



The Role of Picture Books in Raising Children's Understanding of English Literature and Life Science Concepts: Selected Stories by Eric Carle

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Abstract

The current study is a theoretical study that aims to underline the role of picture books as a serious genre of children's literature in raising children's understanding of English literature and life concepts; especially for non-English speakers. Unfortunately, most Iraqi people have developed a social phobia of learning English since childhood. This phobia is resulted from the heavy traditional reading and writing assignments as well as hard exams. Therefore, this study suggests incorporating more interesting literary material like picture books that would bring pleasure and help in raising children's love and cognition of English Language. More significantly, it calls to replace the old curriculum with a more vital one where children can interact with all their senses; visual, auditory, and kinesthetic (VAK). To make this possible, two of Eric Carle's books *The Very Hungry Caterpillar* and *The Tiny Seed* have been carefully selected according to the American and English elementary school teachers' standards for children aged 3-6 years old. Each story element was submitted to a literary analysis, including pictures, life concepts, and language that enhance children's understanding of literature. Based on Piaget's view about the importance of involving sensorimotor actions in learning to help in children's cognition development, some VAK lesson plans and activities were designed using the concept development model and Synectics strategy. The study has concluded that incorporating picture books into the school curriculum and sensorimotor activities like coloring, cutting paper, games, sounds, and music would help in raising children's understanding of English literature and life science more interactively.

Keywords: Concept development strategy, Picture concept, Synectics, VAK.

دور القصص المصورة في زيادة فهم الأطفال للأدب الإنجليزي و مفاهيم علوم الحياة: قصص مختارة لأيريك كارل

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المستخلص

الدراسة الحالية دراسة نظرية تهدف إلى التأكيد على دور قصص الأطفال المصورة بوصفها نوعا جادا من الأدب في زيادة فهم الأطفال للأدب الإنجليزي ومفاهيم علوم الحياة خاصة لغير الناطقين باللغة الإنجليزية. لسوء الحظ، طور معظم الشعب العراقي رهبا اجتماعيا من تعلم اللغة الإنجليزية منذ الطفولة نتيجة لواجبات القراءة والكتابة التقليدية الثقيلة وكذلك الاختبارات الصعبة؛ لذلك، تقترح هذه الدراسة دمج مواد أدبية أكثر إثارة للاهتمام مثل: القصص المصورة التي من شأنها أن تجلب المتعة وتساعد في زيادة حب الأطفال وإدراكهم للغة الإنجليزية. والأهم من ذلك، أنها تدعو إلى استبدال المنهج القديم بمنهج أكثر حيوية حيث يمكن للأطفال التفاعل بكل حواسهم البصرية منها والسمعية والحركية. (VAK) وللإجابة عن السؤال: كيف نجعل ذلك ممكناً؟، تم اختيار قصتين لأيريك كارل *The Very Hungry Caterpillar* و *The Tiny Seed* بعناية فائقة على وفق معايير معلمي المدارس الابتدائية الأمريكية والإنجليزية للأطفال الذين تتراوح أعمارهم بين ٣-٦ سنوات. تخضع كل قصة للتحليل الأدبي من حيث عناصرها الأساسية بما في ذلك الصور ومفاهيم علوم الحياة واللغة وكل ما يسهم في تعزيز فهم الطفل للأدب. إستناداً الى وجهة نظر Piaget حول أهمية دمج النشاطات الحسية في التعلم للمساعدة في تنمية الإدراك لدى الأطفال، تم تصميم بعض خطط وأنشطة دروس VAK باستعمال نموذج تطوير المفهوم واستراتيجية Synectics. خلصت الدراسة إلى أن دمج الكتب المصورة في المناهج المدرسية والأنشطة الحسية مثل: التلوين، وقطع الورق، والألعاب، والأصوات، والموسيقى؛ من شأنه أن يساعد في زيادة فهم الأطفال للأدب الإنجليزي وعلوم الحياة بشكل أكثر تفاعلية.

الكلمات المفتاحية: استراتيجية تطوير المفهوم، أسلوب حل المشكلة، التعلم الحسي (VAK)، مفهوم القصص المصورة .

1. Introduction

Picture books are a genre of children's literature that relies heavily on pictures to illustrate information, like alphabet and counting books, ideas and concepts, like family, everyday experiences, and appreciating cultural diversity and literature. Studying literature in an EFL classroom, as stated by Yimwilai, "is beneficial for many reasons: it involves a profound range of vocabulary, dialogue, and prose; appeals to the imagination and enhances creativity" (quoted in Salah & Srayisah, 2017, p.95). Thus, the importance of picture integration and illustrations has been emerged within the text of literature to reveal profound meanings, enhance creative thinking, and help children to develop a well understanding of the plot, the settings, the actions, the characters, and the themes behind (Huck, Kiefer, Helper, & Hickman, 2004). In her book *Interpreting Literature with Children*, Shelby A. Wolf shed the light on "literary engagement", asserting that a verbal expression is not the only language to interpret literature; illustrations can evoke children's insights and accomplish what is meant verbally (Wolf, 2008, p.10). Eric Carle believes that involving learning language, literature, or life concepts with some simple and joyful activities like coloring, cutting paper figures, hide and seek games, sounds, and music, as well as worksheets, would enhance children's visual literacy, knowledge, and creativity (Cullinan, 2020). Unfortunately, Iraqi children are deprived of having interesting English materials and heavily rely on traditional textbooks in school. The element of fun integrated with learning in EFL classroom is completely absent due to the shortage of time and teachers' experience. Such an obstacle hinders children's creativity and limits their imagination development and speaking ability. Despite the huge advance of technology and social media, Iraqi people, college students, and school children in government schools in particular still have the same fear or, in other words, phobia of the English Language. This phobia has become a social problem because learning English Language is mandatory in Iraqi schools, making it a real obstacle for our children to pass the exam rather than to understand or speak the language.

