The Influence of Differentiated Instruction on Academic Achievement of Students in Mixed Ability Classrooms

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Abstract

The present study aims at describing the influence of differentiated instruction on the academic achievement of English Language Learners low achievers and high achievers in a mixed ability classroom. It explores the strategies used by teacher to apply some principles of differentiated instruction in mixed ability classrooms and how pupils including low achievers and high achievers progress academically in English classrooms and how much they benefit taking into consideration teacher's time and effort. A total of 20 students from one intact English class were used as a sample of this experimental study that was conducted on 10 low achievers and 10 high achievers. In order to obtain the data, the achievement test pre-test and post-test was used as an instrument to gauge the low achiever's and high achiever's academic performance. In this experimental class, the researcher used differentiated instruction as an intervention. This intervention class was able to improve their academic score from pre-test to post-test. Therefore, the results revealed a marked improvement in the low achiever's academic scores following the implementation of differentiated instruction in a great way. But for high achievers, their scores were somehow stable between the pre-test and post-test following the implementation of this process. It is evident that differentiated instruction is a strategy that has a great influence on the academic achievement of low achievers in a great way.

Keywords: differentiated instruction, mixed ability classrooms, english language

1. Introduction

The study tries to examine the influence of differentiated instruction on academic achievement of English Learners low achievers and high achievers in mixed ability classrooms. So, this study will collect information about the impact of this phenomenon on academic achievement of students as well as teacher's strategies and also it will depict the relation between this phenomena and academic achievement of students. This will be validated through collected data at high school level, the researcher teach in by introducing the achievement tests before and after applying the differentiated instruction, which will encompass the methods and strategies used by the teacher. The data will be analysed to depict to what extent differentiated instruction impacts or influences the academic achievement of low achievers and high achievers of ELL in mixed ability classrooms.

The influence of differentiated instruction on academic achievement of ELL low achievers and high achievers in mixed ability classrooms was studied worldwide, but not in Lebanon. It was studied all over the world by researchers in math, English, and science classes, but there were not researches that dealt with this issue in Lebanese contexts. So, the researcher intends to solve this gap in literature by addressing this issue in Lebanon including its impact. Though, this topic was studied in English but it was handled externally in two sets of groups (controlled and experimental). The researcher is going to address this issue in the Lebanese contexts by using only one group which is experimental.

This research attempts to answer the following research questions:

1. How does the implementation of differentiated instruction impact the academic achievement of ELL low achievers and high achievers in mixed ability classrooms?
2. Will Direct Instruction improve the academic scores of students mainly low achievers?

Students and teachers will benefit from this research. The teachers benefit from this as it eases the instructions for them as well as it aids them in improving their teaching methods as well as implementation of strategies that focus on improving student's learning by ensuring effective results in academic achievement.
2. Literature Review

2.1 Differentiated Instruction

When it comes to learning and education, all students are not alike. Though all students learn, they still differ in their background knowledge, learning styles, learning abilities, motivation level and interests, pace of learning, and even proficiency of language. The end, they are humans that have important differences and variances. But this does not mean that they do not share some similarity between them in terms of size, personality, hobbies, or even likeness.

However, in a classroom where differentiated instruction is implemented, such similarities are built upon and student's differences become the most important factor that must be targeted in teaching and learning process. The differentiation is defined as, "Differentiation refers to a wide variety of teaching techniques and lesson adaptations that educators use to instruct a diverse group of students, with diverse learning needs, in the same course, classroom, or learning environment." (The Glossary of education reform, 2013). Therefore, at its most basic level, the phenomenon "differentiated instruction" seems mostly to address such variances among students by shaking up what goes in the classroom so that pupils have numerous options to acquire knowledge and information in terms of content, process, and product so that students can learn effectively. In other words, students have multiple avenues for taking information, processing it, and even manifesting what they learn. Also, such pupils tend to be more effective when pushed to learn in challenging environments that fit their diverse needs and learning styles.

In terms of differentiating content, when providing students with different avenues to learning to acquire content as well as adapting what we teach to their unique needs especially according to their learning style, this will enable them to be more creative and evince their uniqueness. Furthermore, Tomlinson (1999) stated that "In differentiated classroom, teachers begin where students are, not the front of the curriculum guide" (p. 2). By recognizing that students are individuals and humans that have different diverse needs, teachers in differentiated instruction classroom tends to take this issue into consideration by acting on the premise that they should be ready to involve students in instruction through different learning approaches, and respond to their wide range of interests and needs and use different rates of instruction along with different levels of complexity and backing systems. In this way, they'll be able to meet students where they are and ensure a substantial growth in them. (Tomlinson, 1999). Therefore, differentiated instruction is an organized, flexible way of proactively planning a variety of ways by teachers who needs to work with students and should be robust enough to address the varied range of learner's needs in order to help them have a positive and effective learning experience. In addition, differentiated instruction is a qualitative attribute not a quantitative one which focuses mainly on the quantity and tends to be more effective for them. Moreover, it's a student-centered process that puts a priority reaching effective results in learning by engaging students and providing them challenging tasks that let them feel more interested in learning. (Tomlinson, 2001). Additionally, it was stated that "It is an organized, yet flexible way of proactively adjusting teaching and learning to meet students where they are and help all students achieve maximum growth as learners." Tomlinson (as cited in Adams and Pierce, 2004).

Though there are many distinctions for the definition of differentiated instruction, but there is an assent among this phenomenon that seems to achieve in high standards student's diverse needs.

2.2 Characteristics of Differentiated Instruction

Differentiated instruction is a cyclical phenomenon the learner's needs and interests (Strengths and Weaknesses) and thus responds by differentiating learning according to their diverse needs (content, process, and product) which will be discussed deeply in the following sections. However, such process is not needful unless you desire growth and prosperity for each of the students which require in turn a greater degree of fulfilment from the instructor the key of developing such attributes in their learners. Thus, the challenge to meet the diverse needs of every individual student was considered by one of the mentioned concerns above.

Teaching is an art and science. Therefore, the teacher should design a positive climate that will meet the needs of every individual learner and spent time to enhance and refine her teaching process according to student's abilities which makes from her the best teacher. According to the issues mentioned above which shed the light on the importance to respond to the student's unique needs that should be implemented by the ideal teachers, several characteristics and features drive the success of differentiated instruction:

1. Instruction is concept centered and principle driven.
2. Flexible grouping is used systematically and in an organized way.
3. Using time, space, and material flexibly>
4. Use assessment as a teaching tool to extend rather than merely measure instruction.
Instruction is concept centered and principle driven: The teachers focus on the necessary skills and information that students ought to learn. Such concepts and principles are the same for all students but what is adjusted is the level of complexity for the variety of learners in one classroom. Therefore, differentiated instruction is concept focused as it concentrates on key principles and ideas and understandings that empowers learning. Otherwise, given concepts in excess quantities is a losing process that results in what is called "memory loss".

