



RELEVANCE OF DIFFERENTIATED INSTRUCTIONS IN ENGLISH CLASSROOMS: AN EXPLORATORY STUDY IN THE SAUDI CONTEXT

Anis Jahan,

Associate Professor, Department of Education, Aligarh Muslim University,
Aligarh, U.P., India

Intakhab Alam Khan

King Abdulaziz University, Jeddah-Saudi Arabia

Fariha Asif

King Abdulaziz University, Jeddah-Saudi Arabia

ABSTRACT

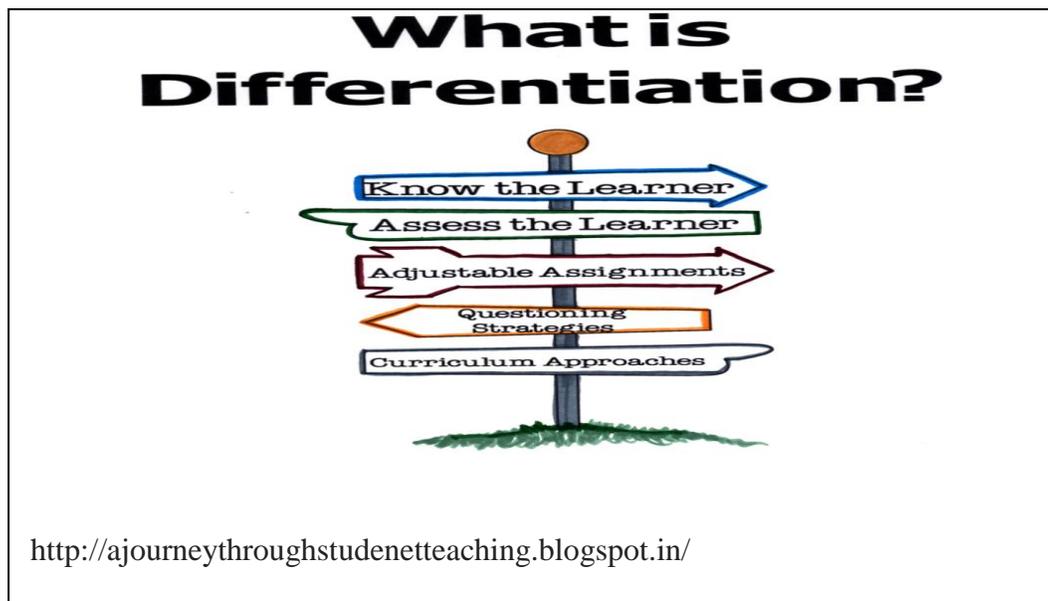
English language, because of its particular linguistic structure, is not easy to learn especially for foreign language learners. In Arab countries, this issue is not easy to handle both by learners and teachers. In EFL/ESL classroom set up, majority of teachers often observe that a good number of learners lag behind their peers in their class. Despite teachers leaving no stones unturned, they could not keep pace with the class in a normal manner. 'Differentiated Instruction' is the approach that supports the success of all students given the different achievement levels, developmental levels, and learning needs within one classroom. The point is not to make tasks easy for the learners but to attempt to make tasks possible. The low performing learners can't be ignored; rather they need and deserve more attention by the teacher. Teachers can instill in them the fervor of learning, so that they become active participants to keep pace with the rest of the group learners and perform better. The study is descriptive-exploratory in nature, based on a questionnaires administered on 63 practicing teachers in the Gulf/Middle East region and the findings will support the theory that differentiated instruction can be of great

importance. It can be recommended late that DI can be used as teaching strategy in an English classroom for diverse learners.

Key words: Differentiated Instruction, EFL classroom, individual learner, interactive participant

1. Introduction

Differentiated Instruction (DI) is a concept, principle or philosophy for effective teaching that involves different students with diverse background. In other words, ‘Differentiation’ means tailoring instruction to meet individual needs. Whether teachers differentiate content, process, products, or the learning environment, the use of ongoing assessment and grouping makes this a successful approach to instruction.



1.1. Why is DI important?

Differentiated Instruction enhances the learning potential of brilliant students to uncover deeper layers of learning, it simultaneously structures and uses curriculum to support lower level students or students with learning disabilities. This principle utilizes the concept of pairing students to allow for peer teaching which reinforces high achievers’ understanding of material while providing a struggling student with a peer instructor to further facilitate. Educators should know that one standard approach to teaching will not meet the needs of diverse learners. Differentiating instruction is the key to reaching all students.

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1.2. Is DI feasible at tertiary level?

Some critics are of the view that DI is only useful for young learners. However, it may be viewed from yet another angle no matter the learners are young or adults. But, there should be diversity and they should be special learners. In the entire Gulf/Middle Eastern region, English language learning is a challenge, and the learners are from different socio-linguistic and psycholinguistic backgrounds, therefore, DI as a technique can be well utilised, provided the instructor is intelligent and well trained.

1.3. Conceptual framework

At its most basic level, differentiation consists of the efforts of teachers to respond to variance among learners in the classroom. Whenever a teacher reaches out to a student or a group to vary his or her teaching to create the best learning experience possible, that teacher is doing nothing but differentiating instruction.