The study, therefore, aims to raise children's understanding of English literature and life science concepts by adopting interesting genres of literature as picture books that allow learning with fun (Carle, 2020). It also encourages educators to replace the old traditional curriculum with more active ones based on VAK senses in integrating pictures with sound and movement. Moreover, it provides teachers and researchers with a work map of literary analysis for the target stories and some suggested creative lesson plans and related activities based on concept development and problem-solving

strategies. Such materials are to be applied later after the end of coronavirus lockdown or to be developed into online classes in the future.

Accordingly, many questions arose, revolving around: the type of materials that should be introduced for children in EFL classroom, the teaching strategy needed, the efficiency of the teachers required, the type of class arrangement that is appropriate for an individual or group, the devoted to free activities and student's learning styles diversity.

However, the importance of this study lies in encouraging creative thinking, imagination, VAK, or sensorimotor learning with fun by using picture books as a genre of literature in order to raise children's understanding of English literature and life science concepts. There are many studies and books that have proved the successful use of these types of books in elementary school settings in other countries all around the world.

This study is a theoretical study that is inspired by Eric Carle's philosophy of learning literature and life science concepts with fun through picture books. To meet the objective of the study, two of Eric Carle's books *The Very Hungry Caterpillar* and *The Tiny Seed*, have been carefully selected according to the American and English elementary school teachers' standards for children aged 3- 6 years old. The study introduces Eric Carle's philosophy and a literary analysis of each story elements and life concept. It also suggests some EFL lesson plans and creative activities based on certain pedagogy strategies like concept development strategy and problem-solving model (synectics) to enhance children's understanding of literature.

2. Theoretical Background

2.1 The Concept of Picture

A picture book is a “special kind of book in which the meaning is created and conveyed through the interaction of the verbal and the visual media” (Huck et al., 2004, pp. 170). In other words, the pictures are made of a series of artistic images and illustrations that together with language convey the message of the story. Such books may vary in length and depth according to the level of children they address.

A well-designed picture book provides the readers whether children, their parents, or teachers with a mind map or a "schema". Or, as Perry Nodelman (1988) put it, it guides them throughout the pictures and the words to grasp the whole idea. The integration of pictures and illustrations within the text reveals the literary elements of the story and helps the children to develop a well understanding of the plot, the settings, the actions, the characters, and the themes behind. The illustrations of Paul O. Zelinsky for

Swamp Angel are a good example of this integration of the language. Writers usually use sensitive, imaginative, and sophisticated words to develop children's language and imagination, since these books are mostly read to them and not by them (Huck et al., 2004).

Picture book writers sometimes work as authors, illustrators, and fun creators. They try to enhance children's visual literacy, knowledge, and creativity by involving them in some simple and joyful activities, like coloring, cutting paper figures, hide and seek games, sounds, and music as well as worksheets. Spending a happy time learning is a prominent aim of picture book writers. In Eric Hill's *Where's Spot and Spot Goes to the Farm*, the children should lift the flaps to find Spot the dog who hides under rugs, or play hide and seek games behind the doors. Tana Hoban uses animal shadows to help children identify animals in her picture book *Who Are They?* Rosemary Wells' *Bunny Cakes* teaches the children, through Max, the stubborn rabbit child, to make a list of cake ingredients and tools required using special worksheets (Cullinan, 2020). Lois Ehlert's *Color Zoo* introduces children to colors and shapes by using cutouts to build animals in an exciting way for preschoolers. In *Children's Books and Their Creators*, Anita Silvey describes it as a "looking at the world in a new and creative way" (Silvey, 1995, p. 220). Eric Carle, our selected understudy picture books author and illustrator among many other artists, like Ezra Jack Keats, Leo Lionni, Patricia Mullins, also introduced children to life experiences in a very simple way through painting on tissue papers, cutting out shapes, and pasting activities (Huck et al., 2004)

2.2 Concept Development Strategy

Teaching stories by applying the Concept Development Strategy puts children in an essential process of thinking. The great goal of education is to stretch children's skills to think for themselves. Promoting their thinking skills requires a complex mental organization, which leads to observe the universe and to remedy the problems. Cognitive skills are perceived as signs of active responses between children and the stimulations they receive. The fundamental principle of applying this strategy is that understanding is constructed not acquired. The constructive theory of concepts or constructivism confirms that new knowledge is built upon old previous ones. Children's previous experiences stand as a model or schema for their continued learning. In Piaget's theory of cognitive development, exposing children to various schemas explains their different and unique concept development (Wadsworth, 2004). Using the concept development model, however, involves analyzing the relationships between parts of a Concept.

According to Mary Alice, the concept development model is “a model that enables learners to practice in categorizing and performing the other mental processes participatory in developing concepts” (Gunter, Estes, & Mintz, 2010, p.106). Performing all six steps of this strategy in a group assists children to assume in a variety of ways effectively. The flexibility of sharing information increases the high quality of children's understanding. Children enjoy the learning process because the ingredients are their contributions and the products (Gunter et al., 2010).