Flexible grouping is used systematically and in an organized way: Using many patterns in grouping of students enables students to interact with each other in a more productive way. Sometimes they are grouped by readiness, or similar interest groups, or similar learning profiles, or even sometimes alone, sometimes in pairs. Such patterns in grouping or regrouping must be a dynamic process that's adjusted according to changes in content, project, and on-going assessments. (Hall, Strangman, and Meyer, n.d.).

Using time, space, and material flexibly: Teachers arrange their classrooms using time flexibly. A flexible use of time allows lessons to finish in a natural length of time rather than being run out in block sets of time (Pierce & Adams, 2004). On the other hand, spacing requires arraying desks in different configurations to ease the process of group work, as well as the whole class grouping.

Students are active and responsible explorers: Instructors use materials and tasks that are interesting, engaging, and pertinent. Such learners in differentiated classrooms seek to find challenging tasks that are motivating for such diverse learners. In such cases, students' responsibility rises as they will be responsible of their own growth.

Use assessment as a teaching tool to extend rather than merely measure instruction: in differentiated instruction, assessment takes place before the unit begins to assess students' level of readiness, interests, and learning profiles by determining the specific needs of individuals in set of ways. Also, teachers merge and incorporates ongoing assessments that helps them design or adjust learning experiences including choices, approaches, and scaffolds based on the needs and interests that appears in a mixed ability classroom. Moreover, using final assessments which occurs at the end of the unit is also important which enable the teacher to successfully record what the learners had learned in form of content.

However, the literature reveals that such characteristics and strategies have limitations and cannot be productive unless applied in challenging classrooms (Oakes, 1992; Wheelock, 2005).

2.3 What can Teachers Differentiate

In differentiated instruction, the teacher modifies content, process, and product. Otherwise, this phenomenon won’t be achieved.

2.3.1 Differentiate Content

Content means the knowledge, understanding, and skills (KUD) that students need to learn (Tomlinson and Imbeau, 2010). However, the teacher should teach the same concepts or skills to the students, but she must use different methods to access each individual learner. "What teachers can differentiate in terms of content is the "methods that students use to access content". (Tomlinson and Imbeau, 2010, p.15). This means that the only difference is the curriculum which is different for different learners. Therefore, the word concept is identical to the input of teaching.

Moreover, instructors use different strategies to differentiate content and ensure that student's characteristics or needs are achieved. Such strategies involve scaffolding, curriculum compacting, learning contracts, using varied texts and resource materials, and content. But such strategies should be implemented according to student's readiness, interest, and learning profile.

2.3.2 Scaffolding

Scaffolding is an instructional strategy that can be used to modify content. If the pupil encountered stiffness in acquiring or mastering a new skill or concept, the instructor can scaffold instruction by using the task analysis. Also, if a student has any difficulty in reading or analysing a comprehensive text, the teacher uses strategies to assist student in grasping the content. For example, she can the “Know, Want to Know, Learned” chart before and during reading process; she also uses graphic organizers like story maps or mental imagery like role play and finally after reading ask student to summarize or retell the paragraph with a partner. Such process can be followed by the teachers mostly for struggling students to aid and help them in mastering the target skills (The IRIS Center, 2018).

2.3.3 Curriculum Compacting

Curriculum compacting is a strategy used in differentiated instruction by which instructors adjust curriculum for students who have already mastered it and use learning activities that are more challenging and interesting (Reis,
et al., 1998). Therefore, this technique is used for advanced students in order to help them increase or maximize their growth and ensure productive use of time for learning. (Reis & Renzulli, 1992).

The compacting process involves several steps:

1. Teacher sets the objectives and the outcomes of a certain unit.
2. Indicate the students who have mastery of some of the goals being set.
3. Pretest students on certain skills and understandings based on objectives being set before instruction.
4. Those who have showed mastery of the skills are subject to more challenging tasks to maximize use of time for learning.
5. The teacher develops a plan for students who didn't master some of the skills.
6. Using enrichment or acceleration options for learners who showed mastery of the objectives being set.
7. Keeping records while compacting students. (Reis et al., 1992).

2.3.4 Differentiating Process

Tomlinson (2001) stated that process is the way the learners process or understand the concepts or skills being introduced. So, when teachers differentiate process, it permits students to deliver the same output or product in various ways. (Watts-Taffe et al., 2012). This means that the teacher should offer and vary the activities that students employ to master and explore the content. Also, the teacher should take into consideration that the process or sense making should be differentiated to students according to readiness, interest, and learning profile. The effective differentiation is the one that caters for student's learning style such as visual, kinaesthetic or auditory and conveying or delivering the material for students according to their preferred style (Tomlinson as cited in Weselby, 2014).

In addition, "Differentiated process is all about practice based on content" (ASCD, 2011, p.2). Therefore, students will work on different activities that ought to be sense making by encouraging flexible grouping of students that requires many patterns in grouping where students may favour to work on activities alone, or in pairs, or in group. (Chamberlin and Powers, 2010). Also, some educators had a debate on this issue is that they argue that flexible grouping may encompass students with same learning style and preferred way of learning qualities: and sometimes with different learning styles and learning profiles. (Santangelo and Tomlinson, 2012; Chamberlin and Powers, 2010).

2.3.5 Differentiate Product

When differentiating products, the instructors follow the same principles (skills or concepts) for each student at the end of the unit of study, however, they give their students multiple ways to let them express their knowledge or mastery of content (IRIS, 2018). Such ways include written tests, and product assignments like project. Also, some teachers may blend written tests with product assignments to enable students to have the maximum chance to express their mastery of content or knowledge. Such product assignments are performance oriented and should be achievable goal for a long – ranged time which means that students (Santangelo and Tomlinson, 2012). This means that it eases the ability for pupils to think, stratify, and explain or express what they acquired during a wide range of time.

2.4 Learner's Academic Achievement and Ability

Academic achievement is academic performance, it is the achievement results that shows the extent to which teachers or students had achieved or carried out their targets in education or goals upon concentrating on certain activities in an instructive climate (Steinmayret al., 2017). In other words, academic achievement is the student's achievement in school and the extent he has accomplished and mastered certain skill or principles which is often known as procedural knowledge. It can be referred to as declarative knowledge by how much knowledge and information the student has attained about certain contents or the subject or the curriculum in an educational system (" Academic Achievement," n.d.). Therefore, such performance is measured by calculating how much knowledge or skills acquired by the pupils in an educational curriculum which is the indicator used to measure academic achievement. Also, it is based on grading techniques in schools that is related to student's score where grades and Grade Point Average are mostly common measures of student's academic achievement in schools.