1.3.1. Elements of DI

Teachers can differentiate at least four classroom elements based on student readiness, interest, or learning profile:

- **Content** – what the student needs to learn or how the student will get access to the information;
- **Process**– activities in which the student engages in order to make sense of or master the content;
- **Products** – culminating projects that ask the student to rehearse, apply, and extend what he or she has learned in a unit; and
- **Learning environment** – the way the classroom works and feels.
- These elements will be discussed later.

1.3.2. Benefits of ‘Differentiated Instruction’

Servilio (2009) strongly contented that Differentiated Instruction is "an individualized method of meeting all of the students' academic needs at their level" (p. 7). One benefit of differentiated instruction is that it helps teachers address the learning needs of each student. The target can be attained by focusing on the students' characteristics as identified by Tomlinson (2001) as:

readiness, interest, and learning profile. Once characteristics and needs are identified, the teacher responds by trying to deal with the need in order for all students to be successful in learning (VanSciver, 2005). In this way, the teacher differentiates instruction to meet the learning needs of diverse learners in a single class. Another benefit of differentiated instruction is the increased student achievement. Servilio (2009) stated, 'The combination of a differentiated curriculum and the options for students' choice are quite suitable for promoting students' success as it can improve outcomes for other students as well' (p. 10). In a differentiated classroom, when students are actively engaged, and have achieved their goal, they are more motivated to continue learning and exceed their original goal or expectation. "With the tools of differentiated instruction, we can take each child as far as he or she can go" (Levy, 2008, p. 164) towards further achievement and success.

1.3.3. Drawbacks of 'Differentiated Instruction'

Each principle has some drawbacks as well. VanSciver (2005) noticed that Differentiated Instruction leads to some disadvantages. However, these disadvantages mainly affect the teacher. The issues are basically associated with three categories: time, resources, and complexity. Differentiated Instruction does take time (George, 2005; Servilio, 2009), however challenges may be minimized if the differentiated instructor spares extra time in assessing, planning and executing the strategy.

If not well understood, differentiation may lead to complexity. Some teachers even found it almost impossible to implement properly for every child or group. (Schmoker, 2010, p. 22). Servilio (2009) also suggested that another disadvantage of differentiated instruction could be a noisier, or "chaotic" (p. 10) classroom. When students actively participate, and are engaged in working groups, the noise level of the classroom will likely be higher than one with students who are independently working. However, Servilio admitted that once teachers and students are accustomed to the increased noise level, this may no longer be an issue. Schmoker (2010), a critic of differentiated instruction, stated there is "no research or strong evidence to support its widespread adoption" (p. 22). Instead of differentiated instruction, Schmoker recommended focusing on a "content-rich guaranteed curriculum" making sure students can "read, write and discuss ... across the curriculum" (p. 23), using a model of instruction that is known to work. This model focuses on using a "clear, curriculum-based objective and assessment, followed by

multiple cycles of instruction, guided practice, checks for understanding, and ongoing multiple checks for understanding" (p. 23).

1.3.4. Pros and cons of ‘Differentiated Instruction’: summarized

Pros	Cons
<p>-Research shows differentiated instruction is effective for high-ability students as well as students with mild to severe disabilities. -</p> <p>When students are given more options on how they can learn material, they take on more responsibility for their own learning. -</p> <p>Students appear to be more engaged in learning, and there are reportedly fewer discipline problems in classrooms where teachers provide differentiated lessons.</p>	<p>-Differentiated instruction requires more work during lesson planning, and many teachers struggle to find the extra time in their schedule.</p> <p>-The learning curve can be steep and some schools lack professional development resources.</p> <p>-Critics argue there isn’t enough research to support the benefits of differentiated instruction outweighing the added prep time.</p>

1.4. Principles of ‘Differentiated Instruction’

Key Principles of a Differentiated Classroom

- The teacher is **clear about** what matters in **subject matter**.
- The teacher understands, appreciates, and **builds upon student differences**.
- **Assessment** and **instruction** are **inseparable**.
- The teacher adjusts **content, process, and product** in response to student **readiness, interests, and learning profile**.
- All students participate in **respectful work**.
- Students and teachers are **collaborators** in learning.
- Goals of a differentiated classroom are **maximum growth** and **individual success**.
- **Flexibility** is the hallmark of a differentiated classroom.

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2. Relevance of related theories

2.1. The Theory of Multiple Intelligences

A theory developed by Gardner (1983) which states that people perceive the world around them through their intelligences. There are nine identified intelligences: linguistic, logical-mathematical, spatial, bodily-kinesthetic, musical, interpersonal, intrapersonal, naturalistic, and existential.

