

Makalenin Türü/ Article Type : Araştırma Makalesi/ Research Article
Geliş Tarihi/ Date Received : 06.02.2024
Kabul Tarihi/ Date Accepted : 06.11.2024
Yayın Tarihi/ Date Published : 31.12.2024
Yayın Sezonu/ Pub Date Season : Güz/ Autumn

Effect of Differentiated Instruction (DI) in The English Classroom on Student Success and Motivation

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An Keywords:

Differentiated instruction, English language achievement, Self-efficacy, motivation, Success, Perception

ABSTRACT

Anadolu Differentiated Instruction (DI) fine-tunes to the variety of learning styles and demands of students. To hold each student's learning inclinations, interests, and level of readiness, necessitates offering a variety of alternatives for the environment, method, product, and material. The present study intended to explore the effects of Differentiated Instruction (DI) on English language achievement, motivation, and self-efficacy in a public school in Addis Ababa, Ethiopia. The study also aimed to examine the perceptions of a teacher and students concerning the application of Differentiated Instruction in English classes. The study focused on how different educational experiences influenced students' involvement, motivation, and success. One instructor and one hundred English language learners in the eighth grade from a public school participated. The quantitative data was conjured by pretest-posttest results and student motivation questionnaires. The qualitative data was based on teacher and student interviews. The research design was based on the concurrent triangulation model. The findings of differentiated instruction in English language learning have shown that it significantly enhances comprehensive language skills and enhances learning outcomes. The study presented pedagogical implications and recommendations for utilizing differentiated instruction in secondary-level English lessons based on the findings.

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1. INTRODUCTION

“Differentiated instruction is a teaching approach that aims to meet the diverse learning needs of all students in a classroom. It recognizes that students have different backgrounds, abilities, interests, and preferences and that they learn best when their unique talents and limitations are taken into consideration when teaching them” (Lawrence-Brown, 2004, p. 36). Differentiated instruction is giving students multiple entry points to the same material so they can process it and show their comprehension, without decreasing the standards or expectations for some students.

“All students can benefit from differentiated instruction, but those who have trouble learning through traditional methods of instruction, such as children with learning disabilities, English language learners, students who are bright and talented, and students from various cultural backgrounds, stand to gain the most” (Lawrence-Brown, 2004, p. 37).

Hall (2002) noted that differentiated instruction adjusts to the various learning requirements and preferences of pupils in a classroom. It entails adapting a lesson's content, procedure, outcome, and learning environment to each student's level of readiness, interests, and abilities. “To differentiate instruction is to recognize students varying background knowledge, readiness, language, preferences in learning, interests, and to react responsively. Differentiated instruction is a process to approach teaching and learning for students of differing abilities in the same class. The intent of differentiating instruction is to maximize each student’s growth and individual success by meeting each student where he or she is, and assisting in the learning process” (Hall, 2002, p. 2).

Differentiated education is effective for several reasons. To begin with, it is proactive in that teachers anticipate the various requirements of their pupils and develop lesson plans in line with those demands. Besides, it is qualitative in that it places more emphasis on the calibre of learning experiences than the volume of tasks or activities. Moreover, it has assessment at its core, so teachers utilize constant formative evaluation to track students' progress and modify the curriculum as necessary (Tomlinson, C.A., 2014). In addition, it is adaptable in that it supports a variety of content, process, and product methods as well as student choice and voice (Lawrence-Brown, 2004). Furthermore, it is respectful because it values each student's unique characteristics and promotes a productive learning environment. DI is vital to assist each other's learning; to foster collaboration among students, instructors, and other stakeholders as well as to respond to the needs and interests of the students as well as the requirements of the curriculum, making it responsive.

Differentiated instruction involves teachers tailoring education to each student's readiness, interest, and learning profile. They must understand students' traits and curriculum objectives, use assessment tools, and use this information for instructional decisions. Flexible grouping, tiered assignments, choice boards, learning contracts, scaffolding, and differentiation by topic, process, product, or learning environment are just a few of the instructional strategies and methodologies used in differentiated education. With the use of these techniques, teachers may modify their lessons to meet the unique needs and objectives of each student or group of pupils (Differentiated Instruction, 2014).

Student success, motivation, engagement, self-regulation, and social and emotional growth are all improved through differentiated instruction. Differentiated instruction has been found in several studies to enhance students' performance on standardized exams as well as formative and summative evaluations (Massaad & Chaker, 2020; Rahimi et al., 2019; Sabboor Hussain et al., 2020).

Additionally, tailored teaching can boost students' motivation and enthusiasm for learning as well as their sense of independence and accountability for their education. Differentiated teaching faces challenges like time constraints, resource scarcity, insufficient professional development, stakeholder opposition, and evaluation issues. Teachers need adequate time, resources, technology, and support. They must also address attitudes and beliefs that limit their ability to implement it effectively. "Teachers in differentiated classes use time flexibly, call upon a range of instructional strategies, and become partners with their students so that both what is learned and the learning environment is shaped to support the learner and learning" (Tomlinson, C.A., 2014, p. 4). Differentiated teaching is not just one technique or tactic; rather, it is a way of thinking that helps teachers design successful and interesting lessons for all of their students. To account for the variances among students entails changing the instruction's method, content, output, and learning environment. There is a growing corpus of research on differentiated education, as shown by a survey of the available literature, a variety of difficulties and obstacles to its implementation, as well as a wealth of empirical evidence demonstrating its efficacy in improving student results. "Several recent studies have shown positive outcomes from the use of differentiated instruction" (Subban, 2006, p. 942). By giving students numerous entry points to the content, opportunities to interact with it, and opportunities to demonstrate their comprehension, differentiated teaching seeks to optimize student progress and achievement. "Teachers in differentiated classrooms begin with a clear and solid sense of what constitutes a powerful curriculum and engaging instruction. Then they ask what it will take to modify that curriculum and instruction so that each learner comes away with knowledge, understanding, and skills necessary to take on the next important phase of learning" (Tomlinson, C.A., 2014, p. 5).

1.1. Theoretical foundations

Differentiated instruction entails altering a lesson's content, procedure, outcome, and learning environment following the preparedness, interest, and learning profile of the students (Tomlinson, 2001). In many different educational contexts, differentiated teaching has been strongly supported as a technique to increase student engagement, motivation, and accomplishment. Differentiated Instruction entails an approach that enables teachers to plan strategically to meet the needs of every student adapting attitude, content, process/product communication and assessment to each student's level of preparedness, interest, and learning profile (Smit & Humpert, 2012).

A learning theory called constructivism places a strong emphasis on how learners actively create their knowledge and understanding of the outside world. Constructivists hold that interaction with others and the environment facilitates learning as a social and

contextual process (Benjamin, 2002). By giving students several opportunities to participate in worthwhile and genuine learning activities that are pertinent to their past knowledge and experiences, differentiated education is in line with constructivism. "The constructivist model of learning avoids direct instruction and enables learners to scaffold their learning from simple to complex topics through a process of guided discovery. An advantage of such an approach is that it can promote self-confidence as it guides the learner to discover knowledge on their own" (Lockey et al., 2021, p. 3).