2.3 *Synectics*

"Synectics" according to Lexico Oxford Dictionary (2010) is "a problem-solving technique which seeks to promote creative thinking, typically among small groups of people of diverse expertise". Its origin goes to "1960s from Late Latin synectics (based on Greek sunekhein 'hold together), on the pattern of dialectics. Children are encouraged to express their ideas convincingly and tackle problems in a new dynamic way. The success of this strategy lies in getting children to see relationships among ideas they might otherwise have never associated. William J. Gordon developed this model in 1961. He suggests "that teachers can directly train students to be aware of their own creative processes and that students can be taught to engage in a metaphoric and creative activity on their own to assist in understanding topics and ideas" (Queen, 2008, p. 190).

Mary Alice and others describe Synectics as an effective strategy in any type of learning and with all ages. Teachers and children are amazed by the imaginative results, and they enjoy the process and are astounded at the metaphor to capture children's imagination (Gunter et al., 2010).

2.4 *VAK learning style*

VAK is considered the most common form of classifying learning, and many educators address this learning style through the game-based learning because it encourages learners to learn using all senses that are “holistically” used (Cariga, Salvador, Solamo, & Ferdia, 2009, p. 108). The V strands for a visual learner who learn best through seeing and responds best to visual stimuli like pictures, illustrations, graphics, etc. The A stands for auditory an learner who learns best through listening, thus, he tends to remember what he hears and prefers hearing about a subject than watching a PowerPoint about it (Cal Varela, Polo, García, & Martinez, 2010). Finally, K stands for kinesthetic learner who learns through doing and performing using physical activities. Such learners involve most of their muscles, creating a motor memory. In American schools, for example, the VAK learning style is widely

used with young children (Cariga et al., 2009) for many reasons, mainly because it is easier to investigate these dimensions compared to other “cognitive or perceptual styles in young children” (Cal Varela et al., 2010, p. 40).

2.5 Previous Works

Picture books have a controlled number of words and sounds. Many words can be difficult for children to understand, yet they will make sense of the meaning while watching the pictures. The colorful artistic illustration increases the child’s vocabulary and encourages learning new words through pictures. Literary devices and elements can be easily introduced, since the number of characters are limited, the plot is simple and the child can conclude the setting and themes with little guidance. Science can also be taught through picture books because the books' format stimulates students, encourages them to connect the illustrations with the character and the storyline, and link them all to the information presented in the story (Ansberry & Emily, 2007). Previous studies have studied picture books as a means for teaching English, and some great examples include a study by Hisu – Chih Sheu that aims to teach the value of English picture books in primary school children (Sheu, 2008). At the same time, another study used picture books to teach English vocabulary to EFL primary school children in Iran (Arash Hashemifardnia, 2018). Some researchers used nature picture books in teaching the English language.

In Iraq, and due to the digital era that people are living in, the use of picture, particularly caricatures have been invested in many cognitive linguistic studies. For instance, Al-Bahrani, Al-Saadi, & Yousif (2016) examined the plural denotations that an image might convey, reflecting as a result the creative sense on the part of the readers; Al-Bahrani & Al-Azzawi (2017) investigated the way visuals play a role in having a creative cognition. Azeez and Al-Bahrani (2019) studied the way caricatures are satirically used to connote social problems; Al-Fatlawi & Al-Bahrani (2019) illustrated the way the participants invest what is displayed visually to generate a conceptual related meaning; and Waad & Al-Bahrani (2020) studied the use of images as a persuasive strategy in tourism. As it is seen, still much work needs to be conducted on the use of visuals in the field of teaching.

A great example is Andi Febriana Tamrin and Sulmi Magfirah study, in which they presented picture books to primary school students to teach them English through picture books about nature (Magfirah, 2019). Other researchers invested picture books in teaching science. An example is a study by Ching – Yuan Hsiao and Pei – Yu Shih in which they taught

environmental protection concepts to children through picture books (Shih, 2015). Sandie Mourao used picture books in primary EFL classrooms to create an authentic environment that produces an authentic response (Mourao, 2016) and Walan's study that used picture books in teaching science (Walan, 2017).

3. Data Analysis

3.1 Eric Carl's Philosophy and Picture Books Analysis

Most of Carle's books are inspired by his love of nature, most of his protagonists are insects or animals and the stories teach simple principles or concepts, like days of the week, life cycle counting, etc. Jack Zipes in *The Oxford Encyclopedia of Children's Literature*, described Carle's stories as having essential human problems like "hunger, loneliness, bad temper, friendship, curiosity, ambition, and confusions are all human themes" (Zipes, 2006). Eric Carle's picture books also provide the child with "built – in participation" as part of their design. Such books serve as both toys and real books. (Huck et al., 2004, p. 124). Some have flaps to lift (My Very First Book.....Series), other have a soft funnel to touch, varying page size like in *The Grouchy Ladybug* (1977), using different types of paper like in *Mister Seahorse* (2004), holes to poke figures through like the holes in the caterpillar's food in *The Very Hungry Caterpillar* (1969), and even a technological support (like the sound of a cricket in *The Very Quiet Cricket* (1990), the click of a beetle in *The Very Clumsy Click Beetle* (1999), tiny blinking lights from the fireflies in *The Very Lonely Firefly* (1995) (Zipes, 2006).