Gardner first introduced his MI theory in 1983 through his book *Frames of Mind*. Gardner stated, 'I believe that human cognitive competence is better described in terms of a set of abilities, talents, or mental skills, which I call intelligences' (p. 6). The theory is based on a "pluralistic view of the mind" (Gardner, 2006, p. 5), and supported the idea that the mind is made up of several intelligences. This 'pluralistic view of the mind' accounts for the different ways people think and act. It also acknowledges that everyone has various levels of strengths and weaknesses in each area of intelligence. Gardner reviewed case studies of people with various mental abilities, including gifted, idiots, mentally disabled, brain-damaged, and "normal" individuals, and the study aimed to determine how the mind works and to "document how different parts of the brain are dominant for different cognitive functions" (Gardner, 1983, p. 2).

According to Gardner (1995), intelligence is "a biological and psychological potential; that potential is capable of being realized to a greater or lesser extent as a consequence of the experiential, cultural, and motivational factors that affect a person" (p. 202). In other words, intelligence is the ability or the potential to process and use information to solve a problem or create a product (Gardner, 1983). When he introduced the theory of MI, Gardner initially identified the existence of seven distinct intelligences: spatial, linguistic, logical-mathematical, bodily-kinesthetic, musical, intrapersonal, and interpersonal; each related to a specific part of the brain. It was not until the 1990s that he added an eighth intelligence, the naturalistic intelligence (Gardner, 2003). Later, the existential intelligence also came into existence. He concluded that even though a person may not have any of one particular intelligence, he may have another intelligence which is still functioning in another part of the brain (2005). Gardner (2006) suggested that each person has and uses all nine intelligences, and, even though one type of intelligence may be stronger than another, they all work together in an ordinary person. Moreover, genetic and cultural backgrounds influence how an individual uses and develops their

intelligence preferences. For example, a dancer must use the spatial, bodily-kinesthetic, musical, interpersonal, and intrapersonal intelligences to become a good dancer.

All factors of genetics, culture, and personal intelligence preference play a crucial role in how an individual uses his/her talent to perform. Originally, Gardner did not identify how he intended the MI theory to be applied or who would benefit from using it (Williams, 2002). In order for a teacher to implement the theory of MI in their classroom, they must first understand the nine intelligences. Once a teacher understands all nine types of intelligences, he will be able to proceed to the next step, which is identifying the intelligence strengths of their students. The teacher can then target those specific intelligences and teach new materials using those intelligence strengths. Studies have shown that teaching students having different strengths using MI has many benefits, including meeting students' learning needs and engaging them more actively. This approach can lead to higher achievement.

2.2. Gardner's Multiple Intelligences

Gardner (1991) in total identified nine distinct intelligences. This theory has emerged from recent cognitive research and "documents the extent to which students possess different kinds of minds and therefore learn, remember, perform, and understand in different ways," According to his theory, 'we are all able to know the world through language, logical-mathematical analysis, spatial representation, musical thinking, the use of the body to solve problems or to make things, an understanding of other individuals as well as ourselves. Children differ in strength mainly due to intelligence. (<http://www.tecweb.org/styles/gardner.html>)

2.2.1. Linguistic intelligence

Linguistic intelligence is the capacity to understand written and spoken language. Thus, students with a strong linguistic intelligence learn through language. Activities such as storytelling, brainstorming, tape recording, journal writing, and publishing allow these learners to demonstrate their strengths (Dickinson, 1996). Books are important to the linguistic learner; they thrive on using words, reading, and telling stories.

2.2.2. Logical-mathematical intelligence

This is the capacity to understand logic and numeric operations. Students with this intelligence strength enjoy learning activities such as calculations and quantifications, classifications, and categorizations using logical reasoning (Armstrong, 2009).

2.2.3.Spatial intelligence

The spatial intelligence is the capacity to visualize what is spoken, read, or written and the ability to manipulate those visualizations (Gardner, 2005). According to Nicholson-Nelson (1998), students with this intelligence learn and understand best by using a "mental or physical picture" (p. 11). Activities such as drawing, using maps, and solving puzzles allow these students to demonstrate their strengths.

2.2.4.Bodily-Kinesthetic intelligence

The capacity to learn through movement and to "solve problems or fashion products using your whole body, or parts of your body, like your hands or mouth" (Gardner, 2005, p. 8). Students with a strong bodily-kinesthetic intelligence have excellent hand-eye coordination. Activities in which these learners do well include: role-playing, building, dancing, playing games, and participating in hands-on activities (Armstrong, 2009).

2.2.5.Musical intelligence

The musical intelligence is "the capacity to create, perform, and appreciate music" (Gardner, 2005, p. 7). Students with this intelligence strength understand musical concepts and learn well through songs, rhythms, chants, and poetry.

2.2.6.Interpersonal intelligence

The interpersonal intelligence involves understanding people. These students are known as being 'people smart' (Lazer, 2000). They have a strong sense of community and work well with others. Interpersonal activities include: peer sharing, cooperative groups, board games, and simulations (Armstrong, 2009).

2.2.7.Intrapersonal intelligence

This is 'specific capacity to understand oneself' (Gardner, 2005, p. 8). Students with this intelligence strength have a strong sense of self and do well working alone. They are in touch

with their own feelings and are good at reflection. Intrapersonal activities include: working alone, setting goals, meditating, and choosing which activity to complete. (Nicholson-Nelson, 1998)

2.2.8. Naturalistic intelligence

The naturalistic intelligence is the capacity to "distinguish and categorize objects or phenomena in nature" (Moran, Kornhaber, & Gardner, 2006). This intelligence strengthens one to enjoy being outdoors, exploring, and learning about plants and natural events.