However, the academic success or academic achievement emanates from learning because without the latter, there is no success and it is attained mainly through encouraging successful and positive climates in classrooms (Tinto and Pusser, 2006). Therefore, educators or researchers correlated the success in attaining specific outcomes in an educational system to a positive classroom environment.
It is been said that achievement means an improvement in what the students have acquired in school. This definition is linked directly to an advancement in the students' knowledge which is relative from where they started to where they achieved their full potential. Thus, achievement is not based on fixed grades (Education Evolving, 2016). Therefore, instructors should be responsive to students needs and support them in areas they are struggling in, and advance them to attain mastery in zones they are proficient in. So, this means that as students achieve their full potential in knowledge, their academic achievement will increase.

Therefore, the identification of student's achievement has been problematic to some researchers. However, Reis and McCoach (2000) stated that there are two measures of achievement: standardized tests and performance in classrooms that is shown by grades or scores attained by the students. Also, an achievement test which assesses or is a measure of to what extent the student has acquired highly developed skill or knowledge, and which is applied directly after a period of instruction. It is been stated that such tests are not strong indicators or measure of pupil's classroom performance though they are widely used by teachers as a method to assess and rectify the student. Though the researcher is intending to use the achievement test as an instrument to evaluate the student's academic achievement by classroom grades before and after implementing differentiated instruction.

In addition to what is mentioned above, Darling-Hammond (1999) stated that the instructor's level or scale of concepts or pedagogical knowledge he owns affects directly the student's achievement. So, the qualifications that teachers have impact the student's level of achievement. Also, student's classmates have an influence on student's performance or achievement that can be referred as a factor called "peer effect." (Todd, 2012). According to Clasen & Clasen (1995), they considered that peer influence is the most important factor that is hindering the student's level of achievement.

Therefore, according to what is mentioned above, the research aims to show whether growth in student's abilities that is enhanced by differentiated instruction will increase the academic achievement of such peers which will be evidenced by using achievement tests as an instrument.

2.5 Mixed Ability

Mixed ability or "heterogeneous" classes consist of students of different levels of skilfulness or proficiency. Such terms are deceptive as homogenous classes can't occur and there aren't two students who are similar (Ur, 1991). So, in classes of mixed ability, students might differ in many ways. They might react to teaching techniques and instructions taught differently. Also, they have varied or different strengths and weaknesses. So, such factors include only in mixed ability classes. Thus, there are no classrooms that have 2 students similar in everything. In addition, mixed ability classes are found in every school where students come from diverse backgrounds and have different background knowledge or skills which confirms what is mentioned above that students are not similar. According to Fisher (2001), "All children are born with potential and we cannot be sure of the learning limits of any child." (p.1) So, for peers to accomplish their full potential, teachers should enable them to work according to their efforts by guiding them to the right track. So, learning obstacles might be eliminated by guiding and helping them to develop their abilities.

Ainslie (1994) states that the term mixed ability corresponds to the variations or distinctions between students in different fields. So, teachers face a challenge to respond to the needs of every individual in the classroom. The different areas that are part of the term mixed ability are age or maturity, educational backgrounds, learning style, external pressure, linguistic ability, external pressure, and time available of study. Such fields are summarized by Ainslie.

In addition to what is mentioned above, teachers should know that a mixed ability classroom has students with different levels of proficiency and have various strengths and weaknesses. Also, it consists of different abilities, learning styles, and learning profiles. (Ireson and Hallam, 2001) So, the teacher has to respond to the needs of students according to their abilities, learning styles, and preferences in mixed ability classrooms in order for those peers to develop and exhibit their full potential.

2.6 Student's Achievement Levels

As the literature has shown or demonstrated, students differ greatly in mixed ability classrooms according to their learning styles mainly. The literature showed also that such discrepancies affect the level of achievement of students academically. However, there are 2 main levels of student's achievement: low achievers and high achievers. Thus, student's achievement measures how much student masters or learns academic content in a fixed amount of time.
2.7 High Achievers

In schools, high achievers are those that attain high marks. Also, they do the work or task demanded from them in a proficient way. They are very organized and behave well in classroom and share effectively in classroom instruction or discussion. As noted by researchers and educators who described students whose academic achievement is high as gifted learners, creative learners, advanced learners or high achievers. However, there are differences between these terms especially between high achievers, gifted learners, and creative thinkers. Studies by educators and researchers differentiated them in an attempt to enable teachers to understand the needs of their peers better.

Advanced learners or high achievers are in need to advance their abilities and skills. Therefore, teachers must assist them in this case. Therefore, such teachers should work on promoting their growth with tasks that fit them and are challenging at the same time. Otherwise, learners might lose interest during the educational process and tends to achieve less. The effect will be a failure in developing or achieving their full potential. (Tomlinson, 2001) Such issues revealed above are evidenced by other important researchers or educators.

In contrast to what is mentioned above, high achievers tend to exhibit the following important traits:

1. Concentrate on outcomes or results: it is often referred to or directly proportional to pragmatism that focuses mainly on success. So, people who are effective and prosperous tend to focus mainly on outcomes rather than processes.
2. See opportunities instead of threat: such high achieving students or successful peers view or see assigned tasks as challenging while less achieving students view them as threats not opportunities.
3. Remember the answers: some researcher's differentiated high achievers from those creative thinkers and gifted learners as their ability to remember the answers quickly.
4. High levels of communication: high achievers have knowledge about the principles of communication, and they know how to apply them. They are proficient communicators who express their ideas in many ways including verbal, nonverbal and written communication. (Lecker as cited in Oechsli, 2005).
5. Generate advanced ideas and absorb information quickly: It is normally known that high achievers tend to achieve at the maximum or top of their group. Also, they learn and grasp the information with easiness. They offer great ideas that are highly advanced and are hard workers. (Wilcox, 2013).

Finally, teachers should coach for growth of such advanced learners by preserving the traits they own in order not for them to lose such traits in their failure of achieving their full potential. Therefore, the researcher attempts to implement differentiated instruction which maximizes student's capacity.

2.7.1 Low Achievers

Low achievers are referred in most researches as "underachievers" or " slow learners". Underachievement is the difference between the pupil's academic capability and his real performance in school. (Reis & Mc Coach, 2000) Therefore, the underachiever is the person who doesn't succeed in arriving to the expected level of performance or doesn't perform as expected. (Dictionary- Merriam-Webster, 1828)

Mixed ability classes are worrying for some teachers and educators as well due to the presence of slow learners or low achievers in such classes. However, Kelly (1974) stated that debates or arguments are founded on the urgent requirement to put such slow learners in separate groups in order to take care of such student's needs and provide them. He then inferred that such type of students let teachers get trapped in the problems in mixed ability classes.