Differentiated instruction is based on the following tenets:

Recognize your pupils: To create training that suits their requirements, consider their level of preparation, their interests, and their learning profiles.

Give several choices: Provide students with a range of learning opportunities, resources, and tests so they may express their understanding in several ways.

Respecting the diversity of students: Establish a welcoming and respectful learning atmosphere that celebrates diversity and encourages student participation.

Observe and correct: To continuously assess student progress and modify education, use data and feedback (Benjamin, 2002).

Differentiated instruction acknowledges that each student has unique preparedness, interests, and abilities, aiming to provide a variety of access points, strategies, and learning opportunities, by supporting their growth as learners.

According to multiple-intelligences theory, people have different degrees of different categories of intelligence, including linguistic, logical-mathematical, spatial, musical, bodily-kinesthetic, interpersonal, intrapersonal, and naturalistic (Gardner, 2017). The theory seeks to describe and encompass the range of human cognitive capacities and in challenging the concept of general intelligence, the multiple intelligences perspective may provide a more useful approach to cognitive differences within and across species (Gardner, 2017). According to the multiple-intelligences theory, each intelligence has strengths and limitations of its own, and students can benefit from training that tackles this emergent and dominating intelligence. By giving students options for how they will learn and express what they have learned, differentiated education acknowledges the range of individuals' intelligence. By exposing pupils to various forms of representation and expression, differentiated teaching also aids in the development of multiple intelligences: verbal-linguistic intelligence, logical-mathematical intelligence, spatial-visual intelligence, bodily-kinesthetic intelligence, musical intelligence, interpersonal intelligence, intrapersonal intelligence, naturalist intelligence and existentialist intelligence in learners (Kaitlyn M. Arns, 2021).

By fostering a supportive and encouraging learning environment that meets the emotional and social requirements of each student, differentiated teaching promotes brain-based learning. By giving pupils demanding, interesting, and varied tasks, i.e. questioning, rearrangement of content, meaningfulness, connecting, encoding and reflecting on individual experiences, differentiated education also stimulates their brains (Al-Balushi & Al-Balushi, 2018). The universal design for learning framework aims to make learning inclusive and accessible to all students based on the four core principles of Universal

Design for Learning- multiple means of representation, multiple means of engagement, and multiple means of assessment. By ensuring that all students have access to the curriculum and may meet the same learning objectives through a variety of means, differentiated teaching involves a universal design for learning (Brand & Dalton, 2012).

In summary, differentiated instruction is a pedagogical strategy that takes into account the diversity and complexity of learners. It is informed by a variety of educational ideas and models. Differentiated education may raise students' motivation, engagement, success, and pleasure in the classroom by using constructivism, multiple intelligences, brain-based learning, and universal design for learning concepts. In deed, "Differentiation is recognized to be a compilation of many theories and practices" (Hall, 2002, p. 5).

1. 2. Empirical pieces of Evidence

How can it be put into practice, though, and what actual data supports its efficacy?

There is a growing amount of evidence supporting differentiated instruction's beneficial effects on student outcomes, according to a review of the literature in the field. For instance, a meta-analysis revealed that differentiated teaching had a moderate influence on student success with an "average size effects of broad constructs and narrow outcomes were slightly lower ($d = 0.23$) compared with those categorized into broad constructs and broad outcomes ($d = 0.43$), narrow constructs and narrow outcomes ($d = 0.37$), and narrow constructs and broad outcomes ($d = 0.35$). Generality is the norm, but, as with many things, there are exceptions of 0.43" (Hattie, 2010, p. 13). Because of the implementation of the differentiated instructions which respected the students' different needs, varying English levels, styles, and majors, students were highly motivated and engaged and practised what they learned. "Some of the students elaborated that what they learned and practised mirrored real-life situations in the workplace. Others added that they now understood how to interact orally or/and through writing in the different contexts they had encountered. Because of these facts, their engagement in the course heightened" (Massaad & Chaker, 2020, p. 768). Teachers' efficacy and use of differentiated instruction practices vary widely, with a heavy emphasis on the differentiation of products, relative to content or process. "Many studies have documented concerns of teachers concerning their readiness to enact a Differentiated Instruction framework as well as varied beliefs about the purpose of differentiating" (Whitley et al., 2021, p. 50). "A cross-sectional study demonstrates a difference in practices between teachers with more- and less-developed Differentiated Instruction cultures, and it was determined that team collaboration that includes pedagogical topics enhances teachers' use of DI" (Smit & Humpert, 2012, p. 1152).

The literature does note, however, that successfully adopting differentiated education in the classroom has several difficulties and obstructions. Among these include "instructors' resistance regarding taking time away from their classrooms to take part in professional learning, particularly the intense and repeated time needed for collaborative inquiry. Some participants described how structural change was necessary in the schools to allow for this time. Other leaders listed innovative solutions they were exploring to support teachers in collaborative sharing" (Whitley et al., 2021, p. 56). As a result, educators must have the

support and training they need to advance their understanding of and proficiency with differentiated instruction. Additionally, to differentiate teaching for various learners, instructors must work in collaboration with their peers and exchange best practices and experiences (Santangelo & Tomlinson, 2012).

1.3. Best Practices

Differentiated teaching involves providing students with diverse methods to understand subject matter, instructional strategies, and learning environments. Effective learning occurs when students are engaged, supported, and adapted to their readiness, interests, and learning profiles.

Several of these methods are presented in the upcoming paragraphs. “The first method is conducting regular evaluations to pinpoint each student's needs, wants, and strengths. The next method is based on “the psychological elements of learning style include global versus analytic learners, left versus right-brain learners, and impulsive versus reflective learners. The way teachers introduce lessons (sequentially for the analytic learner or describing the big picture for the global learner, for example) should be based on the learning styles of individuals or groups of students. The sociological elements are based on the idea that some students work better individually while others work better collaboratively” (Landrum & McDuffie, 2010, p. 11). Next comes giving students access to a variety of teaching and learning tools, including lectures, videos, texts, photos, audio, and hands-on activities. Moreover, giving pupils a range of opportunities and means by which to interact with the material and show what they have learned, such as projects, portfolios, presentations, quizzes, or games; adjusting the content's pace, level, complexity, and depth under each student's degree of preparedness and difficulty is still another successful method. To enhance student learning, teachers can offer guidance, peer tutoring, and encourage autonomy by allowing students to set goals, track progress, and reflect on their achievements. Additionally, creating a welcoming, inclusive environment fosters cooperation and communication.