2.2.9. Existential intelligence

The existential intelligence is the capacity to think about the big picture and why things or people exist. Students with this intelligence strength may ponder questions such as "who are we, why do we die, [and] how did we get here" (Nicholson-Nelson, 1998, p. 12). McCoog (2010) stated that students who display a "strong existential intelligence need the freedom to ponder, conceptualize, and hypothesize about the content presented in class" (p. 127). Activities for these types of learners may include: analyzing and thinking about questions that do not have a clear answer, pondering how variables interact, and evaluating how concepts relate to one another (McCoog, 2010).

2.6. Theories of Differentiated Instruction (DI)

According to Tomlinson (2001), teachers can differentiate instruction through four ways: 1) content, 2) process, 3) product, and 4) learning environment. In the present context, these could be considered as aspects:

2.6.1. Content

The instructor differentiates the content by designing activities for individual/groups of students related to various aspects/levels of Bloom's (cited by Anderson et al, 2001) Taxonomy: remembering, understanding, applying, analyzing, evaluating and creating.

Some students may be required to do tasks starting from the lower levels: remembering and understanding. Students with some mastery may be asked to apply and analyze the content, and students who have high levels of mastery may be asked to complete tasks in the areas of evaluating and creating.

Some examples of differentiating activities:

- Match vocabulary words to synonyms,
- Find opposites,
- Match definitions.
- Text based comprehension questions.
- Think of a situation that happened to a character in the story.
- Differentiate fact from opinion
- Identify an author's views
- Summarizing the lesson in one's own words.

2.6.2. Process

Each student is born with some traits. He/she has a preferred learning style, therefore successful differentiation includes a focus on teaching related to each style: visual, auditory and kinesthetic and through words. All students don't require equal attention of the teacher on all the points, however students may like to choose their activities in a group or otherwise. Teachers can enhance student learning by offering support based on individual needs.

Examples of differentiating the process:

- Provide textbooks for visual and word learners.
- Allow auditory learners to listen to audio books.
- Give kinesthetic learners the opportunity to complete an interactive assignment online.

2.6.3. Product

The product is what the student creates at the end of the lesson to demonstrate the mastery of the content. This can be in the form of tests, projects, reports or other activities. Teachers may assign (following differentiation technique) students to engage in activities that show mastery of an educational concept in a way the students prefer, based on their learning styles:

- Read and write learners write a book report.
- Visual learners create a graphic organizer of the story.
- Auditory learners give an oral report.
- Kinesthetic learners build a diorama illustrating the story, and
- Many other ways.

2.6.4. Learning environment

The conditions for optimal learning include both physical and psychological elements. A flexible classroom layout is the key, incorporating various types of furniture and arrangements to support both individual and group work. Psychologically speaking, teachers should use classroom management techniques that support an active, productive and supportive learning environment.

The activities may include some or all the following based on the situations:

- Divide students into reading groups to discuss the assigned tasks.
- Allow students to read individually if preferred.
- Differentiate instruction ranging from low to high-ability students as well as students with mild to severe disabilities.
- Give more options on how they can learn the material, so that they take on more responsibility for their own learning.

2.7. Motivation and ‘Differentiation’

Motivation has a close connection with the learner's needs and style of learning. Motivation is multidimensional and requires a differentiated approach. John Hattie's work (2011) on what leads to academic achievement lists *feedback* as one of the strongest influencers on achievement; yet, feedback too must be differentiated. Differentiating motivation begins by recognizing that intrinsic and extrinsic motivation have different effects. In reading, for example, Wingfield and Guthrie (1997) found that intrinsic and extrinsic motivation play a role in getting students to read; however, intrinsic motivation played a far greater role and predicted breadth and strength of reading more strongly than extrinsic motivation. When it comes to differentiating feedback, gender is one factor to consider. Dweck (2007) found slight gender differences in feedback in that, boys may feel more accountable for their academic achievement, whereas girls may take greater ownership in their academic challenges. While Dweck takes great care to point out that these differences are slight and represent trends rather than absolutes, effective educators understand that feedback such as the ‘content delivery’ and ‘resources’ should be differentiated. Findings from a 2005 Dutch study (cited in Bryan, 2015) imply that feedback should also be differentiated by age.

3. The present study

3.1. Importance of the study

Differentiated Instruction (DI) is the practice of evolving and adapting instruction, developing, modifying and using materials, and conducting different student based assessments to meet the learning needs of individuals especially in a diverse classroom. English classroom in Arab countries in general and Saudi Arabia in particular, bears special significance on account of its unique features that the learners' background is not appropriate, problems are varied, materials are not suitable, and teachers may not be trained in DI. Therefore, an attempt in this direction is certainly of great significance, and the findings are going to contribute to the development of curriculum and specific instruction.