His artwork is unique, since he uses collages. He is famous for cutting out paper tissues that he originally painted, splashed, or dabbed in acrylic paint into desirable shapes and then pasting them on cardboard to create layers. Carle highlighted the final artistic shapes with ink or crayon to emphasize details (Rodgers, 2000). In 2002, Eric and his wife, founded the Eric Carle Museum of Picture Book Arts in Hampshire College Cultural Village. A very large museum for documenting and honoring the art of children's books from all over the world. The museum hosts more than five hundred thousand visitors a year, including school children (Lexico, 2020).

3.2 The First Picture Book Analysis

Inspired by his love of nature, Carle published *The Very Hungry Caterpillar* (1969) to be his celebrated picture book that sold more than fifty

million copies around the world and was translated into more than sixty languages (Blumberg, 2020). The title of the story introduces a caterpillar, an insect, to be the main and only character in the story which, metaphorically speaking, looks like many children at the same stage of age. A stage of life in which the insect needs much food to grow up like any child with other different needs like love, care, and family. Such a subject allows a nice comparison between the lifecycle of an insect and a human, and calls to make a list of needs for each. The plot of the story beautifully portrays the life cycle of a butterfly following its imaginative journey from a tiny egg on a leaf, then, a hungry caterpillar that eats through everything on its way till it becomes a beautiful butterfly. The time structure of the plot as well allows the children to know the days of the week and understand the cycle of time, of day and night, of moon and sun. The setting takes place in nature, where the forest with its trees, leaves, and fruits metaphorically represent a big home for the caterpillar compared to the cocoon as its small house. Such a metaphorical comparison allows a good discussion of the meaning of one's own home and raises children's understanding of the theme of belonging. However, Carle embedded the theme of transformation within the story to describe how the caterpillar is prepared for its journey to transform into a butterfly simulating by that the human's life journey and transformation from a newborn baby into a grown-up man; from an unshaped creature into full shaped. To intensify the motor sense of moving, eating, growing, transferring, and transforming, Carle provided the children with "built-in participation" (Huck et al., 2004, p. 124). The holes he made through the book's pages symbolize the caterpillar's journey throughout all of the various types of food (Zipes, 2006). He wanted the children to understand that food is necessary for living and growing; hence, the caterpillar has to eat a plenty of food to live inside the cocoon to transform into a beautiful butterfly at the end of the journey. Other themes like hunger, obesity, or food problems are suggested throughout the story. Such opportunities also encourage children to talk about personal experiences or examples from their families to understand their dilemma compared to the caterpillar or any other creature's dilemma.

More fun is suggested by the colorful, interesting pictures illustrated by Carle that make it easy to follow the children and help them figure out the story and recognize its character, plot, and setting as literary elements. Furthermore, the question here is: what are the life science concepts associated with this story? And how can we encourage the children to learn these concepts?

Scientifically, Dixhorn (2014) confirmed that children can learn three life science concepts from *The Very Hungry Caterpillar*; insect lifecycle, namely the butterfly, healthy food, and metamorphoses. By encouraging children to draw the butterfly's lifecycle focusing on the four stages egg, larva, pupa (in cocoon which is also called a chrysalis) and butterfly, they will develop a high understanding of the fact of growth and reproduction. If they are not able to draw the life cycle at the beginning, they can cut the stages out of worksheets or some pictures, paste them in the correct order, then color them. Educating children with the types of healthy food, on the other hand, requires them *to follow* the caterpillar's food from day one till it becomes a butterfly. They should be guided to identify junk food and pointing how the caterpillar felt after eating too much junk food. More specifically, healthy food can be identified by introducing MyPlate, a food circle depicting a plate setting divided into five food groups, including fruit, vegetables, grains, proteins, and dairy. Children should also pay attention to the size of each group and its distinctive color. The third life science concept to be learned is metamorphosis which refers to the complete change of character, appearance, or condition. It also means the process by which the young form of insects, frogs, etc., develops into the adult (Cambridge Dictionary, 2020). In other words, it is the scientific explanation of transformation. The child is introduced to all types of insects and how they go through metamorphoses, pointing to the differences in size, shape, and speed. Other picture books by Eric Carle about other insects are recommended to storm children's thinking and raise their understanding like *The Grouching Ladybug* (1977), *The Very Busy Spider* (1984), *The Very Quiet Cricket* (1990), *The Very Lonely Firefly* (1995), and *The Very Clumsy Click Beetle* (1999).

The Very Hungry Caterpillar can teach primary school pupils English literature through the concept development model that involves analyzing the relationships between parts of a concept. The children are invited through brainstorming to find out the relationships between the elements of the story. Hence, the flexibility of this model allows sharing information, which increases children's understanding and encourages their contribution in producing the ideas and figuring out its implications. Considering that children's understanding can be constructed rather than acquired as stated earlier, teachers should apply this strategy step by step (Gunter et al., 2010). Group performance is suggested for all the six steps of this strategy to help raise children's understanding effectively in different ways.

3.2.1 Step One, Listing

The first step of this model is like the brainstorming activity where children are required to give a lot of words from *The Very Hungry Caterpillar* picture book that has been studied in the classroom. Words listed should be specific and written on the board visibly to all classes. According to the questions which are asked by the teacher, for instance: **What is a caterpillar? Can you describe the caterpillar? What did the caterpillar eat? When did it eat an apple (oranges...etc.? How many pears did it eat?**, the teacher encourages all children to participate in this step and generate more than 40 words or items (Table 1). In order to achieve this target, the teacher should use a brainstorming tool like words cluster web to help the children to set up a mind map (Figure 2) followed by a joyful

little/ Hungry /egg /Sunday/morning/ leaf/ Monday/ apple/ Tuesday/ pears/ ate/ plums/ Wednesday / moon/one /salami / Thursday/ sausage / Saturday /one /slice of watermelon/ big /fat /small /two / beautiful /tiny /three /four/ strawberries /five /oranges /Saturday /ice-cream /lollipop /cupcake / cheese/ cocoon /butterfly /chocolate/stomachache

matching activity. The children should be divided into two groups. One group is provided with the cutout pictures to match the words listed on the board while the other group is provided with flashcards. The teacher randomly chooses any word on the board and asks the children to find its matching picture and flashcard. This step increases childrens' grasp of the complexities of perceptions and opens their different points of view.