According to the evidence, differentiated instruction may benefit student performance as well as motivation, engagement, self-efficacy, and attitudes toward learning. “When students were taught with instructional strategies or materials that complemented their learning styles increased academic achievement, improved attitudes toward school, and a reduction in discipline problems occurred” (Landrum & McDuffie, 2010, p. 12). However, it also recognizes some of the difficulties and limits associated with putting differentiated education into practice, such as time restraints, curriculum demands, teacher expectations, concerns with classroom management, and a lack of resources and support. Therefore, to satisfy the requirements of their pupils, instructors must be aware of the advantages and difficulties of differentiated education and use a flexible and responsive approach. Multiple learning styles are evident in students, and this influences their motivation and level of involvement, according to evidence. Differentiated instruction is necessary to meet the needs of every single learner. “Research has shown students learn in several ways, which also affects student engagement and motivation. Instruction should be differentiated to

benefit each student” (Zens, 2021, p. 7). To effectively implement differentiated education, a lesson plan or assignment must be modified to accommodate the requirements of every student. Educators adapt their instruction to meet the needs of each student by constructing courses around their unique skills. Students can progress their learning at their own speed by choosing their assignments and making use of mentorship. According to Ferrazalo (2023), students always have access to learning materials of various complexity ranges and differentiated instruction can be difficult to apply, although the work seems worthwhile. Ferrazalo (2023) further noted that differentiation may not always be available, but teachers must use it frequently and include it in regular teaching methods to ensure it develops into a natural skill for all instructors.

Differentiated education in English-speaking schools includes a variety of approaches such as setting up learning stations, employing task cards, pre-teaching, cooperative learning, and tasks with alternatives. These strategies assist students in understanding the topic, appreciating it, and collaborating on tasks. Pre-teaching helps students comprehend the content before they begin studying, whereas cooperative learning allows students to collaborate in smaller groups. Stakke (2023) stated that tasks with options help learners demonstrate their understanding.

Differentiated teaching research is scarce, conflicting, and inconclusive. Furthermore, there is a lack of clear understanding of its efficacy, as well as an evaluation of its effects on student results in connection to aspects such as motivation, prior knowledge, and socioeconomic status.

1.4 Purpose and Importance of the Study

Research Questions

- How does differentiated instruction impact students' learning outcomes in the classroom?

Specific Questions

- Is there a significant difference in academic achievement between students who received differentiated instruction and those who received traditional instruction?
- Is there a significant difference in motivation between students who received differentiated instruction and those who received traditional instruction?
- Is there a significant relationship between academic achievement and motivation among students who received differentiated instruction and those who received traditional instruction?

Objective of the study

- To look at how varied instruction affected student motivation and success in an English classroom

Specific Objectives

- Compare the academic performance of students who received differentiated instruction with those who received traditional instruction;

- Examine the differences between the two groups in terms of students' attitudes and self-efficacy toward English.
- Examine the difficulties and advantages of implementing differentiated instruction from the viewpoints of teachers and students.

2. METHOD

2.1. Research Approach

Using a mixed-methods approach, the research on the use of differentiated education in the classroom incorporated data. Standardized test results, and student, and teacher questionnaires made up the quantitative data. A mixed-methods Concurrent Triangulation design was used in the study. "Mixed methods research (MMR) entails combining qualitative and quantitative strands in a research programme where findings and inferences are derived through the methodological and/or analytical integration of data" (Ercan et al., 2022, p. 390). "This model generally uses separate quantitative and qualitative methods as a means to offset the weaknesses inherent within one method with the strengths of the other (or conversely, the strength of one adds to the strength of the other)" (Creswell, 2009, p. 196). The researcher used mixed-methods procedures in this study. This is because the research questions of the study focused on differentiated instruction and this may not be answered by either the quantitative method or qualitative method but a combination of the two. Therefore, Standardized test results, and student, and teacher questionnaires incorporated the quantitative data on the use of differentiated education in the classroom whereas the qualitative data was made from the interview.

The study looked at how student success, engagement, and motivation were impacted by differentiated instruction. Eight weeks were dedicated to the intervention. Descriptive statistics, inferential statistics, and content analysis were all used in the data analysis. The findings demonstrated that differentiated instruction in English Language classes had a favorable impact on student progress across all subject areas. According to the findings, individualized teaching raised students' enthusiasm and interest in learning activities as well as their sense of self-efficacy and autonomy. Implementing differentiated education was difficult because of time restraints, a shortage of materials, and opposition from certain parents and children. Implementing individualized education has positive effects on student and teacher satisfaction as well as teacher cooperation.

2.2. Data Gathering Techniques

The following were the data-gathering techniques used to examine how differentiated teaching was used in classrooms. Teacher and student interviews made up the qualitative data. Students' exam and motivation questionnaire made up the quantitative data. The researcher conducted interviews with some of the students to get their opinions on the various teaching methods as well as what they liked and didn't like about them. The researcher asked the teacher to respond on how frequently and why she employed various approaches to meet the varied needs and aptitudes of their pupils. The

researcher studied the classes to see how she differentiated in terms of content, method, product, and setting, making notes as we went. The researcher looked at the students' test results and grades and contrasted them with their preferences and experiences with customized instruction. The researcher sought to determine if academic success, student happiness, and motivation were correlated with differentiation. For eight weeks a teacher in a "Bole" school was asked to use differentiated teaching in her course. Then, using questionnaires, exams, and interviews, the researcher gathered information on the students' academic achievement, involvement, and satisfaction. The pre-test and the post-test exams were prepared to measure if there was a difference between the two groups before and after the treatment. The contents of the exam were meant to test the grammar, reading and vocabulary knowledge of the students and it was based on the students' textbook.

The duration of both exams was 50 minutes. Additionally, The English Language Learner Motivation Scale (ELLMS) was adapted from Sabboor Hussain et al.(2020), and used in the study. This is a self-report questionnaire that can assess students' intrinsic and extrinsic motivation in the context of English as a Foreign Language (EFL) learning. "This scale is grounded in self-determination theory and was originally developed for postsecondary education. It consists of items that measure various aspects of motivation, including intrinsic and extrinsic motivation, and can be used to gain insights into students' motivational orientations in the EFL context at the secondary school level as well"(Sabboor Hussain et al., 2020, p. 15). "The scale comprises 20 items, with an equal number of items dedicated to measuring intrinsic and extrinsic motivation"(Sabboor Hussain et al., 2020, p. 15). For the convenience of comprehension, the questionnaire was translated into a native tongue. Strongly disagree (1) to strongly agree (4) is the range of a four-point Likert-type scale that served as the basis for the scales. To find out more about the viewpoints of teachers and students on learning and using DI for English practice, semi-structured interviews with the students were also conducted to collect qualitative data. Amharic was the language used for the student interviews.

To establish the reliability of the questionnaire, it was translated by a professional translator and the original version was reviewed with the translated version through comparison. An attempt was made to adapt to the local culture by making it relevant and appropriate for the participants. Then, the expert review was sought to see its validity. This way the constructs were ensured to be able to measure what they were supposed to measure.