3.2. Methodology

3.2.1.Objectives

- 1- to study the relevance of differentiated instruction (DI) in the English classroom,
- 2- to explore if teachers know and use DI,
- 3- to find out the challenges of using DI.

3.2.2. Research questions

1. Is DI relevant in an English classroom?
2. Are teachers aware of DI?
3. Do teachers use DI?
4. Do teachers face challenges in using DI ?

3.2.3.Sample

Teachers of English especially from the Arab world were administered a self developed questionnaire. Around 200 teachers were contacted by social networking/professional sites, but only 63 filled in questionnaires were received back.

3.2.4.Tools and methods of data collection

Questionnaires

A questionnaire (Appendix-A) was adapted from Whipple (2012), and modified by the researcher to elicit the required data. However, content validity was further checked before administration of the tool.

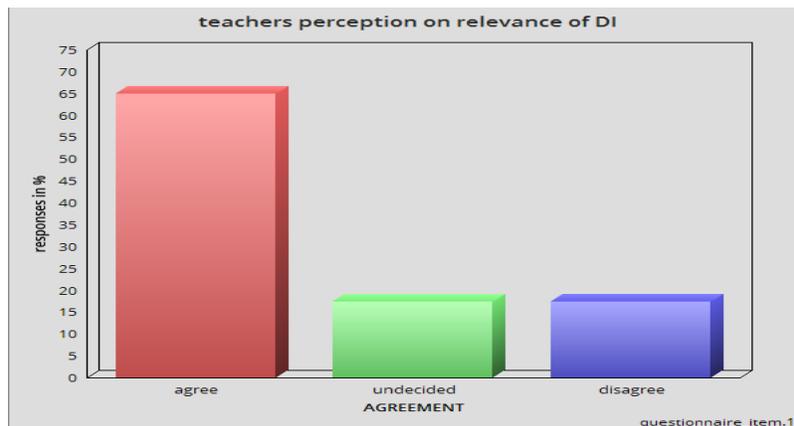
4. Analysis of the data

4.1. Perception of the teacher towards differentiated instruction

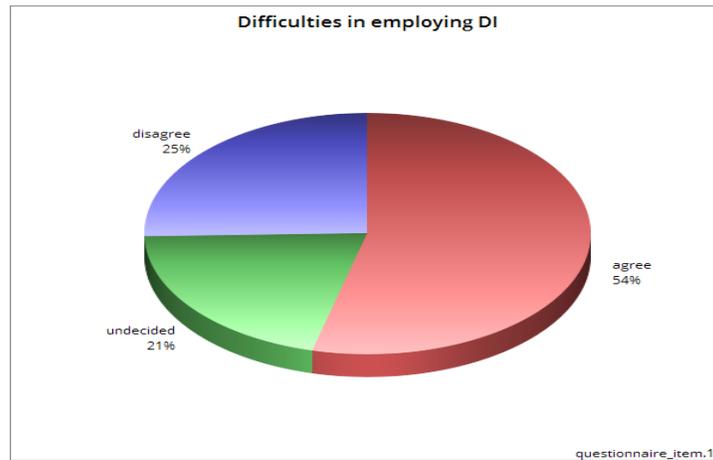
Item wise analysis

1-65% respondents agreed that Differentiated Instruction (DI) is a principle and technique of instruction that deals with diverse learners in a single class.

Figure-1



Item-2: 53.9% are in agreement with the statement that Differentiated Instruction is not impossible.



Item-3: Around 57% teachers confirmed that they plan their lessons with differentiated instructional principles in mind.

Item-4: Only 61.9% confirmed that they use differentiated instruction in reading, writing and grammar exercises.

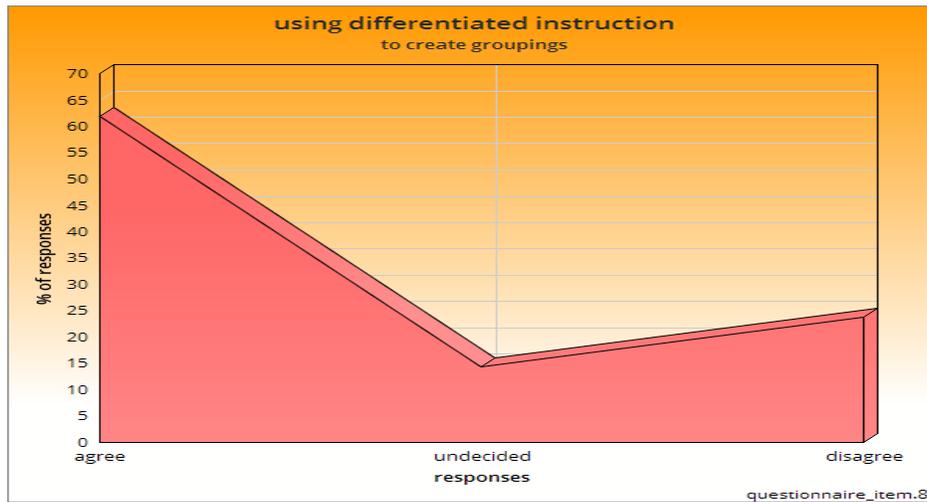
Item-5: 42.85% respondents opined that managing a differentiated classroom is not very difficult.