Table 1
Children's Listed Words
Figure 1



Listing Activity

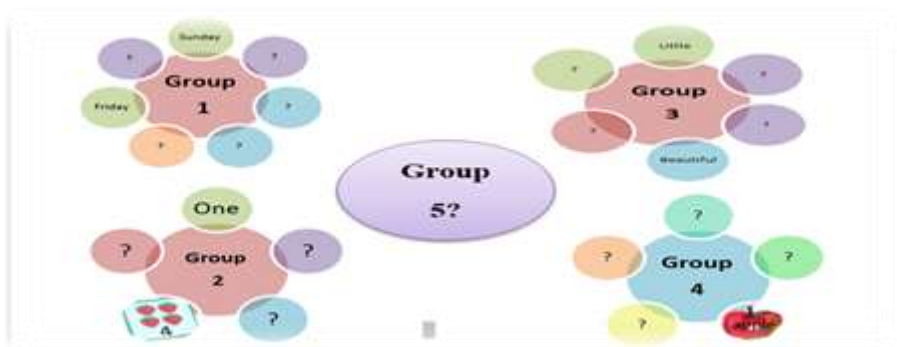
3.2.2 Step Two, Grouping

This step encourages children to identify qualities. After enough words and pictures have been listed on the board, children are asked to examine their relationships and generate new groups. The teacher divides the children into five groups, providing them with pictures and flashcards and asking them: Which of these words you listed go together because they are alike somehow? Children are ready to extract five groups guided by the cluster webs designed by the teacher (see table 2). Children first can loudly tell the missing words to complete the groups. The teacher then provides them with charts to paste on the pictures and words cutouts to complete the cluster web (see figure 2). The teacher should set a limited time to raise the spirit of competition.

Table 2
Grouping

Group1	Group 2	Group 3	Group 4			Group 5
Sunday	one	Little	Apple	Salami	ice-cream	caterpillars
Monday	two	Hungry	Chocolate	cheese	sausage	leaf
Tuesday	three	Fat	Egg	Pears	lollipop	moon
Wednesday	Four	Tiny	slice of watermelon	Cupcake	plums	Morning
Thursday	Five	big	strawberries	Orange		Butterfly
Friday		beautiful				
Saturday						

Figure 2



Grouping Activity

3.2.3 Step Three, Labeling

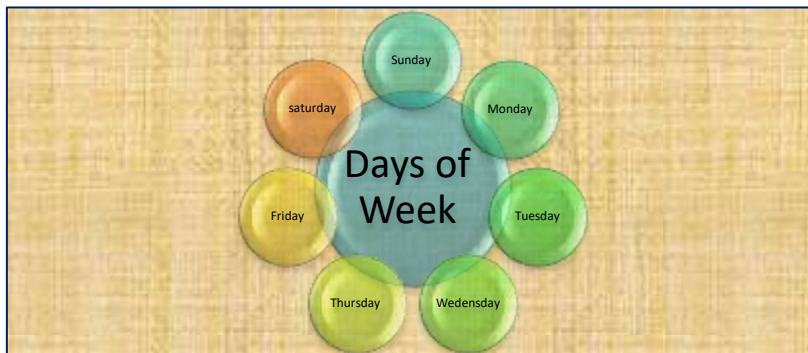
This step strengthens children's ability to generalize. Children are asked to label each group and explain the reasons for their choices (see Table 3).

Children thinking should be grasped to all. The teacher provides children with papers and markers to write the name of each group and paste them on their charts (see Figure 3).

Table 3
Labeling

Days of the week	Numbers	Adjectives	Food	Nouns
Sunday	one	Little	Apple	caterpilla
Monday	two	Hungry	Pears	leaf
Tuesday	three	Fat	Orange	moon
Wednesday	Four	Tiny	Salami	Morning
Thursday	Five	Big	strawberries	Butterfly
Friday		Beautiful	Cheese	cocoon
Saturday			ice-cream....etc.	