2.3. Participants of the Study

The participants were 100 students and one teacher enrolled in the 8th-grade secondary school English subject at a state school. A sizable urban district's 1 public school was the site of the research. An instructor and 100 students in grades 8 made up the sample. The students were selected by random sampling method. This sampling method reduced bias and gave equal opportunity to the participants. Besides, this random assignment was meant to control confounding variables that might have otherwise affected the results. Moreover, this sampling method has good internal validity as the post-test result can be confidently attributed to the treatment rather than other pre-existing variables. The students were divided into two groups at random: control and intervention. The intervention group was taught by differentiated instruction tactics based on the preparedness, interests, and learning profiles of the students, whereas the control group was taught by conventional teaching techniques based on the textbook.

2.4. Techniques for data analysis

The following data analysis techniques were employed to respond to the study question about the application of differentiated teaching in the classroom: First, we gathered information from a variety of sources, including student questionnaires, student interviews, teacher interviews, and test results. To establish the content validity of the study, an expert from the Department of Special Needs Education was consulted. The relevant literature was consulted and the established theories were investigated and presented in the theoretical foundations sections to establish the construct validity of the study. The reliability of the quantitative measures was established by using test-retest reliability analysis. To triangulate the data and obtain a thorough understanding of the phenomena, the researcher employed a mixed-methods technique. Second, statistics like mean, standard deviation, correlation, and ANOVA were used to make descriptive and inferential inferences about the quantitative data. To conduct the analysis and test the hypotheses, SPSS was utilized. To emphasize the key findings and depict the data, the researchers also employed tables. The qualitative data were subjected to thematic analysis in a third step. The themes were found and coded. To further highlight the concepts and strengthen the arguments, quotes and instances were incorporated. Fourthly, the quantitative and qualitative findings were combined and discussed to show how theory and practice may be affected. The findings from various sources and methodologies were analyzed and contrasted and discrepancies were explained. The study's weaknesses were discussed and ideas for future research possibilities were offered. To respond to the research question about the use of differentiated teaching in the classroom, data analysis was conducted. The researcher hopes this will offer insightful information for educators and decision-makers who are interested in enhancing student learning outcomes and equality.

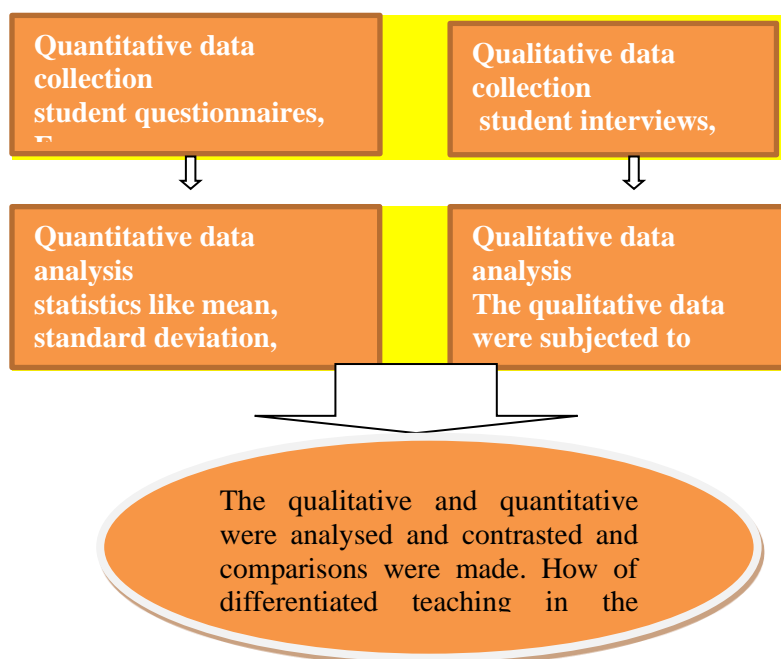


Fig. 1. Mixed method flow diagram of data collection analysis, and integration of the study

2.5. The study's possible difficulties and ethical issues

Differentiated instruction is a teaching method that addresses students' diverse learning requirements and preferences in order to deliver the greatest possible educational experience to all. However, it raises ethical questions regarding fairness and may create inequality among pupils. Differentiated instruction can influence the motivation of learners, self-esteem, academic achievement, independence, accountability, and critical thinking. Instructors must guarantee that the curriculum is founded on solid educational concepts and research, so that the quality and rigour of instruction are not jeopardised. The practicality of individualized schooling is another potential impediment. According to some detractors, diversified education may be extremely difficult or impractical for teachers, especially in large or diverse classes. Differentiated teaching can be difficult for teachers owing to limited resources and opposition from students, parents, and administration. Teachers must consider the benefits and drawbacks while collaborating with all parties involved.

3. FINDINGS

The study's findings about the application of differentiated instruction in the classroom were fascinating. Based on the students' learning preferences, interests, and levels of preparation, the researcher randomly divided the class into various groups. After that, students were offered with other assignments and resources to finish the same learning goals. The findings revealed that although some students flourished in this setting, others struggled or became bored. Some students even swapped groups secretly, which led to confusion and disorder. The researcher concluded that differentiated education is a complicated and dynamic process that needs careful planning, monitoring, and evaluation.

Differentiated teaching had a beneficial effect on all three outcomes, according to our statistical analysis of the data. Comparatively to students who got standard education, students who received differentiated instruction had higher test scores, greater curiosity, and greater satisfaction in learning. The difference was statistically significant. The researcher concludes that differentiated instruction is an effective teaching strategy that can enhance the learning of students.

In addition, differentiated instruction was reported to increase job satisfaction and to decrease stress level of the teacher. Not only had this differentiated instruction offered the teacher the freedom to be more imaginative, adaptable, and sensitive to the needs of the pupils, but it gave the teacher satisfaction and enjoyment of observing the students mature and develop in many ways. To study the impact of differentiated instruction on students' academic performance and motivation, descriptive and inferential statistics were used in the data analysis stage. The descriptive statistics included the mean, frequency and standard deviations whereas the inferential statistics included the ANOVA, t-test and correlations analysis in order to answer the research questions of the study effectively. The first research question was whether there was a significant difference in academic achievement between students who received differentiated instruction and those who received traditional instruction. The academic achievement was measured by the scores on a standardized test administered at the end of the semester.

Table 1. *Descriptive Statistics for Experimental- -Control Group Pre-Test*

Group	Group	N	M	SD	SEM
Experimental- Control Pre- Test	Control	50	27.1200	1.97060	.27868
	Experimental	50	27.0600	2.06684	.29230

Table 2. *Independent Samples Test for Experimental- Control Group Pre-Test*

	F	sig	t	df	Sig. (2-tailed)	M	Std. Error Difference (σM)
Equal variances assumed	.114	.736	.149	98	.882	.06000	.40386
Equal variances not assumed			.149	97.778	.882	.06000	.40386

The pre-test result indicated the following. The t-test results showed that there was no significant difference in academic achievement between the two groups, $t(98) = .882$, $p <$

0.01. The mean score of the differentiated instruction group was 27.0600 (SD = 2.06684), while the mean score of the traditional instruction group was 27.1200 (SD = 1.97060).

