

Using Flipperentiated Instruction to Enhance Preparatory Stage Pupils' EFL Reading Comprehension Skills

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Abstract

The current study investigates the effectiveness of Flipperentiated instruction in enhancing preparatory stage pupils' EFL reading comprehension skills. A total of 150 preparatory stage pupils participated in the study. Participants were divided into two groups; control and experimental. The control group consisted of 30 pupils whereas the experimental one consisted of 120 pupils divided into four groups according to their strongest intelligence. Pre-post tests were administered to assess the participants' reading comprehension skills before and after intervention. A Flipperentiated instruction- based program was used with the experimental group whereas the control one received regular instruction. The results showed that participants of each of the four experimental groups outperformed those of the control group. Flipperentiated instruction proved to be effective in enhancing preparatory stage pupils' EFL reading comprehension skills.

Keywords: Flipperentiated instruction, EFL reading comprehension skills, preparatory stage pupils.

الملخص العربي

هدفت الدراسة الحالية للتحقق من فعالية التعليم المتمايز المعكوس في تحسين مهارات الفهم القرائي لدى تلاميذ المرحلة الاعدادية. اشتملت عينة الدراسة على 150 تلميذ بالصف الثاني الاعدادي مقسمة الى مجموعتين؛ تجريبية وضابطة. تكونت المجموعة الضابطة من 30 تلميذ بينما اشتملت المجموعة التجريبية على 120 تلميذ موزعين على اربع مجموعات وفقا للذكاءات القوية لديهم وذلك بعد تطبيق مقياس الذكاءات المتعددة. وقد خضعت المجموعتان لاختبار قبلي بعدي لتقييم مهارات الفهم القرائي لديهم قبل وبعد التجربة. تم استخدام برنامج قائم على التعليم المتمايز المعكوس مع المجموعة التجريبية بينما تلقت المجموعة الضابطة التدريس التقليدي. أظهرت النتائج تفوق المشاركين في الاربع مجموعات التجريبية بشكل دال احصائيا على المشاركين في المجموعة الضابطة.

1. Introduction

The process of reading aims at constructing meaning through dynamic instruction taking into consideration the reader's prior knowledge, the information suggested by the text, and the context of the reading situation (Klingner, Vaughn & Boardman, 2007 as cited in Furqon, 2013). Nature of learners must be considered when the individualistic view of reading is dealt with. Classrooms today are more diverse than ever, with a wide range of interests, levels of readiness, and learning styles. In addition to this breadth of academic diversity, there is a challenging aspect of cultural differences

that strongly influence learners' social and instructional identities. Teachers are encountered with unique needs of students which deeply affect their performance and achievement.

To meet such diverse differences, Flipperentiated instruction can be of great help. It is a combination of flipped learning and differentiated instruction. On one hand, differentiated instruction offers multiple approaches to deal with learners' needs (Smith & Throne, 2007). It can be described as a group of common theories and practices classifying student differences in background knowledge, readiness, language, learning style, intelligences and interests, resulting in individually responsive teaching appropriate to particular student needs (Tomlinson & Kalbfleisch, 1998; Vaughn et al., 2000 as cited in Santamaria, 2009). On the other hand, "flipping the classroom establishes a framework that ensures students receive a personalized education tailored to their individual needs." (Bergmann & Sams, 2012, p.6)

1.1. Context of the Problem

The current study addresses the question of whether or not EFL preparatory stage pupils benefit from Flipperentiated instruction in the enhancement of their reading comprehension skills. The problem of the current study is derived from the following resources:

First, the researcher interviewed 25 EFL preparatory teachers. Questions were about students' reading comprehension. Teachers assured that pupils find difficulty comprehending reading passages as they are not exposed to classroom activities that support real and authentic situations. Besides, reading is taught within the regular method that does not meet the pupils' individual differences.

To document the results of the interviews, the researcher conducted a pilot study in which 30 second year preparatory school pupils were tested on their EFL reading comprehension skills. The test consisted of 3 questions that aimed to test EFL reading comprehension skills at the literal, inferential, and critical levels. The results indicated the low level of second year preparatory school pupils in EFL reading comprehension skills. 66%, 70%, and 83% of pupils could not answer literal, inferential, and critical comprehension questions respectively.

1.2. Aim of the Study

The aim of the current study is to investigate the effectiveness of using Flipperentiated instruction in enhancing EFL reading comprehension skills of second year preparatory school pupils.

