Picture book conventions play significant influences for raising young children's environmental awareness.

How effective are picture books as an educational resource to raise environmental consciousness in young children?

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This dissertation is submitted to

Waikato Institute of Technology

for a

Master of Arts (Visual Design)

Word Count 8070

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Introduction

Social development and technological progress have not only brought people a comfortable life but have also caused damage to the environment. Human exploitation and using natural resources have led to the exhaustion of these resources, throwing off the ecological balance and creating more problems that will eventually come back to haunt humanity (Tamrin, 2018, p. 2). Despite this, healthy food, clean air, and good water are human necessities; therefore, it is necessary to maintain a sustainable relationship with the environment. According to Brennan (2008, p. 5), the future of children is the future of humankind; if this is the case, it is essential to cultivate children's environmental awareness. But how are we to do this?

This essay argues that children's picture books can serve as valuable educational tools to introduce and promote learning about environmental destruction. Through engaging storytelling, visual learning, emotional connections, and positive role models, these books can empower young readers to become more aware, knowledgeable, and active in protecting the environment.

Picture books, especially during the young years, can help children learn about the environment and build positive attitudes, thus encouraging them to take action to protect the environment. The first part of this essay will discuss, firstly, the importance of environmental education and, secondly, why the young age is suitable for cultivating environmental awareness, owing to preschool-age children's cognitive development characteristics at this stage. Thirdly, the role and influence of picture books on children will be discussed.

In the second part of this essay, four exemplary picture books suitable for young children will be analysed. These are *The Last Tree*, *Animals Should Definitely Not Wear Clothing*, *The Little House*, and *TIDY*. The visual elements in those four picture books will be analysed, exploring how picture books, and their conventions can effectively raise children's environmental awareness.

The importance of environmental education

Solving environmental problems and maintaining a sustainable relationship with the natural environment is not solved in a single step; it requires continuous efforts from generation to generation. Despite this, education is a vital early step in raising awareness of protecting the environment. According to Hsian and Shih (2016), environmental education is "a vital issue in global education" (p. 2); on top of this, environmental education can help develop and build people's attitudes, values, awareness, knowledge, and environmental skills (Chen, 2022, p. 3). Erhabor (2018) observed that environmental education is essential in building positive attitudes toward solving environmental issues (p. 2), cultivating a hopeful movement for ecological protection. Erhabor also suggests that to achieve environmental education, leaders with extensive knowledge, critical perspectives and intense awareness of environmental ethics can help people make positive changes and thus move towards a better future (p. 2), and as the cliche goes, todays children are tomorrows leaders.

Although environmental education is essential for everyone, targeting preschoolers is especially important as they have specific developmental characteristics that make them especially receptive towards such education. Children are easy to educate at this age because their minds are open, unlike adults who have already formed their inherent ideology, which is difficult to change (Brennan, 2008, p. 5). The following part of the essay will discuss why environmental education is more important for young children from the perspective of those developmental characteristics.

Developmental characteristics of young children

It is important to focus on cultivating ecological awareness in children because as Louv (2005, as cited in Brennan, 2008) argues educating the next generation determines how the next generation will educate their future generations (p. 5). Tamrin (2018) suggests that a key developmental characteristic of children is that children are inquisitive about their surroundings (p. 2). Moreover, Witt and Kimple (as cited in Hsiao and Shih) noted that "childhood is the most influential period for absorbing new concepts" (p. 37). The American Psychological Association (2023) interprets childhood as occuring from late infancy to early adolescence, from two to ten years of age. The Finnish National Syllabus for Early Childhood Education and Care (as cited in Hannikainen, 2010) claims that the "younger the child is, the greater the extent to which interactions between the child and educators take place in care situations" (p. 104). This means that the younger the child is, the more receptive he or she will be to the educator or parents. Suppose educators expose children to and interact with environmental topics as early as possible, in this case, these young children will be more interested in exploring environmental issues, thus improving people's environmental awareness to a large extent. Parents' or educators' actions will affect children's behaviours, as Grodzieka-Jurczak et al. (2006, as cited in Hsiao and Shih, 2016) stated that "the behaviours of parents have a significant impact on children's environmental knowledge and attitude towards the environment (p. 38). Picture books as a medium provide a simple and efficient way for children and their parents to communicate. Although a picture book is necessarily simplified and reductive, ensuring information is comprehensible to children, it is still crucial to cultivate an ecological awareness at the low comprehension age. By reading picture books on environment-related topics, communication and discussion with each other are encouraged. Therefore, two to six years old is the most suitable stage for environmental awareness education.

The role and influence of picture books on children

In 1841, a children's book called *Mother's Gift to Children* was published, Australia's first children's book. In 1865, colour printing became popular and, as Salisbury (2004) puts it, "what has come to be known as the 'golden age' of book illustration in England and America" (p. 10) began. Caldecott ushered in a new era of picture books and is arguably the "father of the modern picture book" (Salisbury, 2004, p. 11). After the Second World War, picture books began to be recognised as playing an essential role in children's education. From this point, picture books were strongly supported, for example, by the New South Wales Children's Book Council and the National Book Awards.

Previously picture books were characterised as "interpreting or embellishing textual information by adding visual representations" (Salisbury & Styles, 2012, p. 7). In other words, illustrations were added to the story to anchor and supplement the text. Unlike before, today's picture books combine words with pictures to tell a story together (Salisbury & Styles, 2012, p. 7). A picture book is a successful and exciting way of telling a story and can provide readers fun (Nodelman, 1988, p. 3). However, many researchers also believe that reading picture books has many benefits for children, such as the development of cognition, imagination, communication and expression, a sense of beauty, social emotion, reading behaviour and character formation (as cited in Hsiao and Shih, 2016, p. 38). Hirsh-Pasek and Golinkoff (2003, as cited in Hsiao and Shih, 2016) pointed out that the "picture book could be a natural and non-threatening way to help children develop skills and learn important concepts" (p. 38).