Table 3. *Descriptive Statistics for Experimental- -Control Group Post-Test*

	group experimental or control Group	n	M	SD	Std. Error Mean
Exam	Control	50	27.1600	2.31772	.32778
	Experimental	50	34.2600	4.72535	.66827

Table 4. *Independent Samples Test for Experimental- Control Group Post-Test*

Exam	F	sig	t	df	Sig. (2-tailed)	M	σM
Equal variances assumed	29.043	.000	-9.539	98	.000	-7.10000	.74432
Equal variances not assumed			-9.539	71.287	.000	-7.10000	.74432

The t-test results showed that there was a significant difference in academic achievement between the two groups, $t(98) = 0.000$, $p < 0.01$. The mean score of the differentiated instruction group was 34.2600 (SD = 4.72535), while the mean score of the traditional instruction group was 27.1600 (SD = 2.31772). This indicated that students who received differentiated instruction performed better on the post-test.

Table 5. *One-way ANOVA Descriptives for motivation, interest and efficacy*

Measure	Control		Experimental	
	M	SD	M	SD
Motivation	2.5000	1.58114	3.9600	1.12413
Interest	2.7400	1.60115	3.9600	1.12413
efficacy	2.5000	1.58114	3.9600	1.12413

Table 6. *ANOVA for Experimental-Control Group /ANOVA for motivation, interest and efficacy*

	Source of Variation	SS	DF	MS	F	Sig.
Motivation	Between Groups	67.240	1	67.240	42.100	.000
	Within Groups		98	1.597		
	Total		99			
Interest	Between Groups	53.290	1	53.290	34.905	.000
	Within Groups		98	1.527		
	Total		99			
efficacy	Between Groups	79.210	1	79.210	57.680	.000
	Within Groups		98	1.373		
	Total		99			

The second research question was whether there was a significant difference in motivation between students who received differentiated instruction and those who received traditional instruction. The motivation was measured by a self-report motivation questionnaire that assessed students' intrinsic and extrinsic motivation, as well as their self-efficacy and interest in learning. The ANOVA results showed that there was a significant difference in motivation between the two groups, $F(42.100) = 0.000$, $p < .001$. The differentiated instruction group had higher scores on intrinsic motivation ($M = 4.1400$, $SD = .83324$), self-efficacy ($M = 4.2800$, $SD = .49652$), and interest ($M = 4.2000$, $SD = .69985$) than the traditional instruction group ($M = 2.5000$, $SD = 1.58114$; $M = 2.5000$, $SD = 1.58114$; $M = 2.7400$, $SD = 1.60115$), respectively. This indicated that students who received differentiated instruction had higher levels of motivation than those who received traditional instruction.

Table 7. Descriptive statistics and Correlations between achievement and motivation

Variable	n	M	SD	Pearson Correlation	Sig. (2-tailed)
Exam	100	30.5900	5.01683	1	.304**
Motivatio n	100	3.2300	1.54955	.304**	1
Total	100				.002

** . Correlation is significant at the 0.01 level (2-tailed).

The third research question was whether there was a significant relationship between academic achievement and motivation among students who received differentiated instruction and those who received traditional instruction. The correlation analysis results showed that there was a significant positive relationship between academic achievement and motivation among both groups, $r(100) = 0.304$, $p < 0.02$. This indicated that students who had higher academic achievement also had higher motivation, regardless of the type of instruction they received.

3.1. Student Perceptions of Differentiated Instruction -based English Classes

The researcher asked students to volunteer to take part in the interview for those who are eager to talk about their experiences with differentiated instruction. These willing learners from the experimental group only were interviewed to tap their perception of the use of the teaching approach. The interview questions were used to elicit insightful responses from the experimental group of students.

Table 8. Students' perceptions Common themes and sample quotes

Common themes	Example quote
autonomy ^a	"Our interest and passion are pleased when teachers use different techniques to make the learning experience meaningful and relevant".
Motivational Factors ^b	Differentiated instruction motivates students by considering their unique requirements and preferences, offering flexibility and allowing students to choose assignments or projects aligned with their interests"
collaborative work ^c	Working together with peers helps us learn crucial social skills while also deepening our comprehension of the subject matter."
the flexibility of learning ^d	"I can take control of my learning because of the flexibility that differentiated instruction offers."

Customized instruction in English classrooms offers a more personalized and interesting learning experience, encouraging creativity and critical thinking. However, challenges like preparation and potential curricular incompatibilities must be addressed. This is supported by Habiba who stated:

"We may pursue our interests, make plans, and assume ownership of our academic careers when we have autonomy. It encourages independence and self-assurance, two traits that are crucial for our future pursuits."

Regarding motivation, differentiated instruction motivates students by considering their unique requirements and preferences, offering flexibility and allowing students to choose assignments or projects aligned with their interests. Peer interactions also contribute to motivation, as they generate camaraderie and support, and learn from one another. One respondent (Meaza) has the following to say:

"Our interest and passion are pleased when teachers use different techniques to make the learning experience meaningful and relevant. These motivating components, whether they be practical exercises, linkages to the real world, or custom projects, keep us interested in learning."

Constructive criticism and peer interactions are essential for academic performance. Differentiated instruction fosters a supportive learning environment, encouraging active participation in class discussions and contributing to the larger learning community. The personalized approach and encouragement from classmates dramatically enhance motivation to learn, grow, and achieve goals. Kamilat stated this:

"They increase academic achievement by helping students appreciate the value and relevance of the subject they learn. Finally, peer relationships are critical to the learning process. Working with peers teaches us important social skills while also enhancing our understanding of the subject. Working together on group projects or conversations allows us to share ideas, gain insight from one another's perspectives, and form long-term ties"

Students who participated in DI-based sessions expressed positive sentiments, stating that lectures were more enjoyable and relaxed. Regarding collaborative work the following response (Mohammed) says;

“I can take control of my learning because of the flexibility that differentiated instruction offers. I am more inspired to actively participate in the learning process when I have the option to select from a variety of assignments or projects that are in line with my interests. This strategy also motivates me to establish and strive toward personal goals, which increases my drive.”

3.2. Reflections from the Teacher on Differentiated Instruction-based English Classes

The themes from the analysis of the teacher’s reflections are being independent, having favourable opinions of DI-based lectures, challenges and barriers, impact and the motivating components of DI-based courses.

Table 9. *Teacher perceptions Common themes and sample quotes*

Common themes	Example quote
Challenges and Barriers ^a	“There were some obstacles that I encountered in the surroundings of the study, especially problems utilizing the particular instructional strategy or addressing particular curricular elements of it”
Motivational Factors ^b	Some variables affected how engaged and enthusiastically students learn, including the effects of instructional strategies, comments, and the atmosphere of the classroom.
Perceptions of Success ^c	“There were some accomplishments as far as testing, accomplishment, and personal development, as well the overall educational setting is considered”
Preferences for Instructional Methods ^d	“Differentiated instructional strategies were very effective and I am very happy with the method for instruction and learning.”
Impact of DI on Learning ^e	“I believe that Differentiated instruction (DI) affects the students’ comprehension, learning, and overall educational experience positively.”