Item-6: 65% teachers stated that they knew individual student's interest, and can relate it to instruction.

Item-7: 71.42% respondents affirmed that they consider student's learning styles while teaching.

Item-8: 61.9% respondents said that they use differentiated instruction to create flexible grouping. It is

perhaps needed to orient teachers about differentiated instruction

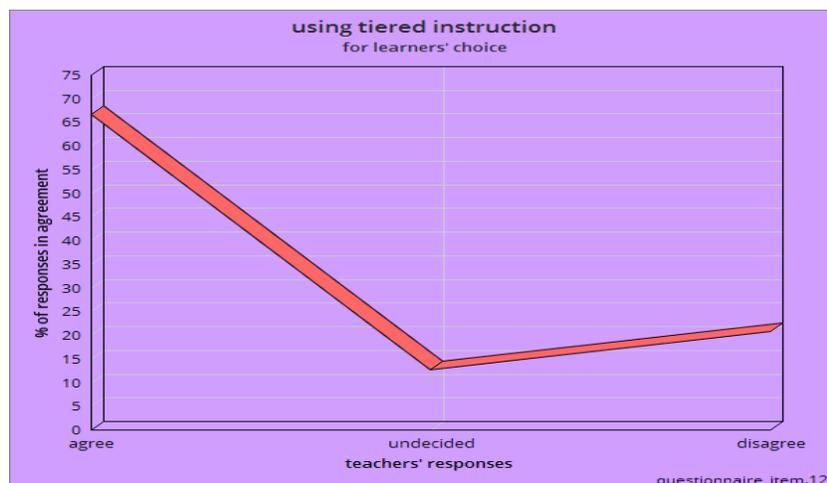


Item-9: 69.8% teachers contended that they are aware of students' learning difficulties and how to address them in lessons.

Item-10: Around 68% teachers claimed that they assign differentiated homework.

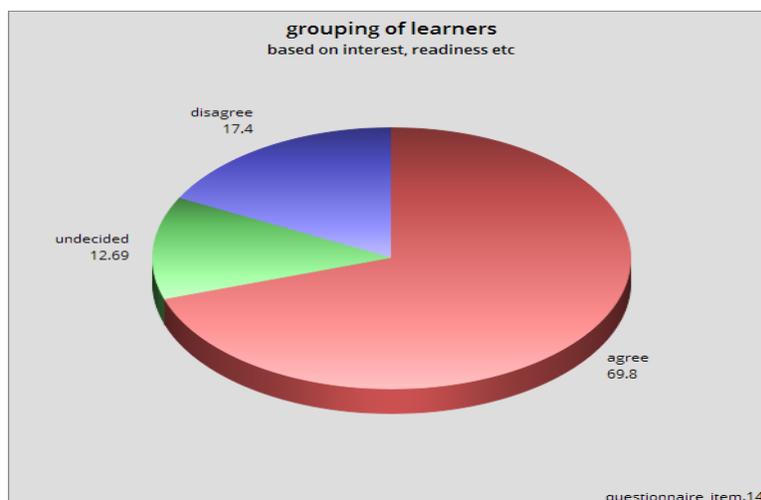
Item-11: Only 55.55 teachers confirmed that teaching materials are used to deal with the students' reading/interest abilities.

Item-12: Around 66% teachers confirmed that they adjust for diverse learner needs with tiered instruction & provide student choice in learning activities.



Item-13: 73.01% respondents accepted that they use variety of materials other than the standard text.

Item-14: Nearly 70% teachers said that they group students for learning activities based on readiness, interests, and/or learning preferences.



Item-15: Some 76.19 teachers confirmed that they assign Differentiated assessment tasks.

5. Findings, Conclusions and Recommendations

5.1. Findings (based on Research question)

1- It has been found that DI is relevant in an English classroom. Item wise analysis of different statements show that DI can be used to cater to the needs of diverse learners who have different levels of readiness, interest, motivation level and backgrounds.

2. Many teachers are aware of DI, and they employ the principles and techniques. However, all the teachers should be oriented with the DI principles and techniques to deal with different kinds of learners in a single class.

3- Analysis of related items reveal that many teachers use differentiated instruction, and they yield results as well.

4. It has been found that using DI is not an easy task however it can't be considered as impossible.

5.2. Conclusions

Interesting findings were noted in the perception of Differentiated Instruction among the

participants based on responses. However, for further enhancement, in near future, professional development programmes may be organized to expand the areas of DI content, theory and classroom practices (with examples). It will facilitate the process of attainment of DI aims and objectives. There was a good understanding on the overall concept of DI, and even the practice issue among the participants. In this regards, the participants confirmed that they plan their lessons with differentiated instructional principles in mind. The teachers also bear in mind that objectives of DI vary from reading, writing to grammar exercises etc as per the pedagogic need. The study concluded that DI needs to assess the students' learning styles while making a plan, teaching, assessing and re-planning. Such activities can be followed in all the aspects of DI, be it content, process or product. Data also reveal that the instructors use differentiated instruction to create flexible grouping, however they may not be well aware of the principle or theory of such an activity.