1.3. Questions of the Study

The main question of the study is:

How far would Flipperentiated instruction be effective in enhancing second year preparatory school pupils' EFL reading comprehension skills?

This question is divided into the following sub questions:

1. To what extent is Flipperentiated instruction effective in enhancing second year preparatory school pupils' EFL Literal reading comprehension skills?
2. To what extent is Flipperentiated instruction effective in enhancing second year preparatory school pupils' EFL inferential reading comprehension skills?
3. To what extent is Flipperentiated instruction effective in enhancing second year preparatory school pupils' EFL critical reading comprehension skills?

1.4. Hypotheses of the Study

1. There is a statistically significant difference between the mean scores of the 1st experimental group (verbal/linguistic intelligence) and those of the control group in the posttest regarding the overall and each of reading comprehension skills.
2. There is a statistically significant difference between the mean scores of the 2nd experimental group (logical/mathematical intelligence) and those of the control group in the posttest regarding the overall and each of reading comprehension skills.
3. There is a statistically significant difference between the mean scores of the 3rd experimental group (Intrapersonal intelligence) and those of the control group in the posttest regarding the overall and each of reading comprehension skills.
4. There is a statistically significant difference between the mean scores of the 4th experimental group (Interpersonal intelligence) and those of the control group in the posttest regarding the overall and each of reading comprehension skills.

1.5. Delimitations of the Study

The current study was delimited to:

1. Second year preparatory stage pupils (N= 150).
2. Narrative texts adapted to the level of second year preparatory school pupils.
3. The second semester of the academic year 2016-2017.

1.6. Significance of the Study

The current study might be significant to pupils as it could help them develop their EFL reading comprehension skills. It could also be helpful for teachers as it might raise their awareness of the importance and benefits of Flipperentiated instruction and how it can be implemented effectively in EFL classrooms. Besides, the current study could provide them with some Flipperentiated activities based on multiple intelligences that could help them enhance preparatory school pupils' reading comprehension. On the other hand, the current study might draw curriculum designers' attention to Flipperentiated instruction as a new trend that could be incorporated in Egyptian preparatory schools for teaching English in general and EFL reading comprehension in particular.

1.7. Definition of Terms

Reading Comprehension

It is operationally defined in this study as the ability of second year preparatory pupils to comprehend a text at the literal, inferential, and critical levels.

Flipperentiated Instruction

It is operationally defined in the current study as the process which combines personalized and differentiated instruction in a way that enables each pupil to work according to his/her own abilities and at the same time receives options that match different types of intelligence.

2. Review of Literature

2.1. Reading Comprehension

According to Paris & Stahl, (2005, p. 206) "Reading comprehension is the process of simultaneously extracting and constructing meaning through interaction and involvement with written language". RAND (2002) refers to Reading Comprehension as a process that consists of three elements; the reader, the text, and the activity. These elements interrelate and interact with each other in a sociocultural context. The learner's understanding of the reading passage is determined by his or her cognitive abilities (attention, memory, critical analytic ability, inference, and visualization), motivation (purpose, interest, and self-efficacy), knowledge (vocabulary and topic knowledge, linguistic knowledge, and knowledge of comprehension strategies), and experiences.

When the learner starts reading, he/she constructs various meanings of the text which are important for comprehension. They include the surface code (the exact wording of the text), the text code (idea units representing the meaning of the text), and the mental models (the way in which information is processed for meaning). These meanings differ according to the type of the text that includes: narrative, expository, descriptive, or persuasive (Graesser , 2007).

The learning process for reading is conducted within a context that extends far beyond the classroom. Differences among readers are related to the varying sociocultural environments in which learners live and learn to read. Learning and literacy are viewed partly as cultural and historical activities, not just because they are acquired through social interactions but also because they represent how a specific cultural group or discourse community interprets the world and transmits information (Peltzman, 2015). Grabe (2009: pp. 15-16) describes the process of reading as follows:

1. Reading is an interactive process. It is an interaction between the writer's intended message and the reader's background knowledge.
2. Reading is an evaluation process. This evaluation is affected by readers' attitudes and emotional responses to the text and the topic, and it requires a strong set of inference skills and the use of background knowledge.

3. Reading is a strategic process in which a number of strategies are used by the reader to identify main idea and specific details, summarize information, and monitor comprehension.
4. Reading is a flexible process. If the readers struggle, they can use alternative strategies to achieve their goals.
5. Reading is a linguistic process. The reader must have a reasonable store of linguistic knowledge (syntactic, sematic, and morphological) of the language of the text in order to decode words and structural phrases.