Differentiated education caters to individual skills, interests, and learning styles, creating an inclusive and productive learning environment. DI-based classes are highly valued for their ability to help students flourish and realize their full potential. Being independent empowers students to make choices and decisions about their education, promoting independence and self-assurance.

Motivating components significantly impact student engagement and accomplishment in learning. Teachers use techniques like practical exercises, real-world linkages, and custom projects to keep students interested and passionate about the material. Working with peers helps develop social skills, deepens comprehension, and fosters lasting bonds. This was expressed by the teacher as:

“In terms of student feedback, I have received numerous reflections from my students expressing their appreciation for the DI approach. Many have mentioned feeling more engaged and motivated in class, as they can choose activities or projects that align with their interests and strengths. They have also highlighted the positive impact on their learning outcomes, as they feel more confident in their abilities and have a deeper understanding of the English language”.

DI-based English lessons have proven extremely effective at increasing student autonomy, enthusiasm, cooperation, and fun. This strategy, known as Differentiated Instruction, addresses students' different needs and learning styles while developing ownership and empowerment. Teachers respond to diverse learning preferences by using a variety of teaching tactics, such as visual aids, hands-on exercises, and group work, which results in greater student confidence and motivation. This is in line with the teacher's viewpoint:

“From my perspective as a teacher, implementing DI-based English classes has been a rewarding experience. It has allowed me to tap into the unique potential of each student and witness their growth and progress firsthand. The flexibility and adaptability of DI have also challenged me to continuously improve my teaching practices and explore new strategies to meet the diverse needs of my students.”

DI-based English classes foster a collaborative and inclusive learning environment, enhancing students' understanding of the English language and preparing them for real-world situations. The teacher has this to say:

“Students express appreciation for the DI approach, feeling more engaged and motivated, and gaining a deeper understanding of the language. Teachers appreciate the flexibility and adaptability of DI, which challenges them to continuously improve teaching practices and explore new strategies to meet diverse student needs.”

Understanding and participation in DI-based English lessons improves, establishing a collaborative, inclusive learning environment with individualized assistance and targeted instruction, encouraging students to attain their best potential. This is substantiated by the teacher:

“DI, or Differentiated Instruction, allows me to tailor my teaching methods and materials to meet the diverse needs and learning styles of my students. This approach has not only enhanced their understanding and engagement with the subject matter, but it has also fostered a sense of ownership and empowerment in their learning journey”

In conclusion, the reflections from both teachers and students on DI-based English classes have been overwhelmingly positive. This approach not only enhances student understanding and engagement but also fosters a collaborative and inclusive learning environment. The personalized support and tailored instruction provided through DI empower students to take ownership of their learning and achieve their full potential.

4. DISCUSSION & CONCLUSION

Motivation Questionnaires, pre-test and post-tests and interviews were used to gather information on students' academic achievements, levels of participation, and enjoyment throughout eight weeks. A statistical study of the data supported the claim that students' learning journeys benefited from differentiated instruction. Descriptive statistics, inferential statistics, and theme analysis were all used to examine the data. This study's objective was to present and discuss the data analysis findings about the use of differentiated teaching in the classroom. Tables were used in the data analysis to show the advantages and difficulties of differentiated training and to make a visual presentation.

The findings of this study have a number of implications and importance for different theories and applications of differentiated instructions in the classroom. Differentiated instruction attempts to cater to the needs and learning styles of students by offering to them a variety of options to the material, environment, content and procedure and product. Theoretically speaking, constructivisms, multiple intelligence theory, Universal design for learning are the foundations of differentiated instruction. Practically, differentiated instruction may enhance student motivation, engagement, achievement and satisfaction. In deed the findings of the study support these theoretical and practical assertions by effectively demonstrating that students who received the differentiated instruction out performed those who did not in terms of academic achievement, and reported higher level of motivation, efficacy, and interest in learning and articulated a more constructive attitude towards themselves and their peers. Furthermore, the effectiveness of differentiated instruction on the motivation and academic achievement of English language learning has been confirmed with findings implying a significant relationship between the differentiated learning approach and student motivation and achievement. This is in line with the previous study that reached a similar conclusion (Rahimi et al., 2019, p. 161). Therefore, by presenting empirical proof of its efficiency and advantages for a range of learners in a variety of circumstances, this study adds to the body of knowledge already available on differentiated teaching.

According to the study of the data, differentiated teaching has a favourable effect on students' academic performance, engagement, motivation, and self-efficacy. A substantial difference in academic achievement was seen between the two groups, as indicated by the t-test results ($t(98) = 0.000$, $p < 0.01$). The standard instruction group received a mean score of 27.1600 (SD = 2.31772), while the differentiated instruction group received a mean score of 34.2600 (4.72535) (standard Deviation). This suggested that pupils' post-test results were higher for those who received tailored instruction. Whether students who received differentiated education and those who received regular instruction differed significantly in

motivation was the content of the second research question. The answer to this demonstrated that students who got instruction that was differentiated were more motivated than students who received traditional instruction. According to the findings of the correlation analysis, both groups' academic achievement and motivation significantly correlated positively, with $r(100)=0.304, p<0.02$. This is in line with Ford(2011) who found that differentiated instruction has a positive impact on English language success and motivation. Teachers, who differentiate instruction for English Language Learners (ELLs) by getting to know each student and providing appropriate instruction based on each student's background, can effectively support their learning. This study has found that planning, evaluation, and cooperation between instructors and students are all critical components of differentiated education. This has been found in prior studies that stated successful differentiated instruction entails proactive planning of varied approaches to address learner variability, offering choices in engagement, representation, and expression, and providing constant access to learning materials of varying levels of difficulty(Ferrazalo, 2023). Research has also shown that incorporating differentiated learning activities into the classroom can lead to increased student motivation and engagement in English language arts(Zens, 2021, p. 3). The study has further discovered that there are challenges to implementing differentiated instruction in the classroom.

The obstacles to differentiated learning include time restrictions, classroom management, and differentiation of materials and resources. For instructors who desire to adopt or enhance their diversified education approaches. This study has found a connection between differentiated instruction and student motivation. While there is yet to be conclusive evidence on how much differentiated instruction affects student motivation, it has been recognized as a factor in student success, and there is a need to understand the connection between differentiated instruction and student motivation(Fandino, 2008, p. iii-iv).

The findings showed that although some students did well in this arrangement, others had difficulties or were disinterested. There were in addition cases of pupils secretly transferring groups, which was confusing. Despite the limitations that were highlighted, the study found that differentiated instruction had a beneficial influence on students' academic performance, engagement, and contentment. Those receiving differentiated instruction showed improved test results, heightened curiosity, and more satisfaction with their education when compared to students receiving traditional education. This statistically significant variance demonstrated how varied instruction improves pupils' academic performance. Emphasizing the need for careful planning, observation, and assessment, the results of the study demonstrated how complex and dynamic differentiated instruction is.