One thing that make picture books effective for targeting young children is that both words and pictures can convey information (Nodelman, 1988, p. 2). And as Bishop Comenius (a Bishop of Leszno in Poland) suggested pictures are the easiest and most attractive way for children to learn (Salisbury, 2004, p. 8). As Nodelman (1988) states, in picture books, the pictures have the function of attraction (p. 3). The text can help the picture complete the content or meaning that the creator wants to express, so as to avoid readers misunderstanding the visual information in the picture (Nodelman, 1988, p. 195). Viewers are happy to be in

contact with these images. British art historian E. H. Gombrich (1961, p. 82, as cited in Nodelman, 1988, p. 4) said in *The Visual Image* that the visual image has the highest stimulating ability. So, the picture can arouse readers' interest, catch children's attention, and let them read the text (Nodelman, 1988, p. 4). Furthermore, Sutherland, Monson and Arbuthnot (1981, p. 124, as cited in Nodelman, 1988) said that pictures attract children to maintain their interest, or it can help them learn a specific subject (p. 4). Nodelman (1988) explained the viewpoint of *Orbis Pictus*, a textbook with illustrations, saying, "Pictures are a visual aid, a means of conveying information to inexperienced listeners and readers. These messages cannot be conveyed by words alone (p. 4). Moreover, he also pointed out that the pictures in *Orbis Pictus* could help readers better understand the meaning of the words (Nodelman, 1988, p. 2).

A vital experiment by psychologists Julian Hochberg and Virginia Brooks demonstrated that humans are born with some ability to recognise images (Nodelman, 1988, p. 6). John M. Kennedy's research in *A Psychology of Picture Perception* also shows that many animals, including humans, can obtain information from line drawings (Nodelman, 1988, p. 6). So, images can convey messages. The drawing is interesting, can attract the reader's attention, and provide fun. Therefore, pictures will not bring psychological pressure on people. That is to say, when children look at pictures, they do not need to think. Pictures can convey information better than words, and can also make readers better understand (Nodelman, 1988, p. 5). Therefore, when children read picture books with environmental concepts, picture books attract readers, convey information, provide fun at the same time, teach about the environment-related content, and unconsciously cultivate children's environmental awareness.

Through their pictures, picture books transform complex environmental topics containing many technical and scientific words into an accessible, easy, and non-threatening reading format for children. This allows children the empathise with characters. It is impractical to communicate with children using specialist vocabulary. The text needs to be transformed into a language children can understand and enjoy. On top of this, telling children the truth should not be cast aside for engaging prose and a happy ending. They must be aware of the problems

and try to understand them, not just be told the good side. The power of education is vast and affects a child's whole life. The role of the picture book is to cultivate awareness not deliver pure fact. In this way, we can raise the capability of independent and critical thinking and judgement in children. Despite this, we also need to know whether the child will become anxious after learning about environmental destruction's problematic and worrying consequences (Medress, 2008, p. 9).

As stated regarding Erikson's theory, children's habits should be cultivated from an early age, and good habits are the cornerstone of children's success, suggesting that it is vital to educate children about the environment, which is effective through picture books from the age of two to six (Wilson, 2011, p. 90). However, how do conventions of picture books help children become more aware of the environment? In the following section, there is an analysis of four picture books about the environment that are outstanding examples of picture books for raising ecological awareness. They all use different design conventions to tell stories and influence the reader's reading experience. Some of the examples are what are called wordless books (or books with few words) that draw the reader closer to the environment in a specific graphic style using the pictures in the book, allowing the reader to become immersed and experience the problems encountered in the picture book. Some books will use text and dynamic typographic treatments to help anchor and supplement the meaning of the visual aspects of the story. The following section will explain the relationship between pictures and words from a graphic design perspective.

The first book: The Last Tree

This section will discuss how the picture book *The Last Tree* explores complex ecological concepts and helps readers gain environmental awareness in an engaging and meaningful way for young audiences. The Last Tree was published in 2014. It was created by author, illustrator and educator Emily Haworth-Booth. The story shows people cutting down trees to construct a comfortable living environment, including houses, fences and tall tree walls. Many trees were cut down, and only the last tree was not cut down. At the same time, people slowly began to forget about games and singing. The heart between people is also like a wall of trees, becoming cold and strange. In order to strengthen the house, parents asked their children to hurry to bring home the last tree before the neighbours did. Nevertheless, the child took care of the last tree instead of cutting it down. When the children were taking care of the last tree, they found that everyone began playing and singing happily together. Therefore, people tore down the tall wall of trees that had been built before. This action also indicates that the tree wall (the barrier between people) between people has been broken, and everyone lives happily together in a new forest they cultivated. Finally, this story's ending says, "the last tree became the first" (Haworth-Booth, 2014, p. 32). The ending leaves space for the reader's imagination and brings hope to the reader.

The narrative of *The Last Tree* is a story of hope and rebellion about people's relationship to their environment and each other, this story not only brings hope to people but also leads readers to think about the changes in the relationship between people due to the changes in the living environment. The story also reminds the reader to remember to focus on the ordinary but happy life. It also guides readers to consider the harmonious coexistence between people and the environment and interpersonal relationships. However, reading this exciting story, children will realise that there are better ways to help improve people's lives than cutting down as many trees as possible to build tall "tree walls" to help people improve their living comfort. It also makes the reader understand the principle that the acquisition or use of tree resources should be controlled. In addition, through reading this story, the children can explore how to reach the balance point between people and nature and between man and man, which is crucial to solving the harmonious coexistence between man and himself. Other

than narrative, *The Last Tree* utilises several picture book conventions such as: colours, double-page spreads, lines, montages and close-up perspectives to influence the readers' reading experience and help raise environmental awareness.