2.1.1 Levels of Reading Comprehension

According to Basaraba, Yovanoff, Alonzo, and Tindal (2013), there are three main levels of reading comprehension; literal, inferential, and critical.

2.1.1.1 Literal Comprehension

This level of comprehension requires the student to extract information that is explicitly stated in a passage. It depends on learners' word level processing skills, or their ability to accurately identify individual words and understand the meaning created by the combination of words into propositions and sentences (Perfetti, Landi & Oakhill, 2005 as cited in Basaraba, et al. 2013). According to Rupley and Blair (1983 as cited in Basaraba, et al. 2013), literal comprehension is composed of two strategies; recall; the ability to provide a main idea or a detail that was part of a passage and recognition; the ability to recognize whether specific information is provided in a passage. The information recalled or recognized includes main ideas, sequence, causes, effects, and character traits. Literal comprehension is a lower level of thinking upon which higher order thinking skills would be based.

2.1.1.2. Inferential Comprehension

Making inferences requires the reader to search for relationships among the main idea and details and to use that information to interpret and draw conclusions about the author's intended message (Basaraba, et al.2013). At this level, readers use explicit information, along with their intuition and background knowledge to make inferences (Rahimi, Mirzaei, & Heidari, (2012).

Readers use divergent and convergent thinking to make inferences. To make convergent inferences, readers realize the hypotheses supplied indirectly by the writer like main ideas, sequences, and details. To make divergent inferences, readers integrate their background knowledge with the text information to read between the lines and create new ideas (Green and Roth, 2013). Inferential comprehension also has been classified into retrieval and generation. The former refers to the process of adding to the text pre-existing knowledge stored in long term memory whereas the latter refers to the production of new information by deriving it from the text (Macomb ISD, 2010).

2.1.1.3. Critical Comprehension

At this level, readers are asked to analyze or evaluate the information acquired from the text (McCormick, 1992; Rupley & Blair, 1983 as cited in Basaraba, et al. 2013) by comparing it with the readers' own background knowledge or values. This comparison creates new meanings and/or relationships that extend beyond the scope of the text. These new meanings and relationships involve different skills including divergent thinking, critical analysis, synthesis and evaluation (Vacca et al., 2009 as cited in Basaraba, et al. 2013).

Therefore, readers must have general knowledge of the topic and an understanding of the reading material to be able to make judgments or give opinions (Day & Park, 2005). When readers make judgments, they evaluate logic, relevance, accuracy, and truthfulness; they also distinguish between fact and opinion (Dechant, 1991). These judgments are made by using external criteria such as other sources or internal criteria such as the reader's experiences or values.

2.2 Flipperentiated instruction

Flipperentiated classroom is an environment which enables learners to benefit from the advantages of differentiated instruction and flipped learning. According to Carbaugh & Doubet (2015), a Flipped Classroom makes it easier for teachers to apply differentiated learning strategies. The point of Flipperentiated instruction is that teachers are not only flipping the regular classroom, they are flipping the differentiated one. This means that students get to work on their individualized assignments and activities

before coming to class. Clear expectations and goals help students get adequate freedom and flexibility to explore and learn. This could build confidence and increase their motivation. The problem of students' fear of learning is eliminated by the fact that most will be inspired by the autonomy and control they now possess over their education.

Another benefit of Flipperentiated classroom is that prior knowledge, different learning styles and intelligences allow students to hold discussions and engage in higher cognitive thinking during lessons. They can share thoughts and ideas during peer cooperation in groups before returning to their individual learning spaces to build on what they have learned. This will not only help them keep moving along their learning path, but it will also ensure that a number of key skills are developed, from timekeeping to independent study and communication. Done properly, this combined teaching method could help students benefit from the advantages of individual learning and differentiated instruction. The following section is an explanation of the two components of Flipperentiated instruction.

2.2.1. Differentiated Instruction

In every classroom, teachers are expected to meet diverse students in terms of readiness, interests, and learning profiles. The one size fits all instruction cannot meet these individual differences among students. Instead, instruction can be tailored according to these differences by using a term called "differentiated instruction".