Besides, the perception of both the students and the instructor regarding the use of Differentiated Instruction was affirmative. In line with previous studies in the area, diverse student perspectives existed on diversified instruction in the English classroom(Ferrazalo, 2023; Ford, 2011; Iqbal et al., 2020, p. 364; Mclerran, 2022, p. 2; Zens, 2021, p. 3). The study found that differentiated instruction motivated students by considering their unique requirements and preferences, offering flexibility and allowing students to choose

assignments or projects aligned with their interests. This is similar to the view expressed by (Ford, 2011) although the goal of personalized instruction is to meet each student's unique needs, different individuals may have different experiences and preferences (Zens, 2021, p. 3). Besides, the perception of the students indicated that working together with peers helps them learn crucial social skills while also deepening their comprehension of the subject matter. Ferrazalo (2023) stressed that few students valued differentiated instruction and became more involved in their studies, which can help them succeed and attain their goals of collaboration. This agrees with some responses by students: "Our interest and passion are pleased when teachers use different techniques to make the learning experience meaningful and relevant". Students felt that they could take control of their earnings because of the flexibility that differentiated instruction offers. This is substantiated by Zens (2021) who noted that when implementing differentiated education, it is crucial to take into account the varying academic needs, cultural backgrounds, learning styles, and languages of pupils. As a result, how well-individualized instruction in the English classroom meets each student's unique needs may have an impact on how well students perceive it.

The information that was gathered from the instructor was positive too. The interview evaluated the instructor's methods, beliefs about differentiated teaching, and the results of the students learning. The themes from the analysis of teachers' reflections are being independent, having favourable opinions of DI-based lectures, challenges and barriers, impact and the motivating components of DI-based courses. As the teacher put it, this kind of teaching opened up a wellspring of creativity, flexibility, and responsiveness for her to draw upon to meet the many needs of her students and take in the wonder of their complex development and evolution. As the instructor put it differentiated instruction-based English lessons offer benefits and drawbacks for students. They provide personalized learning by considering each student's skills, interests, and preferences, promoting active participation and better comprehension. However, this approach also presents challenges, such as time-consuming preparation, classroom management, and a lack of curricular coherence

Providing insightful information on both the benefits and challenges of implementing it in educational environments, this study emphasizes the need for careful planning and evaluation to maximize the effectiveness of differentiated teaching. The study found that teachers who used differentiated instruction had both a significant reduction in stress and a notable increase in job satisfaction.

Conclusion

The study was conducted to see the effect differentiated Instruction in the classroom. It attempted to explore how teachers can modify their resources and instruction to accommodate to the needs and the learning style and strategies of their students. The study attempted to show that differentiated instruction may improve student participation, motivation, accomplishment as well as provide supportive environment to student learning. The study provided many examples on how teachers may cater the instruction based on the material, procedure, final result, and learning environment. The study, in addition, discussed that time management; collaboration, assessment, and professional development were some of the opportunities and challenges in utilizing differentiated Instruction in the classroom. In

summary, the results of data analysis indicated that the use of differentiated instruction had a positive effect on student motivation and achievement compared to traditional instruction. The findings answered the research questions of the study and supported the hypothesis. To try to understand how differentiated instruction affected student academic achievement and motivation; the study used both inferential and descriptive statistics. To deal with the research questions of the study, inferential statistics such as correlation analysis, ANOVA, and t-test were used. The main objective of the study was to check whether there was a noticeable difference in academic achievement between students who received differentiated instruction and those who received no differentiated instruction. To answer this question, the study carefully examined the tests given at the end of the semester. The general findings of the study have shown a striking image not only to students but for the teachers as well on the power of differentiated instruction. The job satisfaction of the teacher increased and stress levels were reduced. Moreover, the students' improved academic performance, increased motivation, got and richer learning experience. All in all differentiated instruction collectively wove a compelling narrative about its profound impact in the classroom.

However, there were significant restrictions and drawbacks in this study that must be addressed.

The following suggestions are made for educators and decision-makers who are interested in implementing differentiated teaching as a pedagogical method.

Before designing and delivering individualized instruction, teachers should assess their students' prior knowledge, preparation, interests, and learning preferences. Furthermore, teachers must provide students with a range of materials, procedures, and ultimate results that are consistent with learning goals and objectives. Teachers should use adaptive grouping strategies to generate varied and homogeneous groups based on their students' needs and goals. In addition, teachers should monitor students' progress and feedback in order to improve their teachings. Instructors should promote students' autonomy, collaboration, and engagement in the classroom, and instructors should have access to the required knowledge, tools, readiness, passions, and preferred methods of learning. For teachers, parents, and students to collaborate and exchange best practices policymakers should support to implement differentiated instruction.

Teachers also need to give students access to a variety of resources, processes, and final products that align with learning objectives and aims. Based on the requirements and objectives of their students, teachers should create diverse and homogeneous groups using adaptive grouping techniques. In order to enhance their instruction, teachers should also keep an eye on their pupils' development and comments. The overall conclusion was that differentiated instruction is a successful pedagogical strategy that can enhance students' learning experiences, notwithstanding the challenges encountered in its implementation.

Limitations

- The sample's small size and random selection may limit the participants' diversity and representativeness

- The main techniques for gathering the data were self-reported questionnaires and interviews, which might introduce subjectivity as well as prejudice into the findings.
- The study's findings may not be as applicable or transferable to other situations and contexts due to its specific location and time frame.
- Nevertheless, this study had important limitations and shortcomings that needed to be addressed. These drawbacks and limitations should be mulled over when construing and making use of the findings.

Research directions for the future

A pedagogical technique called differentiated teaching gives pupils a variety of learning options, which improves engagement, motivation, and accomplishment. However, the limitations of the current study on differentiated instruction necessitate more study on the topic.

The efficiency of differentiated instruction across a range of disciplines, grade levels, and contexts must first be set up by additional study. Most of the current studies have focused on teaching math and reading in elementary and middle schools. It's blurred if differentiated instruction can be employed effectively at several academic levels, like high school or higher education institutions, or in other subject areas, like science, social studies, or the arts. To tailor differentiated instruction, it is also essential to look at the diverse cultural and linguistic backgrounds of students and teachers.

Second, differentiated education requires a great deal of setup, assessment, and organization on the part of the teacher. It also necessitates a great deal of collaboration and communication between parents, students, and teachers. However, there are no clear standards or frameworks on how to effectively and efficiently organize, carry out, and evaluate differentiated teaching. Therefore, further research is required to determine the ideal methods and tactics for implementing individualized instruction in the classroom.

Third, additional research is needed to understand completely how students' cognitive affective and cognitive outcomes are impacted by differentiated instruction. In addition to academic achievement, differentiated education aspires to meet students' interests, readiness, learning preferences, and styles. Yet empirical research on the effects of customized instruction on students' cognitive functions—like critical thinking, self-management, or metacognition—is lacking. It's also vital to identify the factors that support and weaken teachers' adoption and application of differentiated instruction.

Lastly, one should note that such kind of tailored instruction is a potential pedagogical approach that might add to students' classroom learning outcomes and experiences. To advance the theory and practice of differentiated instruction in education, further study is required. The implications presented in the current research can supply some direction for future researchers who are interested in this theme.