The first picture book design convention I will discuss is the use of colour in illustrated works. Villarreal et al. (2015) discussed the purposes of colour, including "character traits and emotions, establishing mood, providing setting information, and drawing attention to objects or characters" (p. 272). For example, the use of colour in the fourth spread of *The Last Tree*, as shown in Figure 1-1, colour is used to help provide contextual information. Using different colours implies changes in the story scene and time, and carries certain connotations. Figure 1-1 shows a double-spread page with four vertical drawings from left to right. The first of those four images on the left has a large area of green to show that people live in the forest, with a small amount of orange to show that it is autumn and winter is

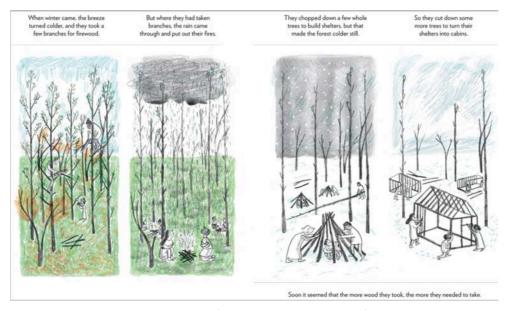


Figure 1-1. (Haworth-Booth, 2020).

approaching. In Figure 1-1, the second picture uses black curved lines to replace the blue straight lines of the first picture, indicating that it is raining in the area where the people live. In the third picture in Figure 1-1, the black is increased, and the green is not present at this

time, indicating that people are now living in winter. In the fourth picture, the use of black and grey is reduced, and the appearance of the blue lines suggests that people are almost through the winter. Turning to the fifth spread, it turns green again, showing that people are returning to summer as well as connoting hope.

The second picture book design feature is double-page spreads. Villarreal (2015) talks about placing pictures on double-page spreads of a book and immersing readers in the pictures (p. 270). *The Last Tree*'s third, seventh, eighth, thirteenth, and fifteenth spreads use this double-page spread display to bring the reader into the story. Figure 1-2 shows the third spread page, and Figure 1-3 shows the seventh spread page. Pictures 1-2 are displayed with double pages and no borders, allowing readers to have the same happy feeling of playing and living in the forest as the people in the pictures. In Figure 1-3, the double cross-page display of pictures gives readers a complete and grand perspective. The reader who is immersed in the picture will be shocked at the great project of the "tree wall" created by the people in the pictures.

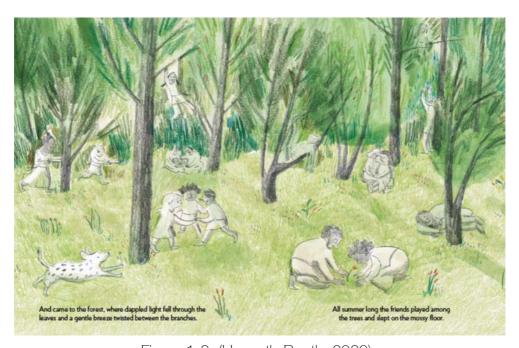


Figure 1-2. (Haworth-Booth, 2020).

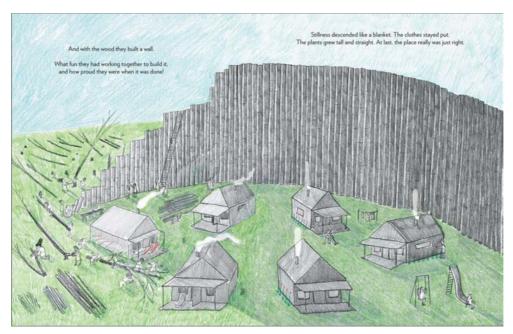


Figure 1-3. (Haworth-Booth, 2020).

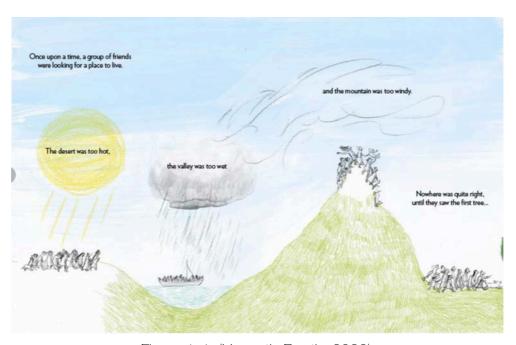


Figure 1-4. (Haworth-Booth, 2020)

The third convention in pictures is the use of lines. Lines in the picture section of children's picture books can help form pictures or guide readers to read. Moreover, using lines in the drawing can also play a role in emphasising, and expressing a specific area, covering

movement and creating tension (Villarreal, 2015, p. 272). In the second spread of *The Last Tree*, as shown in Figure 1-4, straight lines and curved lines are used to express the area of the sun, rain and wind and their directions, respectively. They also play the role of expressing tension and an intense atmosphere. Moreover, on the eighth spread of the book, as shown in Figure 1-5, the author uses a large area of dense black and white lines with different thicknesses to form the picture of a "tree wall" and emphasises that the "tree wall" built by people in the story is very airtight, giving readers a feeling of depression and inability to breathe.

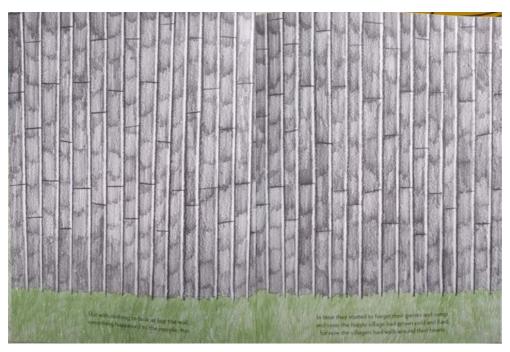


Figure 1-5. (Haworth-Booth, 2020).