Differentiated instruction can be implemented by offering a variety of options that match different readiness levels, interests and learning profiles. Blaz (2006) summarizes the characteristics of differentiated instruction as follows:

1. Complex and flexible: It introduces many ways to accommodate different teaching styles, as well as, students' differences such as learning styles, interests, prior knowledge, socialization needs and comfort zones.
2. Rigorous: It provides challenging instruction that motivates students.
3. Relevant: It focuses on essential learning.
4. Proactive: It uses methods like hands-on projects.

In short, " Differentiation is the process of tailoring instruction to meet the needs of all learners"(Waterman, 2010:p1)

2.2.2. Principles of Differentiated Instruction

According to Strickland (2007), Tomlinson & Imbeau (2010), the three fundamental principles of differentiated instruction are: Respectful tasks, flexible grouping, and ongoing assessment.

2.2.2.1. Respectful Tasks

Respectful tasks are those that the teacher uses to show respect for the similarities and differences of learners instead of treating them alike (Boen, 2010). To make the tasks respectful, Strickland (2007) presented some guidelines for designing them. Tasks should:

1. Match the students' readiness, interests, or learning profiles.
2. Be highly interesting, engaging, and challenging.
3. Focus on the essential knowledge, understanding, and skills targeted for the lesson.
4. Provide appropriate scaffolding for all students regardless of their readiness level. Both of the struggling learners and the advanced learners need support on tasks that are a bit difficult for them.
5. Provide students with opportunities to help and support others. Be sure that advanced students get opportunities to stretch.
6. Discover students' preferences through ongoing dialogue.
7. Take students' interests into consideration.
8. Be differentiated via the complexity of work rather than the quantity.
9. Provide choices whenever possible.

Blaz (2006) asserts that there must be a balance between teacher assigned task and students' choices, or most students will choose what is easy for them and neglect more complex tasks.

2.2.2.2. Flexible Grouping

Flexible grouping refers to classroom practice that allows students to experience a wide range of differentiation options as they work as a whole class, alone, with a partner, and in small groups (Strickland, 2007). All this happens without taking away from the classroom's sense of community (Heacox, 2002). Students are grouped according to their readiness, interests, and learning profiles. Also, they move in and out of the groups as needed based on continuous assessment (Chapman & King, 2008). Heacox (2002) states that the optimum time for flexible grouping might happen at two exit points:

1. When some students have not mastered skills or content, while others are ready to move on.
2. When some students would benefit from an advanced task, while others benefit from a more basic activity.

In other words, students who are at the foundational level need more time to practice instruction, while the students who are at the advanced level move on to extend their learning. According to Coil (2007), flexible grouping takes several forms:

- a. Whole group instruction.
- b. Homogeneous groups.
- c. Heterogeneous groups.
- d. Individualized instruction/ Independent study.

2.2.2.3. Ongoing Assessment

Differentiated assessment is an ongoing process in which teachers gather information before, during, and after instruction using formative and summative tools (Chapman & King, 2012) to document students' learning and find out their individual growth (Coil, 2007). Differentiated assessment is ongoing because it is used as a guide for teachers while dividing the students into flexible groups. According to Wormeli (2006) and Blaz (2008), there are three types of assessment in the differentiated classroom:

1. Pre-assessment: It is used to find out about students' readiness, interests, and learning profiles. The results of pre-assessment are used to guide instructional decisions.
2. Formative assessment: It is used during instruction to provide feedback about students' learning. It results in intervention for struggling students and enrichment for advanced ones.
3. Summative assessment: It is used at the end of instruction to evaluate the students' learning of essential knowledge

2.2.3. Differentiating Reading Instruction

Ankram and Bean (2008: pp. 138-143) highlighted six points that must be considered while differentiating reading instruction:

1. Assessment
2. Grouping Formats
3. Classroom Management
4. Materials

5.Length and Frequency of Instruction

6.Lesson Focus

1. Assessment

Assessment of the reading process is differentiated according to the students' readiness. For example, letter identification could be a major criterion for struggling students, whereas higher order skills could be the aim of assessment for advanced students. To reach this end, the teacher could use observation and conferences to find out about the students' reading skills and strategies. The selection of texts is also considered.

2. Grouping Formats

Based on assessment, the teacher creates differentiated groups according to the reading skills or the strategies needed. The students move from one group to another as a result of continuous assessment so that they move to a lower level group or a higher level group.

3. Classroom Management

There are a variety of approaches from which teachers select a management technique that matches their teaching style:

Literacy Centers: The students move around the classroom to work on a literacy -based activity stations either independently or in groups. The activities within the literacy center can be tiered to provide differentiation of the reading skills and strategies.

