graduates with Islamic values and the practical appropriate knowledge, skills, and attitudes to positively react to and face modern changes. Addressing this educational aspiration, this study presented significant findings to effectively support students with diverse learning needs, including those with learning difficulties. This study addressed the existing gap in the literature regarding the belief representations, specifically belief about inclusive education, belief about teachers' roles, self-efficacy belief, and practices of differentiated instruction among mainstream teachers of students with learning difficulties in inclusive schools in Bisha City, Saudi Arabia.

From a theoretical standpoint, teachers' beliefs play a crucial role in shaping their classroom practices, especially in the context of differentiated instruction (DI) and inclusive education (Bi et al., 2023; Roose et al., 2024). Understanding teachers' beliefs is essential as they can either hinder or facilitate the implementation of new educational practices and reforms (Woodcock et al., 2023). However, exploring these beliefs can be challenging as teachers may not always openly express them or may not

be fully aware of their own beliefs, leading to the adoption of socially acceptable narratives instead (Lazdina & Daga-Krumina, 2023). Hence, this research is significant because it will provide insight into one of the most critical issues regarding belief representations and differentiated instruction practices in inclusive education.

From a practical standpoint, the predicted outcomes of this study will be critical in the development of differentiated instruction practices and their implementation in inclusive education. It will provide the Saudi Ministry of Education and school administrators with the necessary information to work in collaboration to provide more training on differentiated instruction over time before they can effectively implement it and programs that support currently practicing teachers to acquire and/or further develop the knowledge and skills for differentiation enable them to internalize the skills and strategies in differentiation. By examining and addressing teachers' beliefs, teachers can enhance differentiated instruction practices, promote student engagement, and improve learning outcomes in various subjects in the context of inclusive education.

In many countries, educational policy emphasizes the importance of inclusion, and the formation of affirmative beliefs about inclusive education is an important goal of teacher preparation. The results of this study underpin the importance of teachers' beliefs toward inclusive education and teaching students with learning difficulties. To enhance teachers' beliefs about inclusive education and self-efficacy, education officials should focus on two key levels. Firstly, educational institutions have to find ways to support teachers so that they reflect their beliefs toward inclusive education and feel more at ease about their teaching in inclusive classrooms. Secondly, increasing teachers' awareness of students' disability rights can positively impact their self-efficacy in working within inclusive education settings, as demonstrated in prior

research findings. By addressing these aspects, educational institutions can better support teachers in developing the necessary self-efficacy to effectively educate students with learning difficulties in inclusive environments (Alnahdi & Schwab, 2021).

The findings offer empirical evidence that the salience of a non-constructive view of teaching and learning is a major hindrance for teachers to develop positive beliefs about inclusive education. On the other hand, teachers' beliefs about their roles in supporting students with learning difficulties to learn and develop knowledge are likely to go hand in hand with their positive beliefs about inclusive education. Furthermore, the evolution of teacher beliefs towards adapting to challenging student behaviors can contribute to more inclusive practices in schools, emphasizing the importance of teacher mindset in fostering inclusive education.

Moreover, what is important to mention in this study is the mainstream teachers' perspectives of beliefs about inclusive education and differentiated instruction implementation in teaching students with learning difficulties in inclusive classrooms. This is significant in providing new insights that can inform the decisions of policy-makers in Saudi Arabia towards the development of suitable inclusive education programs and provide insights into the professional learning needs of Saudi teachers. The study's conclusions will thus help with the practical answer to the research problem, which is negative teachers' beliefs about teaching special education students in regular classrooms rather than teaching those with other disabilities. It can also help to develop relevant instructions to engage the Saudi mainstream teachers in an investigation of their belief representations, and implementing differentiated instruction strategies may therefore increase awareness among teachers, school leaders, and policy-makers of the main driving factors of the effective provision of