It was also noted that instructors are aware of students' learning difficulties and how to address them in lessons. This facilitates in the attainment process of DI objectives. The teachers also assign differentiated homework which has a connection with the presence of diverse learners in a class.

Implications for Practice

Differentiated Instruction is initially a teaching principle based on philosophy and also a teaching strategy. However, it is an easy concept to comprehend and practice. It requires continuous professional development especially on the issue of practical lessons by different modes including simulated teaching. Time factor is extremely crucial in order to manage differentiated instruction. Therefore, administrators also required to contribute for successful implementation of DI.

Suggestion for Further Research

Although data gathered for this study reveal perception, understanding and implementation of DI, further empirical investigations are imperative to deeper research:

- 1-A study on effectiveness of DI in the teaching of English in general,
- 2-Factors Affecting implementation of DI
- 3-Professional development of DI instructors

References

- Anderson, L.W., Krathwohl, D.R., Airasian, P.W., Cruikshank, K.A., Mayer, R.E., Pintrich, P.R., Raths, J., Wittrock, M.C. (2001). *A Taxonomy for Learning, Teaching, and Assessing: A revision of Bloom's Taxonomy of Educational Objectives*. New York: Pearson, Allyn & Bacon.
- Armstrong, T. (1999). *7 Kinds of smart: Identifying and developing your multiple intelligences*. New York, NY: Penguin Putnam.
- Armstrong T. (2009). *Multiple intelligences in the classroom* (3rd ed.). Alexandria, VA: Association for Supervision and Curriculum Development.
- Bloom, B.S. (Ed.). Engelhart, M.D., Furst, E.J., Hill, W.H., Krathwohl, D.R. (1956). *Taxonomy of Educational Objectives, Handbook I: The Cognitive Domain*. New York: David McKay Co Inc.
- Bryan, J. (2015). Differentiated learning: Closing the gap between theory and practice. <http://www.renaissance.com/2015/10/01/differentiated-learning-closing-the-gap-between-theory-and-practice/>
- Dickinson, D. (1996). Learning through many kids on intelligences. Retrieved from http://newhorizons.org/strategies/mi/dickinson_mi.htm
- Dweck, C (2007). *Mindset :The new Psychology of Success*. New York: Ballantine Books
- Gardner, H. (1975) *The Shattered Mind*, New York: Knopf.
- Gardner, H. (1983). *Frames of mind. The theory of multiple intelligences*. New York, NY. Basic Books. Twentieth Anniversary Edition with new introduction. New York, NY. Basic Books, 2004.
- Gardner, H., & Hatch, T. (1989). Multiple intelligences go to school: Educational implications of the theory of multiple intelligences. *Educational Researcher*, 18(8), 4-9.
- Gardner, H. (1989). *To Open Minds: Chinese Clues to the Dilemma of American Education*. New York: Basic Books. ISBN 978-0-465-08629-0.
- Gardner, H. (1995). *How Are Kids Smart: Multiple Intelligences in the Classroom—Administrators' Version*. ISBN 1-887943-03-X.
- Gardner, H. (1995). "Reflections on multiple intelligences: Myths and messages" (PDF). *Phi Delta Kappan*. 77: 200–209.
- Gardner, H., Csikszentmihalyi, M. and Damon, W. (2001) *Good Work: Where Excellence and Ethics Meet*, New York: Basic Books.
- Gardner, H. (2003). MI after 20 years. Retrieved from <http://www.howardgardner.com/Papers/papers.html>
- Gardner, H. (2005). Multiple lenses on the mind. Retrieved from <http://www.howardgardner.com/Papers/papers.html>
- Gardner, H. (2006) *Changing Minds. The art and science of changing our own and other people's minds*. Boston MA.: Harvard Business School Press.
- Gardner, H. (2006). Schaler, Jeffrey A., ed. "A Blessing of Influences" in *Howard Gardner Under Fire*. Illinois: Open Court. ISBN 978-0-8126-9604-2.
- Gardner, H., Vecchi, V; Rinaldi, C; Cagliari, P (2011). *Making learning visible*. Italy: Reggio Children. ISBN 978-88-87960-67-9.
- Gardner, H. (2015). *Bridging the Gaps: A Portal for Curious Minds*. Pro Unlimited. (at 17 minutes). [soundcloud.com](https://www.soundcloud.com)