Independent Reading: Students read independently or with a partner. They are allowed to select a text from a selection of texts that match their instructional level.

Independent Response: Open ended and creative responses can be differentiated. These responses aim at enriching and extending the students' comprehension of the text. These responses sometimes take the form of journals in which students react to, evaluate, connect to the text personally, and generate questions.

4. Materials

The students can read texts independently according to their interests or their instructional levels. The teacher uses different genres to meet the

diverse needs of students and the texts selected should address the skills and the strategies needed.

5. Length and Frequency of Instruction

Determining the length and frequency of instruction is based on the needs of the learners. Struggling students need more time than advanced ones who will benefit more from independent practice. Also, some struggling students receive individualized instruction so that the teacher can remedy their reading difficulties.

6. Lesson Focus

The teacher must determine the knowledge base that must be acquired by all learners, whether they are struggling, average, or above grade level. Then, teachers have to decide which comprehension strategies to stress, how to build and maintain fluency, and which word-level skills and strategies to teach.

2.3 Flipping allows for real differentiation

Bergmann & Sams (2012, p 28) point out that "one of the struggles in today's schools is accommodating a vast range of abilities in each class. There are excellent students, average ones, and those who struggle with content or cannot read. Flipping the class showed us just how needy many of our students were and how powerful the flipped classroom is in reaching students all along this broad range of abilities". Flipped Learning is a pedagogical approach in which direct instruction moves from the group learning space to the individual learning space, and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students as they apply concepts and engage creatively in the subject matter.

In the traditional model of classroom instruction, the teacher is typically the central focus of a lesson and the primary disseminator of information during the class period. The teacher responds to questions while students defer directly to the teacher for guidance and feedback. In a classroom with a traditional style of instruction, individual lessons may be focused on an explanation of content utilizing a lecture-style. According to Johnston & Karafotias (2016), student engagement in the traditional model may be limited to activities in which students work independently or in small groups

on an application task designed by the teacher. Class discussions are typically centered on the teacher, who controls the flow of the conversation. Typically, this pattern of teaching also involves giving students the task of reading from a textbook or practicing a concept by working on a problem set, for example, outside school.

The flipped classroom intentionally shifts instruction to a learner-centered model in which class time explores topics in greater depth and creates meaningful learning opportunities, while educational technologies such as online videos are used to deliver content outside of the classroom. In a flipped classroom, content delivery may take a variety of forms. Often, video lessons prepared by the teacher or third parties are used to deliver content, although online collaborative discussions, digital research, and text readings may be used.

2.4 Multiple intelligences

Gardner (2000, p. 34) believes that intelligence is "a bio psychological potential to process information that can be activated in a cultural setting to solve problems or create products that are of value in a culture". Based on this new look at intelligence, Gardner introduced seven kinds of intelligence; verbal/linguistic, logical/mathematical, musical/ rhythmic, bodily/kinesthetic, visual/spatial, interpersonal, and intrapersonal intelligences. He added two other intelligences which are naturalistic and existential intelligences.

2.4.1. The Nine Intelligences

Armstrong (2009) describes the eight intelligences of Gardner's MI theory:

- 1. Linguistic:** It refers to having the skills of reading, writing, speaking, and listening and using them to describe, inform, and persuade.
- 2. Logical-Mathematical:** it is the ability to use inductive and deductive thinking, solve problems, and ask questions in a logical manner. It also includes processes like categorization, classification, inference, generalization, calculation, and hypothesis testing.
- 3. Visual/Spatial:** it is the ability to create visual spatial representations of the world, use graphics to understand information, draw, design, and create things. It is often experienced through daydreaming, imagining, and pretending.

4. **Bodily-Kinesthetic:** it is the ability to use the whole body to express ideas and feelings and facility in using one's hands to produce and transform things. People with this intelligence are clever at physical activities and hand eye coordination.
5. **Musical:** it is the ability to think in sounds and to make, perform, and appreciate music. It includes sensitivity to the rhythm, pitch or melody, timbre or tone of a musical piece.
6. **Interpersonal:** it is the ability to understand people and recognize their goals, motivations, and intentions. People with this intelligence have strong leadership skills and are clever at communicating, organizing, and mediating.
7. **Intrapersonal:** it is the ability to reflect on your thoughts and emotions. It includes how well you know about yourself and what you do with this knowledge. People with this intelligence tend to be independent and self-directed.
8. **Naturalist:** it is the ability to recognize and classify plants, animals, and other environmental aspects. It is also about appreciating nature including weather systems, lakes, rivers, farms, and buildings.
9. **Existential:** it is the ability to think philosophically of issues that deal with the meaning of life, death, and human existence.