Figure 3



Labeling Activity

3.2.4 Step Four, Regrouping

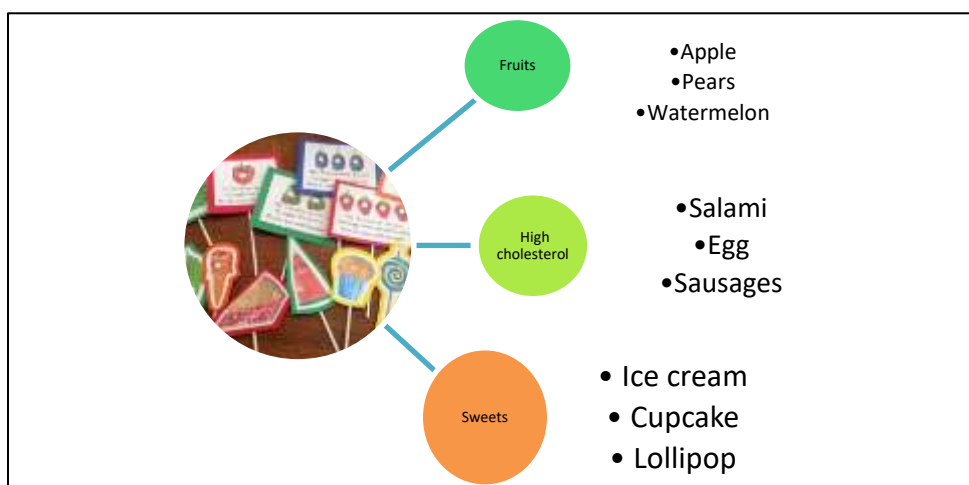
Children are asked to regroup individual words or a whole group under other groups or generate a new group. This step enables children to find out for themselves that each word has more than one characteristic and may be grouped in other ways. The teacher asks his class to regroup and re-label the words in (Table 3) with more flexibility. They must find new relationships

among these words; the most creative connections related to this step. Children will think that one item can be subsumed into two groups at the same step. Foods, for example, are subsumed in one group in (Table 3). Children will be guided to regroup it into three groups as in (Table 4). Nouns are also subsumed in one group in (Table 3), but children will be brainstormed to regroup food into two groups (Table 4). In this activity, children will look for the pictures and flashcards distributed and hidden around the class and regroup on the board like in Figure 4.

Table 4
Regrouping

Foods			Nouns	
Fruits	Foods high in chole:	Sweets	Parts of nat	Insects
Apple	Salami	ice-crear	Moon	Caterpill
Oranges	Sausage	Chocolat	Leaf	Butterfl
Plums	Cheese	Lollipop	Morning	
Slice of waterme	Egg	Cupcake		
Strawberries				
Pears				

Figure 4









Regrouping Activity

3.2.5 Step Five, Synthesizing

Children are asked to look at the board and summarize the whole information, and form

generalizations. The teacher can present examples to encourage children to pick up items and paste them with the matching statements on a chart (Table 5).

Table 5
Generalization

<i>children's generalization</i>	
1	 <p>➤ Caterpillar is the second stage in butterfly cycle life.</p>
2	 <p>➤ Sausage and salami are unhealthy food.</p>
3	 <p>➤ Eating too much causes a stomachache.</p>
4	 <p>➤ Sunday is the first day in a week.</p>
5	 <p>Cocoon is the small house of little and tiny Caterpillar.</p>
6	 <p>Caterpillar grows to be a beautiful butterfly.</p>










3.2.6 Step Six, Evaluating

The teacher assesses children's understanding either through opening discussion or asking them to write a short paragraph using analogy and personification as pairs or groups to share their opinions. Children say or write their analogies, which exhibit their growth and creativity. The teacher can write a paragraph on

a bulletin, hide some words with pictures, then ask children to find out the hidden words, give meanings for the underlined words, and try to change others. More cutouts can be used to replace or hide words (see Figure 5).

Figure 5

Evaluating Children's Application


 ___ makes me feel  to grow but never to  in such way
 and I will ----- healthy ---- to avoid diseases. I will eat different types off
 ----- along the week. There are seven days in a week and Sunday is th
 first day in school.  and  are the week----- holiday
 My----  protects me as her----  . My house is bigger
 than the caterpillar's house.

Evaluating Chart

3.3 The Second Picture Book Analysis

As usual, Eric Carle introduced a one-character story within *The Tiny Seed* (1970) represented here by the tiny seed. He also introduced different settings to raise children's understanding of nature diversity (rivers, oceans, deserts, mountains). The plot of this picture book follows the journey of a small seed along with many other seeds through different places like oceans, deserts, mountains, etc. facing and surviving many difficulties of getting burnt by the sun, eaten by birds, drawn in water till finally. Very few seeds manage to plant themselves in the ground to grow; yet dilemmas never stop. Not all seeds grow into flowers. Other animals eat some. Others dry out because of weeds. The very few who survive to become flowers are picked by children. Only the tiny seed has the chance to grow into a full length, becoming a large beautiful sunflower spreading its own seeds to the world. In this picture book, Carle presented themes like growing and development, life-cycle, difficulties, loneliness, fear, reproduction, and survival in a very simple yet philosophical way in order to raise children's understanding of life. By using collage combinations of shapes, textures, cut papers, and paints, he reinforced the meanings of the words to be easily understood by the children. However, parents and teachers can boost children's understanding of the story language and themes by encouraging them to write and draw another story using their own imagination. They also can guide them through pictures matching activities with the elements of the story. A role-play activity will also add more fun.









In this picture book, the child will learn three main life science concepts; seed gathering and distribution, life cycle and parts of plants, growth conditions and germination. According to Carol and Butzow (as cited in Butzow & Butzow, 2000), in their book *Science through children's literature: Interrogated approach*, for the pupil to fully understand each of these three scientific concepts, they should do different activities such as seed gathering and observation in order to encourage children to classify them according to type, shape, size, and color; and try to guess the plant to which this seed belongs. Using guided-discovery, the teacher should point out to the children that different seeds are used for different things. Some seeds are used for making bread like wheat, rice, corn, oats, and each type of bread is related to a different religious or cultural ceremony. Other seeds are used for cooking like spices, beans, peas, etc. while some seeds are poisons like poinsettias. More to be understood about seeds distribution. The seed in this book spreads through being blown into the winds, floated on the water, glided, or stuck on animals and people. The teacher should encourage