- Gardner, H. *The Theory of Multiple Intelligences: As Psychology, As Education, As Social Science* (PDF). Howardgardner01.files.wordpress.com. Retrieved 11 October 2014.
- Gardner, H., Moran, Seana. "The science of multiple intelligences theory: A response to Lynn Waterhouse". *Educational Psychologist*. **41** (4): 227–232. doi:10.1207/s15326985ep4104_2
- Gardner, H. "On failing to grasp the core of MI theory: A response to Visser et al.". *Intelligence*. **34** (5): 503–505. doi:10.1016/j.intell.2006.04.002
- George, P. (2005). *A rationale for differentiating instruction in the regular classroom*. *Theory Into Practice*, 44(3), 185-193. 10.1207/s1543042tip4403_2
- Hattie, John A. (2008). *Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement*. ISBN 0-415-47618-6.
- Hattie, John A. (2011). *Visible Learning for Teachers: Maximizing Impact on Learning*. ISBN 0-415-69015-3.
- Levy, R (2008). *Meeting the needs of all students through differentiated instruction: Helping every child reach and exceed standards*. [Electronic version]. *Clearing House*, 81(4), 161-16
- Lazer, D. (2000). *Pathways of learning*. Chicago, IL: Zephyr Press
- McCoog, I. (2010). The existential learner. *Clearing House*, 83(4), 126-128. 10.1080/100098651003774828
- Moran, S., Kornhaber, M., & Gardner, H. (2006). *Orchestrating multiple intelligences*. [Electronic version]. *Educational Leadership*, 64(1), 22-27
- Nicholson-Nelson, K. (1998). *Developing students' multiple intelligences*. New York, NY: Scholastic Professional Books
- Schmoker, M. (2010). *When pedagogic fads trump priorities*. Retrieved from <http://www.edweek.org/ew/articles/2010109/29/05schmoker.h30.html>
- Williams, R. (2002). *Multiple intelligences for differentiated learning*. Thousand Oaks, CA
- Servilio (2009) Servilio, K. (2009). You get to choose! Motivating students to read through differentiated instruction. [Electronic version]. *Teaching Exceptional Children Plus*, 5(5), 2-1
- Tomlinson, C. A., (2001). *How to differentiate instruction in mixed-ability classrooms*. (2nd Ed.) Alexandria, VA: ASCD.
- Tomlinson, C. A., & Allan, S. D., (2000). *Leadership for differentiating schools and classrooms*. Alexandria, VA: ASCD.
- Tomlinson, C. (1995). *How to Differentiate Instruction in Mixed-ability Classrooms*. Alexandria, VA: Association for Supervision and Curriculum Development. ED 386 301.
- Tomlinson, C. (1999). *The Differentiated Classroom: Responding to the Needs of all Learners*. Alexandria, VA: Association for Supervision and Curriculum Development. ED 429 944.
- VanSciver, I. (2005). Motherhood, apple pie, and differentiated instruction. [Electronic version]. *Phi Delta Kappan*, 86(7), 534-535
- Wigfield, A., & Guthrie, J. T. (1995). *Dimensions of children's motivations for reading: An initial study* (Research Rep. No. 34). Athens, GA: National Reading Research Center.
- Whipple, K.A. (2012). *Differentiated Instruction: A Survey Study of Teacher Understanding and Implementation in South East Massachusetts School District*. Unpublished doctoral thesis, Northeastern University Boston, Massachusetts June 21, 2012
<https://repository.library.northeastern.edu/files/neu:1180/fulltext.pdf>

Appendix A: Questionnaires

Part A: PERSONAL INFORMATION

Name (optional): Mr/Miss/Mrs/Mis: _____

Age: Total Experience (in years):

Experience in Arab countries:

Contact no. / email (optional):

Part B: Please choose from Strongly agree(SA), Undecided(UD) or Disagree(DA):

S.N	Statements	SA	UD	DA
1	Differentiated instruction (DI) is a principle and technique of instruction that deals with diverse learners in a single class.	41(65%)	11(17.4%)	11(17.4%)
2	Differentiated Instruction is not impossible.	34(53.9%)	13(20.63%)	16(25.39%)
3	I plan my lessons with differentiated instructional principles in mind.	36(57.14%)	9(14.28%)	18(28.57%)
4	I use differentiated instruction in reading, writing and grammar exercises.	39(61.9%)	11(17.4%)	13(20.63%)
5	Managing a differentiated classroom is not very difficult.	27	13	23
6	I know individual student's interest, and can relate it to instruction.	41 65	8 12.69	14 22.22
7	I consider student's learning styles while teaching.	45(71.42%)	9(14.28%)	9(14.28%)
8	I use differentiated instruction to create	39(61.9%)	9(14.28%)	15(23.8%)

	flexible grouping.			
9	I am aware of student's learning difficulties and how to address them in lessons.	44(69.8%)	8(12.69%)	11(17.4%)
10	I assign differentiated homework.	43(68.25%)	12(19.04%)	8(1.61%)
11	Materials are used to deal with the students' reading/interest abilities.	35(55.55%)	17(26.98%)	11(17.4%)
12	I adjust for diverse learner needs with tiered instruction & provide student choice in learning activities.	42(66.66%)	8(12.69%)	13(20.63%)
13	I use variety of materials other than the standard text.	46(73.01%)	6(9.525%)	11(17.4%)
14	I group students for learning activities based on readiness, interests, and/or learning preferences.	44(69.8%)	8(12.69%)	11(17.4%)
15	I assign different of assessment tasks.	48(76.19%)	9(14.28%)	6(9.52%)
16	Any other comments:----- -----			