Researches about underachievement revealed that students have negative self-perception about their academic potentialities, less motivation or strength to complete a certain task, and tend to exhibit negative attitudes towards school. Therefore, showing negative attitudes towards school from students is directly linked to less academic self-perception, and lower self-motivation which is one of the aspects of underachievement (Mandel & Marcus, 1988). Thus, tasks should be suitable to every student according to skills they have mastered, or less achievement will occur, and learning won't take place. (Howard, 1994; Vygotsky,1962)

To sum up, underachievers or low achievers tend to exhibit negative attitudes towards schools while high achievers tend to show positive stands towards schools.

2.8 Related Studies

Boges (2015) did a study which is quantitative and experimental in design. It used the pre-post non-equivalent tests as instruments to determine if there was a significant difference in reading comprehension scores between low achievers or struggling students who received direct instruction and students who didn't receive direct
instruction and instructed or guided with strategy of whole class. The theoretical part of this research encompassed philosophical theories regarding cognitive constructivism. Using the 1 ways of ANOVA, there was not a big difference in the post mean scores of the 2 groups. Also, though the standard deviation was high, it shows that the student's learning was not linked to teaching methods but to not investigate intra-individual variations. So, the urgent need was to respond to the needs of learners in classrooms nowadays in order to minimize the achievement gap that exists between struggling readers and skilled readers which will enable social change. The results and recommendations for this study will give educators information about the methods to rectify struggling readers. In such a way, there will be enough rise in number of pupils who are ready to compete in a global community. So, to remediate or rectify struggling readers, an effective instructional strategy must be used.

Little C. A., McCoach D. B. and Reis S. M. (2014) studied the effect of differentiated reading instruction on students’ achievement in middle school. In general, reading instruction does not focus on responding to the needs and interests of advanced learners. This study was done in 4 middle schools with a sample of 2150 pupils and 47 instructors. The design of this study is multi-site cluster-randomized. The instruments used are pre- and post-test data were gathered on comprehension and reading volubility. To examine the influence of the intervention, which is mainly differentiated instruction, the hierarchical linear modelling was used as a step or procedure. As a total, the results demonstrated identical results for treatment and control group. But the treatment performed better than control in 2 of the middle schools in reading fluency. Also, results revealed that the intervention brought higher scores for fluency but identical scores for comprehension. So, the main purpose of this experimental study was to investigate the influence of instructional methods including differentiation, supported and autonomous reading along with the removal of regular reading on student's achievement.

Stavroula, V., Leonidas, K. & Mary, K. (2011) investigated the implementation of differentiated instruction in reading along with the removal of regular reading on student's achievement. Higher scores for fluency but identical scores for comprehension. So, the main purpose of this experimental study was to determine the influence of differentiated instruction on learning vocabulary in mixed ability classes. This paper is experimental and controlled in design and a total of 479 Cypriot pupils from 24 elementary schools were used as a sample. There were two groups: the control group which didn't receive differentiated instruction and the experimental group which received differentiated instruction. The results of the 2 groups were grouped by multilevel regression. The researcher in this paper has an aim to examine the difference or variations in achievement between the controlled and experimental group and other influences that might impact the student's achievement in mixed ability classes. The research results gave substantial proof over the quality and equity dimensions of education effectiveness as the research question revolved around determining the impact of differentiated instruction on pupil's achievement in mixed ability classes. The dimensions mentioned above are made up of primary dilemmas for differentiated instruction in mixed ability classes. According to the results arrived to, the main objective of this article is to determine to what extent the implementation of differentiated instruction can foster equity and quality for all students in such kind of classes.

Alavinia, P., & Farhady, S. (2012) made a study based on multiple intelligences and learning style. Its purpose was to determine the influence of differentiated instruction on learning vocabulary in mixed ability classes. This study was done in the Iran Language Institute where 80 female students were taken as a sample in the intermediate level. The homogenous grouping technique was adopted in this research and about 60 female learners enjoyed the methods used in differentiation. According to this, the study is split into 2 groups (each group 30 members). The instrument used was the pre-test vocabulary achievement test and based on the questionnaires that was formed of multiple intelligences and learning styles, pupils were split into two different groups. The 1st category was experimental and received differentiated instruction based on the mentioned variables above, and the second category was taught using traditional instruction. After administering the post-test, the results were interpreted through the usage of independent t - sample test and ANOVA. The results showed that there is a significant difference between the achievement of the 2 groups and the experimental group performed better.

Pajalić, N. (2015) studied the differentiated instruction in mixed-ability EFL classrooms in Croatia. The purpose of this study was to determine the attitudes of teachers in Croatia towards the implementation of differentiated instruction in EFL classrooms. The instrument used was an online questionnaire. There was an investigation done on the entrants of this study to see how much repeatedly participants did specific differentiated activities while teaching such heterogeneous groups the English language, as well as the affronts and challenges they confronted when applying differentiated instruction and using it, and their opinions on the approaches that have been using in classroom, and the circumstances that caused a mixed ability classroom. The results showed that there is a gap between the instructor's understanding of this phenomenon at the theoretical level and practical level in EFL classroom. The researcher noted that teachers were aware of student's differences and mainly weaker student. Also, the findings showed that entrants of this study have a negative attitude towards mixed ability classes, as they think
it has a negative impact on teaching. They believe also that receiving high quality training will enable them to solve the above-mentioned gap and transform theory into action in EFL classroom. Aliakbari, M (2014) investigated the Impact of Differentiated Instruction Strategies and Traditional-Based Instruction on the Reading Comprehension of Iranian EFL Students. The purpose of this study was to explore the effectiveness of differentiated instruction and traditional instruction on promoting the Iranian's reading comprehension. The sample was based on 8 elementary, intermediate and advanced classrooms from 1 language institute. According to the results of the pre-test students were divided into two categories. The study is divided into 4 in the treatment group and 4 in the control group. Tiered assignments, flexible grouping was used as methods to differentiate the content, process, and product. The findings revealed according to the post-achievement test that differentiated instruction was effective in promoting student's reading comprehension only in intermediate and elementary levels, but no development was recognized in the advanced level as a performance.