2.4.2 Multiple Intelligences in the Classroom

Gardner (1983-2011, p. xvi) introduces individualization and pluralization as the two main approaches to applying MI in the classroom: Individualization means designing activities based on the intelligence profile of the students; this is what has been called by Fleethman (2006) "teaching and learning to the intelligences". On the other hand, pluralization means using different intelligences to present topics, concepts, or ideas; this is what has been called by Fleethman (2006) "teaching and learning through the intelligences".

Regarding the advantages of multiple intelligence-based instructions, Baş and Beyhan (2010, pp. 365-386) compared and contrasted MI-exposed students with those of traditionally-instructed ones. The fifth-grade learners in the experimental group were exposed to multiple intelligences project-based learning activities, while those in the control group were instructed merely on the basis of traditionally-designed learning activities. The results

of the study justified the excellence of MI-suited activities in contrast with the traditional ones. In the same vein, another comparative study has recently been conducted by Stanciu et al. (2011, pp. 92-96) with the intention of justifying the potential efficiency of MI-based teaching and learning strategies as an improvement upon the traditional methods. The results gave rise to the superiority of MI-derived strategies to their traditional counterparts.

With regard to EFL reading skill, Fahim et al. (2010, pp. 1-14) explored the extent to which the reading sections of TOEFL and IELTS were in line with EFL learners' intelligences. They identified intelligence profiles of 163 (male and female) EFL learners by means of the MI profiling questionnaire. All participants were asked to respond to reading sections of TOEFL in 55 minutes and those of IELTS in 60 minutes. The analysis marked the significant correlation between verbal-linguistic and logical-mathematical intelligences and TOEFL reading scores. As with IELTS, verbal-linguistic and visual-spatial intelligences were seen to have significant correlation.

3. Method and Procedures

3.1. Design of the study

The researcher adopted the quasi experimental design. The analytical descriptive method was used with regard to reviewing the literature relevant to the variables of the study.

3.2. Participants of the study

The participants of the current study were 150 second year preparatory school pupils in the second term of the academic year (2016-2017). They were divided into two groups; control and experimental. The control group consisted of 30 pupils whereas the experimental one consisted of 120 pupils distributed to four groups according to their strongest intelligence.

3.3. Instruments and Materials

The current study made use of the following instruments:

1. A multiple intelligences inventory.
2. A reading comprehension skills checklist.
3. A pre- /post- reading comprehension skills test.
4. A rubric for scoring the test.

5. A program based on Flipperentiated instruction.

3.3.1. The Multiple Intelligences Inventory

This inventory was adapted from Walter McKenzie (1999) (Appendix 1). The inventory included only the four intelligences being addressed in the study (verbal / linguistic, logical/mathematical, interpersonal, and intrapersonal intelligences). The students were asked to place a “1” next to each statement they felt accurately describes them. Then, the total of each section was estimated and multiplied by 10.

3.3.2. The reading comprehension skills checklist

3.3.2.1 Purpose of the checklist

The checklist was prepared to determine the most important reading comprehension skills necessary for second year preparatory school pupils when reading narrative texts (Appendix 2). The reading comprehension skills included in the checklist were determined through reviewing:

1. Ministry of education directives for general preparatory school teachers 2016/2017.
2. Previous literature related to the area of reading comprehension skills and sub skills: Day & Park, (2005), Obeid (2010), Jones (2010), Pourkalhor & Kohan, (2013).

3.3.2.2 Validity of the checklist

The checklist was submitted to a panel of jury specialized in the field of EFL curriculum and methods of teaching to determine (a) the degree of importance of each skill, (b) appropriateness of the skills suggested to EFL first year secondary school students (c) the relationship of each skill to either literal, inferential, or critical comprehension levels. The jury indicated that the checklist was valid and the skills included were clear and adequate.

3.3.3. The reading comprehension skills test (Appendix 3)

3.3.3.1 Purpose of the Test

The pre administration of the reading comprehension test aimed at measuring the control and experimental groups' entry level in reading comprehension skills before intervention. As a post-test, it was used to

investigate the effectiveness of the program in enhancing the experimental groups' literal, inferential and critical reading comprehension skills.

3.3.3.2 Description of the test

The test consisted of two reading texts selected and adapted to second year preparatory school pupils' level and followed by both multiple choice questions and open- ended questions based on these texts.