A montage is a technique of expression in a film. Using montage is the fourth picture book design convention used in this book. The picture section of a picture book will use a montage as an expression to convey different messages. The creator can use the montage method to show the changes in a story over a period of time to readers (Villarreal, 2015, p. 270). The general picture only shows the content of the moment, while the montage expression technique combines the appearance of the same thing at different moments to show the

change of the thing in a certain period of time. For example, on page 21 of *The Last Tree*, as shown in Figure 1-6, a montage is used to show the growth and change of a tree from small to large over a period of time. Additionally, on page 24, as shown in Figure 1-7, it also uses a montage to show the process of wind damage to the houses due to the disappearance of the forest, which conveys the visual feeling of the houses being destroyed and gives readers a sense of escaping from the house.



Figure 1-6. (Haworth-Booth, 2020).

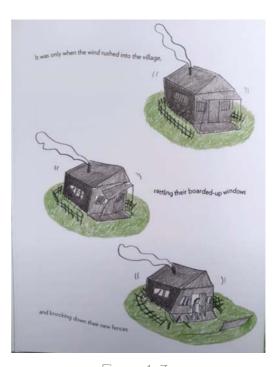


Figure 1-7. (Haworth-Booth, 2020).

The last picture book design convention of this book is close-up perspective. The illustrator uses a close-up perspective to give readers more details while also influencing readers' emotions. As mentioned by Giorgis et al. in *Visual Literacy* (1999), "these perspectives may affect readers' feelings about the scene, influence their state toward the character, or heighten their response to the story itself (p. 149) ". For example, perspective switching is used from the seventh (see Figure 1-3) to the eighth (see Figure 1-5) of *The Last Tree*. From the overall macro view of the seventh spread (Figure 1-3), readers can see the whole scene of people's

everyday living, including houses and protective wall made of trees. When turning to the next page (Figure 1-5), the reader can get a close-up view and feel how the "tree wall" looks. This close perspective brings the "tree wall" closer to the reader's eyes, and gives the reader a sense of pressure brought by the tall "tree wall", and enhances the reader's understanding that the "tree wall" is a super huge project. This sense of suffocation brought by the "tree wall" also implies the atmosphere of despair brought by people's abuse of tree resources and depletion of resources.

In this book, the conventions of use of colour, the placement of the double spread pages, the use of lines in some of the pictures, the montage, and the close-up perspective, all play a role in guiding reader's reading experience. These pictures can help children develop their mindfulness. At the same time, let children know about the destruction of the forest environment, the impact on human beings and changes. The book also uses montage expressions to help children develop their imaginations. Therefore, for *The Last Tree*, some visual narrative features are to help children's cognitive development and also to make children think about the purpose of harmonious coexistence between human beings and the environment to improve children's awareness of environmental protection. This kind of picture book is easy for children aged 2 to 6 to read but is also conducive to discussions between children and educators on environmental protection. This book can significantly improve children's awareness of environmental awareness.

The second book: Animals Should Definitely Not Wear Clothing.

This book helps children to improve their environmental awareness of harmony between humans and animals. This section will discuss how *Animals Should Definitely Not Wear Clothing* uses picture book conventions to help children build their environmental awareness. These conventions include personification, humour, typographic treatment, the counterpoint of picture and text, and the use of colours.

This book was written by Judi Barrett and illustrated by Ron Barrett. The picture book does not have a linear storyline or plot, but instead uses words and drawings with a sense of order and repetition to show the readers why animals do not need to wear clothes. For example, in the third spread of the book, as shown in Figure 2-1, the picture shows a clothed porcupine with her punctured clothes by its spines, with the text "because it would be disastrous for a porcupine" (Barrett, 1988, p. 6). The following page is similar to Figure 2-1. The text starts with the word "because", and pictures show different animals wearing clothes.



Figure 2-1. (Barrett, 1970).

Instead of using exciting stories to attract readers, the book utilises personification presenting different kinds of animals that children like as characters to attract readers' attention. The humour expressed by these absurd images makes children feel happy in a funny and pleasant reading experience. This personification and humour make this a suitable picture book for children aged 2-6 to read. It allows children to think and explore, developing their memory, observation, perception and imagination. Through reading this picture book, children can speculate about animals wearing clothes and what kind of attitude and mood these animals wearing clothes developing the readers.

The second picture book convention involved in this book is typographic treatment in picture books. Picture book artists regard words as part of the visual image (Nodelman, 1988, p. 53). Moreover, words help form the visual balance of each page in a book and disturb its visual balance (Nodelman, 1988, p. 54). In the book Animals Should Definitely Not Wear Clothing, one page is text, the other is a picture. The text is large, that is, the visual weight of the text is large, in order to balance the visual balance of the picture as a whole. In addition, the text size in picture books tends to vary according to the age group of the picture book's target audience. Nodelman (1988) mentioned in Words About Pictures that it is common practice for picture books to choose large font sizes for young children (p. 53). Furthermore, in order to highlight the importance of words in picture books, words are also enlarged in some picture books (Goldsmith, 1986, as cited in Nodelman, 1988, p. 53-54). The composition of pictures and texts, that is the relative position of pictures and words, is significant in the narrative. Goldsmith (1986, as cited in Nodelman, 1988) also stated in Learning from Illustration that placing words to the left, right, above, or below a picture, may affect the reader's reading time specifically the pace of the narrative. In the book Animals Should Definitely Not Wear Clothing, the placement of the text will change repeatedly. Sometimes the text will be placed on the left side of the spread and the picture on the right. Such changes in the position relationship between pictures and texts will change the rhythm of readers' responses, affecting readers' reading order to a certain extent and thus affecting the reading time.