3. Method

3.1 Research Design

This research incorporated the quantitative-experimental design. It was chosen because the researcher's aim was to describe, explain, verify, and evaluate the impact of differentiated instruction on academic achievement in English of low-achievers, high-achievers in mixed ability classrooms of Grade 4 in a private school in optimally experimental conditions where no need for controlled condition is to be included in the study as the researcher has already taught the class without differentiated instruction which is controlled condition. So, no need for it to be mentioned in the research. Also, this study attempts to examine the academic achievement of students mainly: low achievers and high achievers in a specific period which is around 10 days to check whether they demonstrate significant improvement. In addition, experimental condition was applied to test the effectiveness of differentiated instruction as the present study design. In brief, the purpose of collecting data is to conduct an appropriate research. The data must be collected in an organized way and research must be conducted to describe, explain or interpret, and evaluate or verify the mentioned purposes above.

3.2 Participants

Population includes 1 intact class in a school in Tyre region in Lebanon. The research was conducted in Tyre Community School. Representative sample is a small portion of people that may be customers, employees, students etc. In addition, it may be a product, data, or material whose characteristics represent the entire amount (BusinessDictionary.com, 2014).

The sample comprised 20 pupils in a class of 26 students, mainly 4 girls and 16 boys, 4th grade students of the above indicated school in Tyre region. So, the experimental group has 26 students. This experimental study was conducted on a sample of 10 low achievers and 10 high achievers.

3.2.1 Intervention

The teaching intervention that was employed in the implementation of differentiated instruction was the flexible grouping approach where the students were divided into four heterogeneous groups in the English period and each group consisted of low achievers and high achievers in order for the high achievers to support the low achievers during the differentiated activity. However, each group consisted of 6 or 7 students and they were grouped according to their abilities in a class consisting of 26 students. This grammar lesson (simple past) was differentiated in terms of content and process. The main objective was that the students know the form of regular or irregular simple past. The lesson starts with a brief undifferentiated lesson plan as an introduction to the simple past (its definition). The teacher explained the rules and principles of the regular or irregular simple past. Then, she assesses their understanding by dividing them into 4 groups done in heterogeneous way. The teacher renames the groups A, B, C, D. Based on their interests, group A preferred to use exit cards, group B preferred audio instruction, group C exit cards and group D crossword puzzles. The groups A and C were given cards containing simple verbs and they were asked to change them into the simple past using the suitable regular or irregular form. Group B were required to listen to an audio small paragraph where they are required to pick the simple verbs and change them into the simple past by writing them on a sheet of paper. Group D were given a crossword puzzle where they were required to find the words written on the cards in the puzzle and then change them into the simple past by writing the suitable form next to each card. The instruction is given for the 4 groups where the high achievers are expected to support the low achievers and the teacher follows up and checks the 4 group's work which required her effort and more time. After the groups are given the time to finish the selected tasks, discussions are made for each activity for the 4 groups to check the students 'understanding. After finishing the desired tasks, the teacher assigned
the product with common elements and student's options where some of them chose to write a paragraph that contains a simple past. Others chose to fill a graphic organizer about the main points and ideas of the lesson. Others chose to draw pictures about what they did during the weekend in a way showing how the simple past applies to the daily life. After using differentiation for the content, process, and product, students did a post-test including differentiated questions about the covered objectives in this lesson simple past. However, this lesson took somehow 10 days to be finished as between pre-test implementation and post-test.

3.3 Instruments

The researcher used the achievement test as an instrument to gauge the student's performance before and after implanting differentiated instruction. So, two tools were used was to collect data for this study: the pre-test and post-test. The researcher used two versions of the pre-test. The 1st version for the low achievers and the 2nd version for the high achievers were used. Also, after implementing differentiated instruction, the researcher intended to make a post-test using 2 version also (1st version for low achievers and 2nd version for high achievers) in order to determine from the results of the test or not whether differentiated instruction revealed an increase in the academic achievement of students, Mainly of low achievers.

4. Results

4.1 Data Analysis Method

The research intends to compare the academic performance of students (mainly low achievers and high achievers) in English language before and after implementing differentiated instruction. Then the researcher made 4 sampled tests (2 pre-tests and 2 post-tests) in order to evaluate the academic achievement of students after implementing differentiated instruction in a mixed ability classroom. Then, the researcher used SPSS in order to analyse the data being collected from the 4 sampled tests.

Table 1. Scores of Low and High Achievers in pre and post tests

<table>
<thead>
<tr>
<th>Student's ID</th>
<th>Pre-test Low</th>
<th>Post-test Low</th>
<th>Difference Low</th>
<th>ID-High</th>
<th>Pre-test High</th>
<th>Post-test High</th>
<th>Difference-High</th>
</tr>
</thead>
<tbody>
<tr>
<td>1002</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td>1001</td>
<td>8</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>1005</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>1007</td>
<td>9</td>
<td>9.5</td>
<td>0.5</td>
</tr>
<tr>
<td>1006</td>
<td>4</td>
<td>7.5</td>
<td>3.5</td>
<td>1008</td>
<td>9</td>
<td>9.5</td>
<td>0.5</td>
</tr>
<tr>
<td>1013</td>
<td>3</td>
<td>6</td>
<td>3</td>
<td>1010</td>
<td>9</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>1014</td>
<td>4</td>
<td>8.5</td>
<td>4.5</td>
<td>1011</td>
<td>8</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>1016</td>
<td>2</td>
<td>3.5</td>
<td>1.5</td>
<td>1012</td>
<td>10</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>1019</td>
<td>1</td>
<td>0</td>
<td>-1</td>
<td>1018</td>
<td>10</td>
<td>9.5</td>
<td>-0.5</td>
</tr>
<tr>
<td>1021</td>
<td>3</td>
<td>9</td>
<td>6</td>
<td>1023</td>
<td>10</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>1026</td>
<td>3</td>
<td>6.5</td>
<td>3.5</td>
<td>1024</td>
<td>8</td>
<td>8.5</td>
<td>0.5</td>
</tr>
<tr>
<td>1027</td>
<td>4</td>
<td>6</td>
<td>2</td>
<td>1025</td>
<td>8</td>
<td>10</td>
<td>2</td>
</tr>
</tbody>
</table>

The table above represents the student's ID for low achievers and high achievers along with scores of high achievers and low achievers in both pre-test and post-test assessment in English language.

4.2 t-test (Low Achievers)

The 3 tables below show the results of the pre-test and post-test for low achievers by using the paired sample test in order to compare the academic achievement of low achievers before and after using the differentiated process using two types of tests.