Recommendations

- Evaluate the readiness of pupils and their preferences using a range of data sources.
- Give students a variety of options for tests and educational exercises.
- Form both varied and uniform teams according to the requirements and goals of the students using flexible grouping strategies,
- Use a variety of differentiation techniques, considering environment, product, and process.
- Ask for peer and student input to monitor and evaluate the effectiveness of differentiated instruction.

Declarations on Ethical Standards

Financial support I have not yet accepted any financial support to do this study nor have I received any financial support for the publication of the article.

Conflicts of interest I have no conflict of interest regarding the publication of this article.

Ethical Approval In the case of this study I assure that all procedures conducted in this study were following the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

Informed Consent I have obtained informed consent from all individual participants involved in the study.

BIBLIOGRAPHY

- Al-Balushi, K. A., & Al-Balushi, S. M. (2018). Effectiveness of Brain-Based Learning for Grade Eight Students' Direct and Postponed Retention in Science. *International Journal of Instruction*, 11(3), 525–538. <https://eric.ed.gov/?id=EJ1183346>
- Benjamin, A. (2002). *Differentiated Instruction: A Guide for Middle and High School Teachers*. Eye On Education.
- Brand, S. T., & Dalton, E. M. (2012). Universal Design for Learning: Cognitive Theory into Practice for Facilitating Comprehension in Early Literacy. *Forum on Public Policy Online*, 2012(1). <https://eric.ed.gov/?id=EJ979433>
- Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five traditions*. London: Sage publications. <https://doi.org/null>
- Creswell, J. W. (2009). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (3rd ed.).
- Differentiated Instruction: Examples & Classroom Strategies*. (2014, October 1). Resilient Educator. <https://resilienteducator.com/classroom-resources/examples-of-differentiated-instruction/>
- Ercan, S. A., Asenbaum, H., Curato, N., & Mendonça, R. F. (Eds.). (2022). *Research Methods in Deliberative Democracy* (1st ed.). Oxford University Press Oxford. <https://doi.org/10.1093/oso/9780192848925.001.0001>

- Fandino, E. C. (2008). The importance of differentiated instruction to student involvement, motivation, and learning. *Theses Digitization Project*.
<https://scholarworks.lib.csusb.edu/etd-project/3404>
- Ferrazalo, L. (2023). *What Does Successful Differentiated Instruction Look Like in the Classroom? (Opinion)*. <https://www.edweek.org/teaching-learning/opinion-what-does-successful-differentiated-instruction-look-like-in-the-classroom/2023/11>
- Ford, K. (2011, March 8). *Differentiated Instruction for English Language Learners* [Text].
<https://www.colorincolorado.org/article/differentiated-instruction-english-language-learners>
- Gardner, H. (2017). Taking a multiple intelligences (MI) perspective. *Behavioral and Brain Sciences*, 40, e203. <https://doi.org/10.1017/S0140525X16001631>
- Hall, T. (2002). *Differentiated Instruction. Effective Classroom Practices Report. National Center on Accessing the General Curriculum. Washington DC: Office of Special Education Programs, U.S. Department of Education.*
- Hattie, J. (2010). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement* (Reprinted). Routledge.
- Iqbal, J., Khan, A. M., & Nisar, M. (2020). Impact of Differentiated Instruction on Student Learning: Perception of Students and Teachers. *Global Regional Review*, V(I), 364–375.
[https://doi.org/10.31703/grr.2020\(V-I\).40](https://doi.org/10.31703/grr.2020(V-I).40)
- Kaitlyn M. Arns. (2021). *Emerging Scholar Multiple Intelligence in a Center Based Environment*. 6.
- Landrum, T. J., & McDuffie, K. A. (2010). Learning Styles in the Age of Differentiated Instruction. *Exceptionality*, 18(1), 6–17. <https://doi.org/10.1080/09362830903462441>
- Lawrence-Brown, D. (2004). Differentiated Instruction: Inclusive Strategies for Standards-Based Learning That Benefit The Whole Class. *American Secondary Education*, 32(3), 34–62. <https://www.jstor.org/stable/41064522>
- Lockey, A., Conaghan, P., Bland, A., & Astin, F. (2021). Educational theory and its application to advanced life support courses: A narrative review. *Resuscitation Plus*, 5, 100053. <https://doi.org/10.1016/j.resplu.2020.100053>
- Massaad, M., & Chaker, L. Y. A. (2020). The Influence of Differentiated Instruction on Lebanese Students' Motivation, Knowledge, and Engagement. *International Journal of English Literature and Social Sciences*, 5(3), 755–774. <https://doi.org/10.22161/ijels.53.31>
- Rahimi, N. M., Faisa, N. A., Kamarudin, M. Y., & Tukimin, R. (2019). The Effectiveness of Differentiated Learning Method on Motivation and Achievement of Foreign Language Learning. *RELIGACIÓN. Revista de Ciencias Sociales y Humanidades*, 4(19), 161–164.
<https://www.redalyc.org/journal/6437/643770323023/html/>
- Saboor Hussain, M., Salam, A., & Farid, A. (2020). Students' Motivation in English Language Learning (ELL): An Exploratory Study of Motivation-al Factors for EFL and ESL Adult Learners. *International Journal of Applied Linguistics and English Literature*, 9(4), 15. <https://doi.org/10.7575/aiac.ijalel.v.9n.4p.15>
- Santangelo, T., & Tomlinson, C. A. (2012). Teacher Educators' Perceptions and Use of Differentiated Instruction Practices: An Exploratory Investigation. *Action in Teacher Education*, 34(4), 309–327. <https://doi.org/10.1080/01626620.2012.717032>
- Smit, R., & Humpert, W. (2012). Differentiated instruction in small schools. *Teaching and Teacher Education*, 28, 1152–1162. <https://doi.org/10.1016/j.tate.2012.07.003>

- Stakke, Jill. (2023). *50 Differentiated Instruction Strategies and Examples for Teachers*.
<https://www.weareteachers.com/5-differentiated-instruction-strategies-to-try-out-this-year/>
- Subban, P. (2006). Differentiated instruction: A research basis. *International Education Journal*, 7(7), 935-947. <http://iej.com.au>
- Tomlinson, C. A. (2001). *How to Differentiate Instruction in Mixed-ability Classrooms*. ASCD.
- Tomlinson, C.A. (2014). *The differentiated classroom: Responding to the needs of all learners (2nd ed.)*. ASCD. - Google. <https://www.google.com/search?q>
- Whitley, J., Duquette, C., Gooderham, S., Elliott, C., Orders, S., & Klan, A. (2021). Implementation of a Differentiated Instruction Initiative: Perspectives of Leaders. *Canadian Journal of Educational Administration and Policy*, 196, 49-64.
<https://doi.org/10.7202/1078517ar>
- Zens, A. (2021). *The Impact of Differentiated Learning Activities on Student Engagement and Motivation in the English Language Arts Classroom*. <https://red.mnstate.edu/thesis/611>