The third convention in this book is using contrasting colours. In *Animals Should Definitely Not Wear Clothing*, readers can find the conflict between red and green colours used by the author in every picture to imply conflict and stimulation (Nodelman, 1988, p. 64). For example, this book's 14th and 15th spread pages are shown in Figures 2-2 and 2-3. First of all, it can be found that the overall tone of Figure 2-2 and Figure 2-3 are in conflict. One is in a red tone, and the other is in a green tone. Secondly, in Figure 2-2, the pants worn by the moose are green, while the belt is red, creating a conflict between the two. And the green pants don't match the red moose. Then look at Figure 2-3, which consists of three rats hanging upside down and wearing red or green clothes respectively. First, a mouse dressed in green is in the middle of the frame, in conflict with the other two mice dressed in red on either side of it. These colour conflicts stimulate the reader's reading experience and strongly attract readers to continue reading.



Figure 2-2. (Barrett, 1970).



Figure 2-3. (Barrett, 1970).

In Animals Should Definitely Not Wear Clothing, the convention of this picture book include typography treatment, the change in the position of texts and pictures, and the use of contrasting colours. These expressions of design conventions let children to focus their attention on the picture and make the readers have a pleasant visual experience. The use of animals in pictures catches the reader's attention first, as children love animals. Animals are also used here to inspire empathy in children. The ironic pictures also expose the destruction and intrusion of human beings into the living space of animals. It also guides children to think about the behaviour of animals wearing clothes, which to a large extent helps readers to raise the awareness that humans should live in harmony with animals and should not interfere too much in their lives.

The third book is The Little House

This section will discuss how the book *The Little House* transforms complex environmental problems into a form children can easily understand and accept to help readers build a sense of harmony with nature. Virginia Lee Burton created *The Little House* in 1942. The protagonist of this book is a small house. "She" is located in the countryside, surrounded by beautiful scenery, and can feel the cyclical changes of sunrise, sunset, the moon waxing and waning, and seasons. However, due to the development and expansion of the city, the tiny house is gradually surrounded by tall buildings, thus losing those precious views and experiences from nature. Finally, the little house has to move away from the city and come to a place where she can experience nature again. The following paragraphs will discuss some picture book conventions used in *The Little House* that help raise environmental awareness. Those conventions are personification, use of curves, and colours in this picture book, which all influence the reader's reading experience.

First, as mentioned above, the little house is personified by the creator and endowed with human perception. In the book *The Little House*, anthropomorphic features can attract children to empathise from the perspective of the tiny house. This way can help children to perceive, learn and to discover how beautiful the natural environment around human beings is. When people lose the beauty of nature, their surroundings and emotions change. Therefore, *The Little House* is a worthy picture book for children aged 2 to 6 to read and learn. In this book, readers' perception, empathy, observation and thinking skills can be developed by allowing children to understand that irregular urban development in the occupation of farmland and land resources also brings anxiety. By reading *The Little House*, these 2-6 years old children with little social experience can quickly without pressure understand the environmental concepts involved. Therefore, *The Little House* picture book is very suitable for children aged 2 to 6 to read.

Secondly, use of curves appears in many of *The Little House's* images as a significant motif. For example, the cover of the book, as shown in Figure 3-1, places the main character, the tiny house, and the texts in a circle, which conveys the circular pattern and completeness

of the book and makes the reader curious to turn the page and explore the content (Nodelman, 1988, p. 49). In *Words About Pictures*, Nodelman(1988) said that shapes in picture books would bring readers different feelings. For example, circles and arcs would give people a feeling of tenderness and friendliness (p. 72). The whole book uses spiral curves to express the environment of tiny houses. The background sky is curved, and the expression of tall buildings does not use sharp corners. Therefore, it can be found that although the book *The Little House* shows the alarming social phenomenon of "urban disease", it does not make readers feel threatened and challenged because the whole book uses a spiral curve (Nodelman, 1988, p. 72).

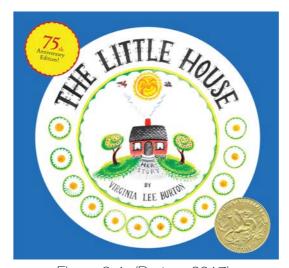


Figure 3-1. (Burton, 2017).

In *The Little House*, pictures and words are so closely integrated that words become part of the visual picture. The 5th page of the book *The Little House* is a good example, as shown in Figure 3-2. Nodelman (1988) analysed that the creator placed the text in the middle of two rows of trees leading to the tiny house, which looked like a small stone on the road leading to the house (p. 55). On the 20th page spread of *The Little House*, as shown in Figure 3-3, the author arranges the words on the right into a spiral curve pattern corresponding to the left. This method can help enhance the atmosphere of the whole work (Nodelman, 1988, p. 56). This method of word processing, which arranges the text into a special shape, makes the text and the picture form a whole picture.

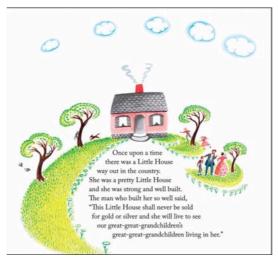


Figure 3-2. (Burton, 2017).

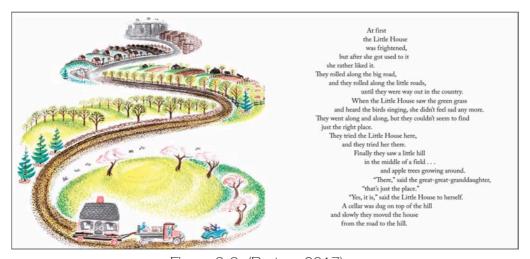


Figure 3-3. (Burton, 2017).