children to label the types of seeds they have observed and how they spread. Another important activity is to remind the pupils that some seeds may be lost and ruined because of certain conditions. The child is encouraged accordingly to identify bad conditions for seeds distribution like being burnt in the sun, soaked in water, bad weather, being eaten by other animals, etc. (Flagg & Ory, 1998). Secondly, understanding the life cycle & parts of the plant invites the children to follow the plant's life cycle from seed to a giant sunflower. The children then are asked to draw the life cycle from seed to flower. In addition to that the children are encouraged to draw parts of the plant starting from roots, stem, leaves, and flower. The third life science concept is Growth. The children are guided to identify all the conditions that faced the tiny seed during its journey and classify them into bad conditions and good conditions. The four seasons and their effect on seeds and plants should be observed too as well as the differences among plants in their need for growth.

The Tiny Seed picture book can be adopted to teach children English literature through focusing on the power of metaphor to expand their imagination and creative thinking using problem-solving models or synectics as a pedagogy strategy. Following are the seven steps to be applied in order to raise children's understanding of literature starting from describing a character, creating direct analogies, describing personal analogies, identifying compressed conflict, creating a new direct analogy, reexamining the topic, and evaluating.

Table 6
Describing A Character

<i>keywords</i>	<i>Pictures</i>	<i>Description</i>
1 tiny/small/ (big/giant)		<ul style="list-style-type: none"> - Is it a small or big plant? - It is a small plant.
2 strong/powerful/ (weak)		<ul style="list-style-type: none"> - Do you think it is strong and stable or weak? - It is strong and stable.
3 beautiful/nice/ (ugly)		<ul style="list-style-type: none"> - What does it need to grow and be a beautiful flower? - It needs sunlight and water to grow and be a beautiful flower.
4 roots/legs		<ul style="list-style-type: none"> - How does this flower stand on earth? Does it have legs like us... or roots? - It doesn't have legs. It has roots.
5 leaves/arms		<ul style="list-style-type: none"> - What about the arms? Does it have arms or leaves? Do you think that leaves look like arms? - It has leaves. They look like arms.
6 giant/big/large (small/tiny)		<ul style="list-style-type: none"> - Petals are the colored crown of the flowers. Do you think that a giant flower also contains/has petals like a small/tiny flower? A giant flower also contains petals.
7 afraid/ scared/ frightened		<p>What is it afraid of?</p> <p>It is afraid of winds, birds, mice, and people s' footsteps.</p>
8 generate/ make		<ul style="list-style-type: none"> - Winds however are helpful. How do they help the flower? - Winds help it to generate new seeds.

3.3.1 Step One, Describing a Character

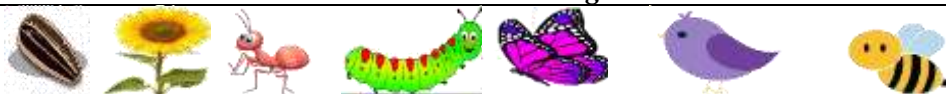
The teacher reads The Tiny Seed story or displays a video. After listening to the story, the teacher then starts questions to brainstorm children using keywords and pictures resembling or contradicting the main character's qualities, 'the tiny seed', to help children state their description. The teacher reads The Tiny Seed story or displays a video. After listening to the story, the teacher prepares the children to describe the main character (the tiny seed) in a

few words or phrases, and all their descriptive words should be written on the board under the topic ***The Tiny Seed***. An introductory to adjectives as came in the story should precede referring to their synonyms and antonyms in order to stimulate children's imagination like (tiny/small, giant/ large, strong /powerful /weak , beautiful / nice / ugly, roots / legs, leaves / arms, afraid / scared / terrified / frightened, generate/ make). The teacher then starts questions to brainstorm children using keywords and pictures resembling or contradicting the main character's qualities, 'the tiny seed', to help children state their description (see Table 6).

3.3.2 Step Two, Creating Direct Analogies

The teacher gives children a few minutes to scan a list of illustrations (a flower, an ant, a caterpillar, a butterfly, a bird, a bee; see Table 7) and name an animal that reminds them of the tiny seed's same qualities as many as possible. The teacher writes each child's contribution on the board and asks them to explain why they chose a particular analogy like (The tiny seed looks like an ant because both of them have a small size).

Table 7
Creating Direct Analogy
Children's Direct Analogies



- 1 The tiny seed looks like an ant, because both of them have a small size.
- 2 - I'm also saying it looks like an **ant** because even it is a small insect but carry heavy
- things that is similar to the tiny seed which faced different conditions like rains
- , heat of sun , unsettled weather with four seasons....etc. as well as both of them
- die by people s' footsteps.
- 3 - It seems as a **caterpillar** because they will grow to be a flower (reproduction and
- growth in plants) and butterfly (reproduction and growth in insects).
- 4 - I think as **birds** because they both fly! Strong winds take birds to new direction and
- blow tiny seeds to other land for distribution process.
- 5 - It's like a **bee** because both of them are considered useful producers. Bee gives
- us honey and the tiny seed may give us vegetables, fruits or fragrant flowers.

3.3.3 Step Three, Describing Personal Analogies

In this step of the model, the teacher asks the class to change the request from a direct analogy to a personal analogy. Asking them to close their eyes and imagine

themselves instead of the tiny seed: 'Tell me about your feelings and I will write them on the board.' Children can describe their feelings and listen to each other while the teacher is listing them as shown in Table 8.