Table 2. t-test - Paired Samples Statistics

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Posttest Low</td>
<td>5.6000</td>
<td>10</td>
<td>2.65414</td>
<td>.83931</td>
</tr>
<tr>
<td>Pretest Low</td>
<td>2.8000</td>
<td>10</td>
<td>1.13529</td>
<td>.35901</td>
</tr>
</tbody>
</table>
Table 3. Paired Samples Correlations

<table>
<thead>
<tr>
<th>Pair 1</th>
<th>N</th>
<th>Correlation</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Posttest Low&amp;Pretest Low</td>
<td>10</td>
<td>.800</td>
<td>.005</td>
</tr>
</tbody>
</table>

This table shows the paired samples correlation between the pre-test and post-test for low achievers. The correlation coefficient is equal to 0.800 meaning that there is a strong positive correlation between the two mentioned variables which means that the pairing is effective.

Table 4. Paired Sample Test

<table>
<thead>
<tr>
<th>Paired Differences</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1 Posttest Low–Pretest Low</td>
<td>2.80000</td>
<td>1.87380</td>
<td>.59255</td>
<td>1.45957</td>
</tr>
</tbody>
</table>

Table 5. Paired Samples Test

<table>
<thead>
<tr>
<th>Paired Differences</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1 Posttest Low - Pretest Low</td>
<td>4.14043</td>
<td>4.725</td>
<td>.001</td>
</tr>
</tbody>
</table>

The paired test compares the mean difference of the values to zero which depends mostly on the mean difference. Hypothesis:

H0: There is no difference in mean pre-and post-marks.

H1: There is a difference in mean pre- and post-marks.

The relevant results for the paired test are in bold for low achievers and assigned a p value of 0.001 (sig 2 tailed value), and the t: 4.725, it is a very small probability of this result occurring by chance, under the null hypothesis of no difference., the null hypothesis is rejected since the p value is less than the correlation coefficient (alpha 0.005). So, there is a strong evidence that (t: 4.725, p: 0.001) the teaching intervention which is differentiated instruction improved the academic achievement of low achievers mainly their marks or scores on post-tests. Concerning the results of the paired test for both tests, it improved their mark, on average, by approximately 3 points (mean for both tests: 2.8, extracted from table 3 which is the mean paired difference). In addition, by looking at the confidence interval (95%), the true population means lies between 1.45957 & 4.14043. This proves that the difference in marks is statistically significant and practically important. This means that there is a significant difference between the academic achievement of low achievers in the pre-test and post-test after adopting differentiated instruction. Also, the mean number of scores for low achievers in post-test: 5.6 is greater than the mean number of scores in pre-test which is 2.8., so it is concluded that the low achievers were able to significantly achieve or perform much better in post-test than pre-test after implementing the teaching intervention.

4.3 t-test (High Achievers)

The three tables below show the results of the pre-test and post-test for high achievers using the paired samples t test in order to gauge the academic performance of high achievers before and after applying the teaching intervention.

Table 6. Paired Samples Statistics

<table>
<thead>
<tr>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Posttest High</td>
<td>9.5000</td>
<td>10</td>
<td>.52705</td>
</tr>
<tr>
<td>Pretest High</td>
<td>8.9000</td>
<td>10</td>
<td>.87560</td>
</tr>
</tbody>
</table>

Table 7. Paired Samples Correlations
Table 8. Paired Samples Test

<table>
<thead>
<tr>
<th>Paired Differences</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>95% Confidence Interval of the Difference</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>Posttest High &amp; Pretest High</td>
<td>.60000</td>
<td>.69921</td>
<td>.22111</td>
<td>.09982</td>
<td></td>
</tr>
</tbody>
</table>

Table 9. Paired Sample test

<table>
<thead>
<tr>
<th>Paired Differences</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>95% Confidence Interval of the Difference</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>Posttest High - Pretest High</td>
<td>1.10018</td>
<td>2.714</td>
<td>.024</td>
<td></td>
</tr>
</tbody>
</table>

The paired sample test for the pre, post-test high achievers reveals a Sig (2 tailed value) value of 0.024 (p value) which is greater than the correlation coefficient (0.005) at 95% confidence interval which implies that there is no statistically significant difference between the 2 conditions (pre-test and post-test) among high achievers. In other words, there is no statistically significant difference between the mean scores for pre-test and post-test conditions. To prove that, in the first table (paired samples statistics), the mean number of scores for high achievers in post-test is not that much greater than that of the pre-test (8.9) as the numbers are very close to each other which validates that result attained above. So, the high achievers did approximately the same in both pre- and post-tests. So, this teaching intervention which is differentiated instruction did not improve that much the marks of high achievers, as it improved their marks on average only by 0.6 points which is a very low number. It is the mean paired difference between the tests. Also, by taking a look at the confidence interval, it is being noticed notice that the true population mean lies between 1.10018 and 2.714, which means that the difference in marks is not statistically significant. 

To sum up, the above results showed that differentiated instruction as a teaching intervention has more impact on the academic achievement of low achievers than the high achievers. So, this conclusion failed to answer the question (hypothesis) adopted in the 1st chapter (Does differentiated instruction impacts the academic achievement of students in mixed ability classroom). So, the researcher, by collecting the data and interpreting it, noticed that differentiated instruction impact more on low achievers in mixed ability classrooms.
This table gives the results for the measures of central tendencies (mean, median, mode, standard deviation, and variance) in the pre-test exam for low achievers. The researcher already made an analysis for the average or mean in the above paired sample t-test tables.

Table 11. Pre-test

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00</td>
<td>2</td>
<td>20.0</td>
<td>20.0</td>
</tr>
<tr>
<td>2.00</td>
<td>1</td>
<td>10.0</td>
<td>30.0</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>40.0</td>
<td>70.0</td>
</tr>
<tr>
<td>3.00</td>
<td>4</td>
<td>40.0</td>
<td>100.0</td>
</tr>
<tr>
<td>4.00</td>
<td>3</td>
<td>30.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The table above shows the frequency and percentage of students who got a score between 1 and 4 on the pre-test. However, the portion of these students is low achievers. So, the first column represents the scores attained by low achiever students on pre-test exam. The frequency column shows how many low achiever students had taken a specific score from the first column and the third column shows the percentage of low achiever students who had taken a specific score. From the table above, it is concluded that most low achiever students had taken a score of 3 (which forms a percentage of 40%) or a score of 4 (30%) in the pre-test exam.

Table 12. Frequencies post-test for low achievers

<table>
<thead>
<tr>
<th>N</th>
<th>Valid</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Missing</td>
<td>0</td>
</tr>
<tr>
<td>Mean</td>
<td>5.6000</td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>6.0000</td>
<td></td>
</tr>
<tr>
<td>Mode</td>
<td>6.00</td>
<td></td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>2.65414</td>
<td></td>
</tr>
<tr>
<td>Variance</td>
<td>7.044</td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>9.00</td>
<td></td>
</tr>
</tbody>
</table>

This table gives the results for the measure of central tendencies (mean, median, mode, variance, standard deviation) in the post-test exam for low achievers.