The third convention is the use of colour as a signifier. It is generally believed that colour is understood through culture and that colour express emotions. In picture books, the connection between emotion and colour greatly influences the atmosphere of picture books (Nodelman, 1988, p. 60). People tend to think that blue stands for melancholy, yellow for happiness, red for warmth, green for vitality, and grey for pessimism, depression or apathy (Nodelman, 1988, p. 61). On page 13 of *The Little House*, as shown in Figure 3-4, the use of a green tone reaches the peak of the whole book. The large area of green colour is used to indicate that the environment around the little house is full of vitality. When the city

developed, and the fields around the small house gradually disappeared, most of the paintings used dark brown and grey colours to suggest the cold, alienated and depressed feeling brought by tall buildings. At the same time, the appearance of dark brown buildings suggests a disturbing, dark and mysterious crisis brought by tall buildings, connoting urban disease (Nodelman, 1988, p. 61).



Figure 3-4. (Burton, 2017).

Colour relationship is a convention utilised in the book. Similar colours suggest calm while contrasting colours suggest conflict and excitement (Nodelman, 1988, p. 64). In particular, on the spread page 19th of the book, as shown in Figure 3-5, the conflict and excitement in the picture reach their peak. The tall buildings are grey, on the contrary, giving people and cars on the road many colours. It can be seen that the first car on the left of the tiny house is red, while the green car is behind it and conflicts with it. After that, the yellow and purple cars clashed again. Also, a red truck towing the small house clashed with the green car in front. The whole colours of this spread page conflict, suggesting the uneasiness and impetuous feelings brought by urban development.

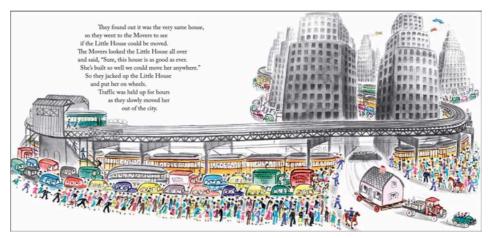


Figure 3-5. (Burton, 2017).

The Little House picture book tells the long and complex concept of "urban disease" by transforming the perspective of a house into a visual language loved by children. The circular visual elements of the text and pictures in the book give readers a non-threatening feeling, which is conducive to forming a stress-free reading experience. At the same time, the use of colour in this picture book suggests time change and enhances emotional expression. These visual features encourage children to take positive actions towards environmental protection.

The fourth book is TIDY

This section will discuss how the picture book TIDY draws readers into the story and encourages them to connect with nature. TIDY is a picture book by Emily Gravett. The book tells the story of a badger named Pete who lives in the forest. The badger is the protagonist in the story who takes action to protect the environment and work toward sustainability. Characters in stories can inspire children and demonstrate the power of individual actions in changing the world. Through positive role models, picture books encourage and develop children's sense of responsibility and agency in environmental issues. The badger here likes to be neat, so he began to clear the forest of the flowers, foxes, birds, branches, stones, leaves and so on. When autumn came, he found that there were fallen leaves and dead trees everywhere, so Pete swept up all the fallen leaves and dug up all the trees. Instead of helping, it caused a flood. Then came the mud. Pete uses a dredge and concrete directly to make the floor clean. When he took out his key and went home, he found the door had been sealed with cement. Homeless Pete realises his mistakes. He should not dig up the trees; everything has its place and role. This kind of organising is extreme. So he takes immediate action, puts the packed things back in their original places, and helps the forest to return to its former state. This story shows the value of individual efforts for environmental sustainability and encouraging children to take positive actions that are friendly to nature. The picture book conventions in this picture book will be discussed in the following paragraphs, including personification, boundaries, composition, and typographic treatment.

The first convention in *TIDY* is personification is the use of animal figures to tell stories and entice children to read. It will be noted that many picture books feature animals as the main characters, as this can capture the reader's attention, through children's love for animals, establishing a connection with the environment and respect for nature. This is why in picture books such as *The Little House* the author calls the house "she", and that's why the author of the picture book *TIDY* calls the animal badger "he". Children at this stage of 2-6 will put themselves into the "badger" perspective, which is more conducive to empathy for readers with the characters. Furthermore, according to Freud (as cited in Frydenberg et al., 2011, p. 12), conscience and superego develop between ages 3 and 6, and conscience takes a

favourable view of things. Empathy is also part of the development of the superego. So, as children develop conscience and empathy, guide them to put themselves in someone else's place, and to feel and do something positive in their positions. This stage of development affects the later stages of a child's development. Children aged 3-6 are compassionate and will incorporate themselves into the story because of the personification. Therefore, environmental storybooks involving animals are an excellent way to raise children's environmental awareness. Of course, an attractive and appropriate picture book styles can also positively influence children's environmental awareness. So, *TIDY* is a good picture book for children between the ages of 2 and 6. While engaging children, the book encourages readers to get outside, get in touch with nature, and learn to live in harmony with the natural environment. So, by reading about an environment in which animals are the protagonists, it helps to establish an emotional connection - empathy - between the reader and the characters or the environment depicted. By presenting relatable characters affected by environmental problems, author can help children develop empathy and emotional investment in the cause of environmental conservation.

The second picture book design convention used in *TIDY* is boundaries. As mentioned by Nodelman (1988), some pictures use specific boundaries, and those areas with borders or specific boundaries are what the creator wants readers to notice, and also suggest alienation and objective feelings, which are different from the subjective feelings of the reader (p. 50). On the 14th spread page of the book, as shown in Figure 4-1, demonstrating a home sealed in cement, a concrete line divides the entire page into two parts. It draws the reader's attention to the neat, impotent world in which Pete lives and highlights how alive the world beneath the concrete can be. In addition, creating a border-like doorway in the title page section to invite the reader in (Nodelman, 1988, p.50). On the first and second spread pages of *TIDY* (see Figure 4-2 and Figure 4-3), the author has hollowed out a space formed by trees and land to form a specific border and invites the reader into Pete's world.