Table 8

Describing Personal Analogy

Children's Feelings/ Personal Analogy

- 1- I feel sad and lonely. There are no other plants around me. It is winter.
- 2- I 'm not weak. I feel strong and powerful. Even winds cannot blow me out.
- 3 - I am a small plant. Giant trees cannot see me. I'm shorter than them .
- 4 - I'm frightened. I hide myself from people s' steps, strong winds, and sun to be secured.
- 5- I feel stuck /imprisoned. My roots go deep into earth. I just have to stay here until grow
-free and independent.
- 6 - I feel hopeful. I'll be taller than others. In spring I will grow to be a beautiful and a
-giant flower or fruitful plant .

3.3.4 Step Four, Identifying Compressed Conflict

It is an important step that enables children to think of words that fight each other. The teacher asks children to select two words of

deceptive feelings (from Table 8) and put them together as a pair (strong and imprisoned), (small and weak) as shown in Table 9.

Table 9

Identifying Compressed Conflict

Words that fight /conflict each other

1. Shorter and taller
2. Frightened and secured
3. Small and giant
4. Strong and weak
5. Imprisoned and free/independent
6. Sad and hopeful

3.3.5 Step Five, Creating a new direct analogy

The teacher instructs children to create another analogy by using compressed conflict. To expand their thinking, children are asked to describe an animal, food, and people depending on words from the story (The lion is strong and imprisoned), (The baby is small and weak), as shown in Table 10.

Table 10
Creating a New Direct Analogy
Children's New Direct Analogies

		
<ol style="list-style-type: none"> 1 A lion in a cage 2 A baby in the family 3 A hot sauce in a bottle 		<p>The lion is strong and imprisoned. The baby is small and weak. The bottle is independent and the sauce is imprisoned.</p>

3.3.6 Step Six, Reexamining the Original Topic

It is a step that stimulates children's' enthusiasm and excitement to describe the original idea or story depending on all the previous steps. Children are asked to discuss or explain the tiny seed in their own words, phrases, and sentences like (Wind blows the seeds) and (Birds eat the seeds); see Table 11.

Table 11
Reexamining the Original Topic
Children's Sentences

<ol style="list-style-type: none"> 1 Tiny seed is a part of plant, it is a first step in plant cycle life. 2 It has root, steam, and leaves. 3 The sun burns the seeds. 4 Wind blows the seeds. 5 Birds eat the seeds. 6 People s' steps break the plants. 7 The tiny seeds grows in spring. 8 In summer, the tiny plant become a giant flower.

3.3.7 Step Seven, Evaluating

The teacher determines the effectiveness of the steps on a class and individual basis. Children are asked to illustrate or describe their responses to the process and write their feelings on a designed sheet as shown in Table 12 to say if they are (Excited, interested, bored, frustrated, Angry) for this activity or on the board. If a number of children indicate frustration, anger, or boredom at this strategy, have a class discussion on the problem and give feedback.

Table 12
Evaluating Sheet
Evaluating Sheet

Name:-----Class:-----Date:-----

You could choose one of these emojis ١ Excited interested bored frustrated Angry
match your responses by ticking with (✓)



- 1- Describing the tiny seed makes me feel.....
- 2- Learning about similar character makes me feel.....
- 3- Describing my feelings makes me feel.....
- 4- Learning conflict words makes me feel..

4. Conclusions

Literary engagement through picture books certainly flames children's understanding of English literature as well as develops their imaginative thinking especially in early age as being confirmed by theorists. Children's picture books in general are so important in learning English Language and other sciences in Elementary schools for their simple language and lovely illustrations that suit the ages of the elementary schoolers. Therefore, they are the best candidate for teaching and learning EFL in addition to other subjects for non- English speakers like Iraqi children for example as interdisciplinary teaching approach. Comparing to another Arabic country like UAE, teaching and learning EFL always suffers from real-life application and field practicing in Iraq whether in the elementary schools or any other advanced schools since there is no other way but the classroom to practice the English Language and under the teachers' guidance. Considering the ministerial instructions, the first responsibility of the teachers is to cover the National Curriculum as much as they could. Matters like encouraging conceptual or textual development, fluency, creativity, problem-solving, and communication, come next based on the time allowed during the academic year and teachers' experience and passion. Hence, such a problem of a lower level of understanding appears among the majority of pupils and students when learning English Language in all Iraqi schools except those private schools. In this collaboration theoretical research, literature and teaching



methods researchers try to introduce a proposed integrated approach for teaching and learning English Literature and Life Science using selected picture books by Eric Carle suitable for the nature of the national curriculum of Life Science and English Language material for elementary schools in Iraq as a contribution to solve this problem. Keeping in mind, picture books if carefully selected and used can offer a real-life application and give the elementary schoolers a new area to practice and explore. Guiding children to think out of the box and developing their cognitive achievements and creativity through literary engagement would evolve their conceptual cognition highly in learning other materials like sciences and arts. English Language educators and writers have already provided the world with a rich and exciting material through picture books to teach children English Literature and life sciences simultaneously in a very joyful way. All that we need as English language and literature teachers is to invest these easily accessed books in lesson plans in the future with visual, auditory, and kinesthetic (VAK) activities to raise children's understanding of English literature and life science. Being inhibited by coronavirus lockdown make it imposible to apply this approach hoping other scholars to apply this recommended genre of literature in order to achieve better understanding and high cognitive development. This study has paved the way for other researchers to uncover a new critical area in children's educational process using the same or other genres of literature.



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