Table 13. Post-test Low

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>.00</td>
<td>1</td>
<td>10.0</td>
<td>10.0</td>
</tr>
<tr>
<td>3.50</td>
<td>1</td>
<td>10.0</td>
<td>20.0</td>
</tr>
<tr>
<td>4.00</td>
<td>1</td>
<td>10.0</td>
<td>30.0</td>
</tr>
<tr>
<td>5.00</td>
<td>1</td>
<td>10.0</td>
<td>40.0</td>
</tr>
<tr>
<td>6.00</td>
<td>2</td>
<td>20.0</td>
<td>60.0</td>
</tr>
<tr>
<td>6.50</td>
<td>1</td>
<td>10.0</td>
<td>70.0</td>
</tr>
<tr>
<td>7.50</td>
<td>1</td>
<td>10.0</td>
<td>80.0</td>
</tr>
<tr>
<td>8.50</td>
<td>1</td>
<td>10.0</td>
<td>90.0</td>
</tr>
<tr>
<td>9.00</td>
<td>1</td>
<td>10.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The table above shows the frequency and percentage of low achiever students who got a specific score in the post-test exam. From this table, it is noticed that most of the low achiever students took a score above 6 (6.50, 7.50, 8, 50, 9 respectively).

By comparing the frequency and percentage of the low achievers who got a specific score between pre and post-test exam, it is noticed that differentiated instruction as a teaching intervention influenced the academic
achievement of low achievers in the post exam mainly. To prove that, before implementing differentiated instruction, most of the low achievers who did the pre-test exam got a failing score of 3 or 4 in it, but in fact, after applying this teaching intervention, the marks of the low achiever students improved positively to reach 9 in the post test.

Table 14. Frequencies Pretest for High achievers

<table>
<thead>
<tr>
<th>N</th>
<th>Valid</th>
<th>Missing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>8.9000</td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>9.0000</td>
<td></td>
</tr>
<tr>
<td>Mode</td>
<td>8.00</td>
<td></td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>.87560</td>
<td></td>
</tr>
<tr>
<td>Variance</td>
<td>.767</td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>8.00</td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>10.00</td>
<td></td>
</tr>
</tbody>
</table>

The table above displays the results for the measures of central tendencies (mean, median, mode, standard deviation) in the pre-test for high achievers.

Table 15. Pretest High

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.00</td>
<td>4</td>
<td>40.0</td>
<td>40.0</td>
</tr>
<tr>
<td>9.00</td>
<td>3</td>
<td>30.0</td>
<td>70.0</td>
</tr>
<tr>
<td>10.00</td>
<td>3</td>
<td>30.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The table above shows the frequency and percentage of pre-test exam for high achievers. According to it, it seems that 4 students of the high achievers had taken a score of 8 in the pre-test exam done and 3 had taken a score of 9 or 10. From this inspection, it is indicated that most of the students had taken either a score of 8 (40%) or 9 or 10 respectively (30%).

Table 16. Frequencies Post-test for High Achievers

<table>
<thead>
<tr>
<th>N</th>
<th>Valid</th>
<th>Missing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>9.5000</td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>9.5000</td>
<td></td>
</tr>
<tr>
<td>Mode</td>
<td>10.00</td>
<td></td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>.52705</td>
<td></td>
</tr>
<tr>
<td>Variance</td>
<td>.278</td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>8.50</td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>10.00</td>
<td></td>
</tr>
</tbody>
</table>

This table displays the results for the measures of central tendency (mean, median, mode, standard deviation, variance) in the post-test exam for high achievers.

Table 17. Posttest High

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.50</td>
<td>1</td>
<td>10.0</td>
<td>10.0</td>
</tr>
<tr>
<td>9.00</td>
<td>2</td>
<td>20.0</td>
<td>30.0</td>
</tr>
<tr>
<td>9.50</td>
<td>3</td>
<td>30.0</td>
<td>60.0</td>
</tr>
</tbody>
</table>
The table above shows the frequency and percentage of post-test exam for high achievers. According to the frequency and percentage, it is concluded that most of the high achiever students had taken a score of 10 (40%) or 9.50 (30%) in the post-test exam. To prove this, the results showed that 3 students had taken 9.50/10 and 4 students had taken 10/10.

To sum up, by comparing the frequency, and percentage of high achievers who got a specific score in the pre-test and post-test exam, it is concluded that differentiated instruction did not impact the academic achievement of high achievers in this mixed ability classroom. As before applying differentiated instruction, most high achiever students got a score of 9 or 10 respectively in the pre-test exam. And after applying differentiated instruction, student's academic performance did not change as most of high achiever students attained a high score of 9.50 or 10 also.

In brief, this short analysis of the results attained using the paired sampled t test, the frequency, and the mean revealed that differentiated instruction ensured a great influence in the academic achievement of low achievers more than that of the high achievers as the low achiever's score improved from the pre-test to the post test after implementing this teaching intervention.

5. Discussion, Recommendation, and Conclusion

5.1 Discussion

This study was designed to examine the impact of differentiated instruction on academic achievement of students (low achievers and high achievers) in English language of a mixed ability classroom. The finding results demonstrate that there was an improvement in academic scores of low achiever students (academic performance) in English subject where the differentiated instruction process influenced them positively while this teaching intervention did not have a great influence on the academic achievement of high achiever students.

The following part supplies information about the research questions: How does the implementation of differentiated instruction impact the academic achievement of EFL low achievers and high achievers in mixed ability classrooms? Will Direct Instruction improve the academic scores of EFL students mainly low achievers? The academic scores improved after applying the teaching intervention in the experimental class, as expected for low achievers more than that of high achievers as it ensured a substantial growth in them. The low achiever scores improved to reach a high level after applying the teaching intervention, but those for high achievers, differentiated instruction did not have such a great influence due to the fact that such type of students’ performance is already high. This proves that direct instruction worked mostly for low achievers because such students were offered what they needed to succeed, they made a growth or increase in their academic achievement in comparison to their peers of advanced abilities.

So, the results attained match the original hypothesis or research question that direct question is an effective strategy that raise the academic scores for students mainly low achievers in a mixed ability classroom which contains pupils with different levels of proficiency. This means that this process has succeeded in catering to the needs of its students in such a classroom which encompasses different abilities mainly low achievers who benefited mostly from this teaching intervention as it appeared from the results being attained to. So, as a percentage the academic achievement of low achievers improved more from pre-test to post test in English language more than that of high achievers which means that it ensured a substantial change or growth in the EFL students of a mixed ability class. Also, differentiated instruction best achieves its results in a mixed ability class of different abilities. So, differentiated instruction was effective due to improved test scores in the post-test.