3.3.3.3 Validity of the test

To measure the test content validity, it was given to a panel of jury to evaluate it in terms of:

1. The consistency of the questions with the aim of the test.
2. The extent to which the test items are adequate to measure the comprehension skills required for the study.
3. The suitability of the reading texts and test items for EFL second year preparatory school pupils' linguistic level. The test proved to be a valid one.

3.3.3.4 Test Reliability

The split-half method was used to determine the reliability of the test. The correlation coefficient was 0.72 which is highly reliable.

3.3.3.5. Scoring Test

The Reading comprehension skills rubric was prepared to assess the participants' responses to a set of open ended questions addressing the skills mentioned in the checklist (Appendix 4).

3.3.4. The Program (Appendix 5)

3.3.4.1. Aim and Objectives of the program

The current program aimed at enhancing the EFL reading comprehension skills necessary for second year preparatory pupils when reading narrative texts through using Flipperentiated instruction. These reading comprehension skills belong to three levels of comprehension; literal, inferential, and critical.

By the end of the program, Pupils were expected to:

1. Recognize main idea.
2. Recognize supporting details.
3. Infer cause and effect relationships.

4. Infer character traits.
5. Draw conclusions about the author's intended message.
6. Relate information from the text to students' background knowledge.
7. Evaluate information acquired from the text in terms of previous knowledge or experiences.

3.3.4.2 The content of the Program

- A story adapted from classic literature: Beauty and the beast
- A matrix of activities addressing the four multiple intelligences (verbal/linguistic, logical/mathematical, interpersonal, and intrapersonal) was used for each group.

3.3.4.3 Flipperentiated Strategies for Teaching Reading

3.3.4.3.1 Flipped learning strategy

The researcher used the flipped learning strategy as follows:

1. Participants are asked to watch the video of the story "Beauty and the beast" at home. The video is accompanied by English captions about the events of the story. The participants have to read the captions while watching the video.
2. Different types of questions (direct, inferential and critical) are distributed to the four groups of participants. They have to look for the answers while watching the video. These questions directed participants' attention to the main elements of the story.

3.3.4.3.2 Differentiated strategy

The researcher used different activities with each of the experimental groups. The activities were designed in a way that is relevant to the type of intelligence of the group participants. The differentiated strategy was implemented as follows:

a) Direct Instruction

The researcher presented the activity, its purpose, and the steps of doing it.

b) Modeling

Using a familiar story, the researcher modeled how to do the activity and provided a model answer for the questions included.

c) Guided Practice

The researcher guided the pupils while doing the activity in groups. Watching the video with the English captions of the story helped participants perform the activities. The researcher assisted them by providing task cards and guidelines for doing the activity.

d) Independent Practice

The researcher's guidance decreased gradually till it diminished. This was accomplished by letting the students work without task cards which were provided only when necessary.

4. Results and Discussion

The Reading comprehension test was administered as a posttest to the control and experimental groups. T-test was used to measure how significant the difference was between the mean scores of the two groups. The researcher and another rater used the rubric for correcting the test.

Table (1): The Significance of Difference between the Mean Scores of the 1st Experimental Group (Verbal/Linguistic) and the control group on the Post-test in the Overall Reading Comprehension Skills

Skill	Participants	Mean scores	Standard deviation	T value	Significance
Literal Comprehension Skills	Control group	10.233	1.888	9.2483	Significant
	Verbal/linguistic group	13.700	0.836		
Inferential Comprehension Skills	Control group	10.366	1.956	8.055	Significant
	Verbal/linguistic group	13.600	1.003		
Critical Comprehension Skills	Control group	10.80	2.4167	8.8621	Significant
	Verbal/linguistic group	15.6	1.734		
Reading Comprehension Skills	Control group	31.399	6.48	8.8801	Significant
	Verbal/linguistic group	42.90	2.90		

Table (2): The Significance of Difference between the Mean Scores of the 2nd Experimental Group (Logical/Mathematical) and the control group on the Post-test in the Overall Reading Comprehension Skills

Skill	Participants	Mean scores	Standard deviation	T value	Significance
Literal Comprehension Skills	Control group	10.233	1.888	14.2779	Significant
	Logical/Mathematical group	16.03	1.19		
Inferential Comprehension Skills	Control group	10.366	1.956	11.5940	Significant
	Logical/Mathematical group	15.47	1.41		
Critical Comprehension Skills	Control group	10.80	2.4167	10.6314	Significant
	Logical/Mathematical group	16.00	1.17		
Reading Comprehension Skills	Control group	31.399	6.48	13.3327	Significant
	Logical/Mathematical group	47.50	4.41		