Figure 4-1. (Gravett, 2017).



Figure 4-2. (Gravett, 2017).



Figure 4-3. (Gravett, 2017).

The third convention is composition. Different compositions will bring different visual feelings to readers. It is generally believed that a circular composition conveys a relaxed and accommodating feeling, while square composition conveys a rigid and stubborn visual feeling (Nodelman, 1988, p. 127). For example, in Figure 4-1, mentioned above, Pete's house is sealed with cement, and the cement surface divides the whole picture into two squares. The upper square, in particular, where Pete stands, gives the reader a sense of alienation and stiffness associated with something as modern as cement. In addition, according to Nodelman (1988), pictures tension is generated by a stable triangle formed by three related objects is less than that generated by an inverted triangle formed by three objects (p. 130). For example, on the 15th page spread, shown in Figure 4-4, Pete, the moon and the text in the upper left corner form an unstable triangle. This unstable triangular composition conveys to the reader a sense of quiet in the dead of night, and also a sense of instability that the quiet is about to be overturned.

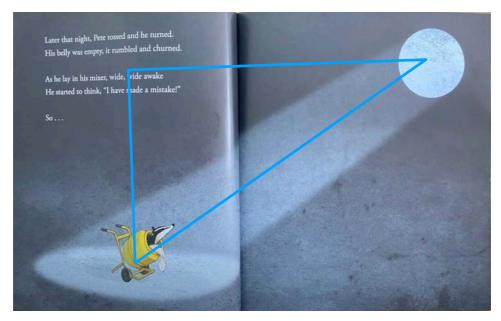


Figure 4-4. (Gravett, 2017).

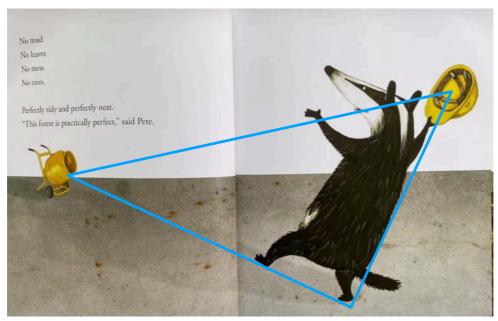


Figure 4-5. (Gravett, 2017).

More examples are below. On the 13th spread page of *TIDY*, as shown in Figure 4-5, the yellow blender on the left of the picture forms an inverted triangle with Pete's right foot and the yellow hard hat he holds in his right hand. The composition of the inverted triangle

enhances the tension of the picture, highlighting the badger pride and sense of accomplishment in successfully clearing the forest's soil, leaves, branches and other mess. On the 16th spread page of the book, as shown in Figure 4-6, when Pete breaks the concrete floor, the whole picture also adopts an unstable inverted triangle composition, breaking the cold and rigid atmosphere of the concrete floor. The composition of these inverted triangles creates different tension in the picture, attracting readers' attention and interest, and allowing readers to experience Pete's emotional changes.

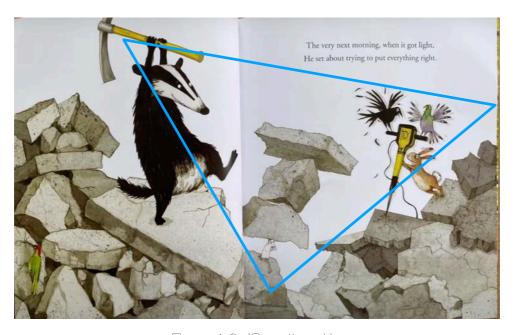


Figure 4-6. (Gravett, n.d.).

The fourth visual element to discuss is typographic treatment. The text in a picture book can be regarded as a part of the picture, and the size of the text will affect the reader's reading experience. Indeed, the choice of text size will help the emotional expression of the picture. Similarly, the choice of text style and the use of text in Italian style can also help the emotional expression of the picture (Villarreal, 2015, p. 273). On the tenth and eleventh spread pages of *TIDY*, shown in Figures 4-7 and 4-8, the author has written the words "FLOOD!" and "MUD! "in capital letters. The purpose of this is to emphasise the flood and mud, but also to reinforce the reader's aversion to the flood and mud, so that the reader has a

strong desire to clean up the messy mud. Again, this design convention can be seen as an encouragement to the reader to take action and make them pay attention to the presence of floods and mud and need to think about why mud and flood occur.

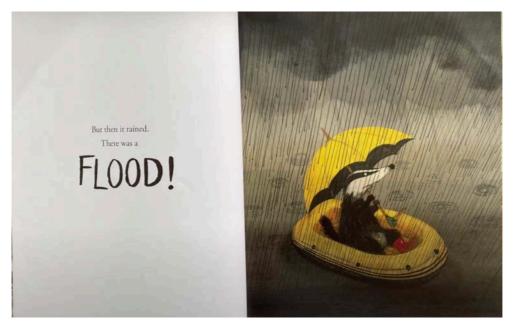


Figure 4-7. (Gravett, n.d.).



Figure 4-8. (Gravett, n.d.).

TIDY, a picture book, uses specific lines to guide or imply the reader's reading experience. The personification and cute animal figures can attract children's attention. The composition of circles, squares, solid triangles and inverted triangles also can affect the reader's reading experience. These visual elements are the easiest and most attractive way for children to express themselves. Therefore, reading these interesting visual elements can help children build awareness of being close to nature and protecting the environment.

Conclusion

Picture books use imaginative narratives and captivating illustrations to engage children. By presenting stories that revolve around environmental themes, they can introduce concepts such as deforestation, pollution, climate change, and wildlife conservation in an accessible and relatable manner.