5.2 Conclusion

The purpose of this project was to investigate the influence of differentiated instruction on English language learners’ low achievers and high achievers in a mixed ability classroom. It was clear from the results being attained that EL learners’ low achievers do benefit from this teaching intervention as it improved their test scores which lead to an increase in their academic performance. It was clear also that flexible grouping as a teaching intervention was a successful strategy used to differentiate instruction and maximize the student's performance especially catering to the needs of low achievers whose test scores increased in a great way. In other words, it ensured academic growth in them due to the use of successful strategy as differentiated instruction. But regarding high achievers, it was concluded that their test scores did not change between pre-test and post-test after applying
differentiated instruction due to the fact that such type of students have a high academic performance. This study's findings suggest that when an instructor or teacher uses a successful strategy or teaching intervention, students mainly those struggling ones will progress academically and maybe socially in the future. Therefore, it was evident that differentiated instruction is an effective teaching strategy that addresses student's major ability levels.

5.3 Recommendations for the Future Research

The finding results revealed that differentiated instruction as a teaching intervention was an effective strategy in ensuring an academic growth in ELL low achievers and achievers. Based on the study and what have been mentioned, several recommendations can be made to teachers in order to insure a successful implementation of differentiated instruction in a mixed ability classroom. First, adopting more than one differentiated instruction activity by teachers might yield better achievement results. So, instructor should use multiple strategies in an English mixed ability classroom in order to push students towards achieving the best education that addresses their variable needs. However, a limitation must be considered here where the researcher was not able to use more than one differentiated activity due to the limited time. This, study yielded the desired results which was an increase in the student's academic achievement. So, implementing various differentiated activities by the researcher in the lesson will positively produce better achievement results for both low achievers and high achievers.

Another recommendation is that the teacher should know her English language learners and be familiar with their various needs that can make them more powerful, achieve to a certain extent, and thus improve their academic scores in post–tests but in a wider span of time. So, when the teacher is able to recognize her students, she can develop tasks and activities that is suitable for a mixed ability classroom that has students with diverse abilities. As Tomlinson (2001) recommends that students should be provided challenging tasks or activities designed with several multiple intelligences. Also, that tasks should be arranged and graduated in a way that students understand the task and apply it. In addition, the work must be balanced between task required by the teacher and tasks or activities selected by students in a way they are enabled to have their choices and preferences in the educational or learning process. In this way, students will be motivated and of course by retaining motivation, their academic scores in English would increase.

References


**Appendix A**

**Pre-Test: Low Achievers**

Change the blue words into the past tense: (10 pts)

1- I play football everyday.
   - playd
   - played
   - plays
   - playing

2- We start playing the game.
   - started
   - starts
   - starting
   - startd

3- They go to the park everyday.
   - went
   - goes
   - goed
   - going

4- She call her friend.
   - called
   - callid
   - calls
   - calling

5- stop becomes in the simple past:
   - stopped
   - stoped
   - stopd
• stopid

6- I do my homework.
• do
• did
• does
• doing

7- love becomes in the simple past:
• loved
• loves
• loved
• loving

8- cry is changed into the simple past by:
• adding ed
• adding ied
• adding d
• adding s

9- is becomes in the simple past:
• was
• were
• are
• am

10- I want a car.
• wanted
• wanted
• wantd
• is wanting

Appendix B

Pre-Test: High Achievers

1- Circle the correct answer using the appropriate past simple form of each verb: (10 pts)
1- Sam ________ more than 600 pieces of music:
• writed
• wrote
• was wrote
• writes

2- What ______ you ________ last weekend?
• were/do
• did/did
• did/do
• do/do

3- The film wasn't very good. I _________ it.
• enjoyed
• didn't enjoy
• didn't enjoyed
• wasn't enjoy
4-  The police ______________ me on my way home last night.
• was stop
• stopped
• stops
• stopping
5-  The window was open and a bird ___________ into the room.
• flew
• flied
• was flew
• did fly
6-  I ___________ a nice dress yesterday.
• buy
• was buy
• did bought
• bought
7-  I __________ my friend in the town yesterday.
• did see
• was saw
• did saw
• saw
8-  I __________ the door.
• opened
• openned
• opennd
• opend
9-  burry is changed into the simple past by:
• adding ied
• adding ed
10- Sam __________ to study for the exam.
• tried
• is trying
• tryd
• tried

Appendix C

Post-Test: Low Achievers
1-  March each verb to its suitable form                                      (3 pts)
  • love
  • walk                                     d
  • study                                     ed
  • decide                                    ied
2- Circle the correct answer with the verb that shows the action in the past: (2 pts)

- The boy (asks, asked) many questions.
- We (finished, finishes) our food.
- They (watch, watched) TV last night.
- Sam (talk, talked) with his friend all day.

3- Complete each sentence with the correct past tense form of the verb: (2 pts)

- My mom (look) ___________ at the flower.
- I (go) _____________ to the park yesterday.
- I (meet) ___________ nice people at the party yesterday.
- Mary (do) ___________ her homework correctly.
- Ali (gaze) ___________ across the field.

4- Complete the following question and negative sentence: (2 pts)

- Ali helped his friend in the garden.
  - Negative: Ali _________________ help his friend in the garden.
  - Question: _________ Ali ________ his friend in the garden?

- Ali ate cookies in the morning.
  - Negative: Ali _________________ cookies in the morning.
  - Question: _________ Ali _________ cookies in the morning?

5- Write a sentence using the past simple form of the verb: (0.5 pts)

__________________________________________________________________

Appendix D

Post-Test: High Achievers

1- Add ed, d, or ied to the following verbs to change them into the past tense: (1.5 pts)

- mop: ________________  
- listen: ________________  
- worry: ________________  
- love: ________________  
- clap: ________________  
- roll: ________________

2- Rewrite the present tense paragraph in the simple past: (2 pts)


________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

Complete the sentences using the past simple form of the verb in parenthesis: (2.5 pts)

- The man in the shop (say) ___________ something to the woman, but she (not, hear) him.
- I (ring) __________ the doorbell and a woman (open) __________ the door.
- I (write) __________ a letter to a friend, and then I (post) __________ it.
- Mary (do) __________ her homework and (go) __________ to school.
- My dad (catch) __________ a cold when he (be) __________ in Canada.
- She was cleaning the vase when she (drop) __________ it.

3- Complete the following question and negative sentences: (2 pts)
• Alexandra helped Anita with her homework.
Negative: _________________________________________________________________
Question: ________________________________________________________________
• Mom made breakfast early.
Negative: _________________________________________________________________
Question: ________________________________________________________________

4- Write a short paragraph about what you did the last weekend using the past simple form of the verb. (2 pts)

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