Table (3): The Significance of Difference between the Mean Scores of the 3rd Experimental Group (Interpersonal) and the control group on the Post-test in the Overall Reading Comprehension Skills

Skill	Participants	Mean scores	Standard deviation	T value	Significance
Literal Comprehension Skills	Control group	10.233	1.888	15.7393	Significant
	Interpersonal group	16.27	0.94		
Inferential Comprehension Skills	Control group	10.366	1.956	13.6945	Significant
	Interpersonal group	15.87	1.01		
Critical Comprehension Skills	Control group	10.80	2.4167	12.7496	Significant
	Interpersonal group	16.83	0.95		
Reading Comprehension Skills	Control group	31.399	6.48	12.8214	Significant
	Interpersonal group	48.97	3.50		

Table (4): The Significance of Difference between the Mean Scores of the 4th Experimental Group (Intrapersonal) and the control group on the Post-test in the Overall Reading Comprehension Skills

Skill	Participants	Mean scores	Standard deviation	T value	Significance
Literal Comprehension Skills	Control group	10.233	1.888	16.6109	Significant
	Intrapersonal group	16.77	1.04		
Inferential Comprehension Skills	Control group	10.366	1.956	14.7690	Significant
	Intrapersonal group	16.10	0.84		
Critical Comprehension Skills	Control group	10.80	2.4167	13.7165	Significant
	Intrapersonal group	17.73	1.36		
Reading Comprehension Skills	Control group	31.399	6.48	19.3842	Significant
	Intrapersonal group	50.60	1.37		

The statistical analysis of results indicated the significance of differences between the participants' performance on the posttests. Tables 1, 2, 3 and 4 indicated that the mean scores of the four experimental groups on the posttest are higher than those of the control group in the overall reading comprehension skills. The differences were statistically significant in favor of the experimental groups.

These results might be due to the following:

1. The activities used in the program were in accordance with the pupils' strongest intelligence. This helped them work effortlessly and make considerable progress.
2. Using an attractive and popular story " Beauty and the Beast" encouraged pupils to watch the video of the story and read the English captions included.
3. Stating a purpose for watching the video, to find answers to questions of different types; literal, inferential, and critical, made it easy for pupils to carry out the activities designed for each group.
4. Modeling the activities helped participants to implement each step of the activity with little assistance from the teacher as they knew how to carry out the activity.
5. Guided practice helped participants to be more confident, more accurate, and assisted them in monitoring their performance.

6. Some activities required making connections between the text and the pupils' background knowledge; that stimulated students' thinking and reflection as they formed relationships between fiction and memory.
7. Tailoring instruction according to the students' multiple intelligences had a positive effect on students' achievement, interests, and motivation.
8. Working in groups enabled participants to share thoughts, feelings, and opinions in a way that facilitated language development

5. Conclusion

The current study aimed at enhancing second year preparatory stage pupils' EFL reading comprehension skills through a program based on Flipperentiated instruction. Participants were divided into control and experimental groups. The latter was divided into four experimental groups according to their strongest intelligence. Flipped learning strategy was first used where participants had to watch a video of the story "Beauty and the Beast" and read the English captions. After that, each experimental group had to carry out activities relevant to their strongest intelligence. A pre-post reading comprehension skill test was administered. Findings indicated that there is a statistically significant difference between the mean scores of the control and experimental groups on the posttest regarding the overall reading comprehension skills.

6. Suggestions for Further Research

Based on the findings of the current study, the following recommendations and suggestions were made for further research:

1. English language teachers should be provided with professional development training on how to use Flipperentiated instruction to develop students' language skills.
2. Curriculum designers should make use of Flipperentiated instruction when designing English curricula.
3. English language teachers should consider students' multiple intelligences before designing language activities.

4. English language teachers should focus on activities that stimulate students' higher thinking skills like analysis, evaluation, and synthesis, not only recalling information.
5. English language teachers should accept different interpretations of the reading text and students should justify their answers with reasonable explanation.
6. There should be further research to investigate the effectiveness of Flipperentiated instruction in developing language skills among primary or secondary school students.
7. Flipperentiated instruction could be implemented to overcome EFL reading and writing disabilities.

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