In order to achieve the harmonious coexistence between humans and the natural environment, environmental education is urgent. Children are the future of mankind, and young children between 2 and 6 years old are in the rapid cognitive formation and development period of cultivating good habits, forming good knowledge and establishing good values. Picture books, on the other hand, give children ages 2 to 6 something to discuss with their parents. By reading and discussing the four picture books mentioned above, children are encouraged to think critically about environmental issues and to think, question, discuss and reflect on the causes, consequences and potential solutions of environmental damage. Therefore, reading environment-related picture books can help children have a deeper understanding of complex environmental issues. Therefore, at the golden age of cognitive development, children between 2 and 6 years old read picture books on environmental themes that are engaging, fun, non-threatening and educational, helping to raise their environmental awareness and achieve sustainable development of human and natural resources.

Picture books discussed in these books, *The Last Tree*, *Animals Should Definitely Not Wear Clothing, The Little House*, and *TIDY*. Using different picture book design conventions to express meanings to attract readers to immerse themselves in the books. These conventions include cover design, typographic treatment, graphic placement, double-page placement of pictures, frame boundaries, compositions, colour use, montages, personification and close-up perspective. These visual conventions not only help children better understand the content of picture books but also enhance children's pleasant reading experience. They incidentally let children acquire knowledge about nature and cultivate children's exploration and attention to the environment. So, picture books do help children to raise environmental awareness to a great extent.

Bibliography

- American Psychological Association. (2023). *APA dictionary of psychology*. https://dictionary.apa.org/childhood
- Barrett, J., & Barrett, R. (1988). *Animals should definitely not wear clothing*. Atheneum Books for Young Readers.
- Brennan, P. (2008). Storybooks: A teaching tool for sustainability. 2008.
- Burton, V-L. (2017). *The little house*. 75th Anniversary edition. Houghton Mifflin Harcourt Publishing Company.
- Chen, S-Y. (2022). To explore the impact of augmented reality digital picture books in environmental education courses on environmental attitudes and environmental behaviors of children from different cultures. http://doi. 10.3389/fpsyg.2022.1063659
- Erhabor, N-I. (2018). Developing leaders through mentoring in environmental education. *Electronic Green Journal.* 1(41), 1-10.
- Frydenberg, E., Deans, J., & O'Brien, K. (2011). Developing everyday coping skills in the early years: Proactive strategies for supporting social and emotional development. New York, NY: Continuum International Pub. Group.
- Giorgis, C., Johnson, N-J., Bonomo, A., Colvert, C., Conner, A., Kauffman, G., & Kulesza, D. (1999). Children's books: Visual literacy. *Reading Literacy*. *53*(2), 146-153.
- Gravett, E. (2017). TIDY. Simon & Schuster Books for Young Readers.
- Hannikainen, H. (2010). 1 to 3-Year-Old Children in Day Care Centres in Finland: An Overview of Eight Doctoral Dissertations. http://doi. 10.1007/s13158-010-0015-5

- Hanfstingl, B,. Benke, G,. & Zhang Y-F. (2019). Comparing variation theory with Piaget's theory of cognitive development: More similarities than differences? *Educational Action Research*. 27(4), 511-526. http://doi.org/10.1080/09650792.2018.1564687
- Haworth-Booth, E. (2014). The Last Tree. Harper Collins Publishers.
- Hsiao, C-Y., & Shih, P-Y. (2015). The impact of using picture books with young students in Taiwan on the teaching of environmental concepts. *Published by Canadian Center of Science and Education*. 8(3), 14-23. http://dx.doi.org/10.5539/ies.v8n3p14
- Hsian, C-Y., & Shih, P-Y. (2016). Exploring the effectiveness of picture books for teaching young children the concepts of environmental protection. *International Research in Geographical and Environmental Education*, 25(1), 36-4.http://dx.doi.org/10.1080/10382046.2015.1106203
- Knight, Z. G. (2017). A proposed model of psychodynamic psychotherapy linked to Erik Erikson's eight stages of psychosocial development. *Clinical Psychology & Psychotherapy*. 1047-1058. http://doi:10.1002/cpp.2066
- op de Beeck, N. (2018). Children's Ecoliterature and the New Nature Study. *Children's Literature in Education*, 49(1), 73–85.
- Majdenie, V., & Saratlija, I. (2019). Picture books for children of early school age for purpose of environmental education. *Pannoniana*, *III*(I-II), 199-238.
- Medress, A., (2008). *History of storybooks with environmental themes*. Storybooks: A teaching tool for sustainability. https://doi: digitalcollections.sit.edu/isp_collection/65
- Nodelman, P. (1988). Words about pictures: The narrative art of children's picture books.

 University of Georgia Press.

- Salisbury, M. (2004). *Illustrating Children's Books: Creating Pictures for Publication*. Piers Spence.
- Salisbury, M., & Styles, M. (2012). *Children's picture books: The art of visual storytelling*. Laurence King Publishing Ltd.
- Smith, T. (2016). Thinking Science Australia: A short history of how thirty science lessons transform learning and teaching. *Teaching Science: The journal of the Australian Science Teachers Association*, 62(3), 16-21.
- Strouse, G. A., Nyhout, A., & Ganea, P. A. (2018). The role of book features in young children's transfer of information from picture books to real-world contexts. *Frontiers*. *Psychology*. *50*(9). http://doi: 10.3389/ fpsyg. 2018.00050
- Tamrin, F. A. (2018). *Children's literature: As a way of raising environmental consciousness A study.* https://www.researchgate.net/publication/325011433
- Villarreal, A., Minton, S., & Martinez, M. (2015). Children illustrators: Making meaning through visual art in picture books. *The Reading Teacher*. 69(3), 265-275.
- Wilson, R. A. (2011). Why do we do what we do? Exchange. 90-92.