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INVESTIGATION OF SOCIAL IMAGINATION USING WORDLESS PICTURE BOOK AMONG PRESCHOOLERS

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ABSTRACT

Social imagination is a mindset which provides the ability for individuals to realize the relationship between their personal experiences and the larger society in which they live their lives, which may include people's thoughts, feelings and intentions. However, there is no standardised method available to assess or profile social imagination in preschoolers. Therefore, the researcher is planned to explore the profiling of social imagination via using wordless picture books to analyse the thoughts, feelings, and intentions (TFI scores) in social imagination among preschoolers. In this study, a new method of profiling social imagination through using wordless picture book will be attempted. Six children (three boys and three girls) were selected from a 5-year-old class for this pilot study according to the purposive sampling criteria. The findings indicated that the use of social imagination is observable using wordless picture book reading. The findings also revealed that the children's TFI scores across the three dimensions were very different. The potential ways to improve children's social imagination according to their TFI scores are postulated.

Keywords: ADHD behaviors, emotion regulation, preschooler, social imagination, wordless picture book

INTRODUCTION

Social imagination is a mindset which provides the ability for individuals to realize the relationship between their personal experiences and the larger society in which they live their lives. Lysaker (2006) thinks social imagination is the ability to imagine the thoughts, feelings, and intentions of others. This human ability is considered a key aspect of development because it is important for a child to learn ways of establishing and maintaining relationships with others.

According to Lysaker (2012), 'thinking' refers to people's statement which demonstrates the attribution of thoughts (For example, I see, I will, and I think). 'Feeling' refers to people's statement which demonstrates the attribution of feelings (For example, I am angry, I am happy, and I am sad). 'Intention' refers to people's statement which demonstrates the attribution of intention to others (For example, I become, I wait, and I quickly). Collectively, these three elements of social imagination will be called the TFI model of social imagination in this study.

An important aspect of human consciousness is the ability to imagine think about the consciousness of others, referred to as social understanding. Imagining the minds of others and

connecting to those inner realities is integral to human experience and is the basis for meaning social interaction. The ability to imagine the minds of others while critical to successful and rewarding social interactions in the actual world is also integral to reading, particularly the reading of narrative. Understanding narrative depends on making sense of characters' thoughts, feelings, and intentions as well as how they relate to plot. We refer to this use of social understanding during reading as social imagination. Social imagination involves a larger understanding of the 'community of mind' which is represented and enacted in the vicarious social world of a story. Understanding children's use of social imagination as a part of reading is integral to understanding their thinking processes. Thus, social imagination can be viewed as part of this cognitive awareness, involving the active envisioning and empathy for others' internal experiences (Paiget, 1964; Lysaker & Tonge, 2013; Bruner et al., 2017; Miller, 2023).

LITERATURE REVIEW

Wordless picture books refers to books without narrative text. Using wordless picture book to examine the reading of young children has a long history in literacy research. Wordless picture book has its own characteristics because it combines the text and illustration to build the overall meaning of the book (Revina & Nur, 2018). Reading images is a significant multi-modal event in which emergent readers make sense of images and orchestrate their meanings. While arguably more multi-modal than traditional print reading, children's wordless picture book readings nonetheless illuminate many important aspects of print reading, including children's general book knowledge, story knowledge, and narrative comprehension.

In the view of some educational researchers, wordless picture books have established themselves as a useful medium of examine the reading of young children. Research on wordless picture books has predominantly focused on their role in supporting narrative skills, vocabulary development, and inferential thinking in children (Sipe, 2000; Arizpe, 2014; Pantaleo, 2023). For example, studies have highlighted how these books encourage children to generate their own stories, thus aiding in the development of narrative construction skills (Grolig, 2020). In this cases, wordless picture books were used as a means of assessing the developing literacy of young children.

Lysaker (2006; 2012) was the first to explore the feasibility of using wordless picture books as a tool to assess the TFI of preschool children's social imagination. Lysaker (2006) reasoned that children's readings of wordless books could be used as a tool for understanding emergent reading from a self-perspective. In particular, Lysaker (2006) hypothesized that the use of an unfamiliar wordless book might be an effective invitation for children to demonstrate the developing self as reader. She hypothesized that this method could capture the thoughts, feelings and intentions of children, and then evaluate the development of children's social imagination.

Lysaker (2006) present and discuss a childt's wordless picture book reading in order to give a detailed view of the child's use of social imagination during the reading. Lysaker (2006) identified and numbered the participant's sentences in terms of how they were uttered, rather than how they are grammatically defined, in order to capture better the child's reading understanding. Lysaker (2005) explored the use of wordless picture book reading as a window to use of social imagination within the reading process. In line with this. this study aimed to explore the application of wordless picture books in the assessment of social imagination. The following research questions were raised: How to use TFI analysis framework to test the development of social imagination of 3-6 year old children? Does gender affect the development of children's social imagination?

METHODOLOGY

This study was carried out in a public kindergarten in Shenzhen, China. This is a school with 317 children, with 10 classes in total, divided into 3-4 years old class, 4-5 year-old class and 5-6 year-old class. According to purposeful sampling criteria, six children of different sexes (three boys and three girls) were selected from a 5-year-old class for this pilot study. The typical developmental children recommended by the six children based on the observations of the class teacher.

Investigation of Social Imagination using Wordless Picture Book among Preschoolers

This study was conducted in a public kindergarten located in Shenzhen, China. The kindergarten has a total of 317 children divided into 10 classes, categorized by age groups: 3-4 years old, 4-5 years old, and 5-6 years old. For this study, we employed purposeful sampling to select participants based on the following criteria: (1) typically developing children, (2) no obvious behavioral problems, and (3) no signs of developmental delays or disorders. Based on these criteria, six children (three boys and three girls) from the 5-year-old age group were recommended by their respective class teachers for participation in the study. Table 1 summarizes the individual characteristics of these six students.

Table 1: Characteristics of the preliminary study students

	Age (years)	Gender
Xinxi	5	Female
Yining	5	Female
Jiayue	4.5	Female
Kangkang	5	Male
Xingye	5	Male
Jingxuan	5	Male

(a) Instruments

Wordless Picture Book

Falling gifts (Jinxiaojing, 2019) is a wordless picture book created to help children develop their understanding of how books work. This book is a book that focuses on emotional feelings. The story book contains a total of 16 scenes Figure 1 shows some exemplar scenes from the book.

Figure 1: Scenes 4 to 9 in the wordless picture book - *Falling gifts* (Jinxiaojing, 2019)



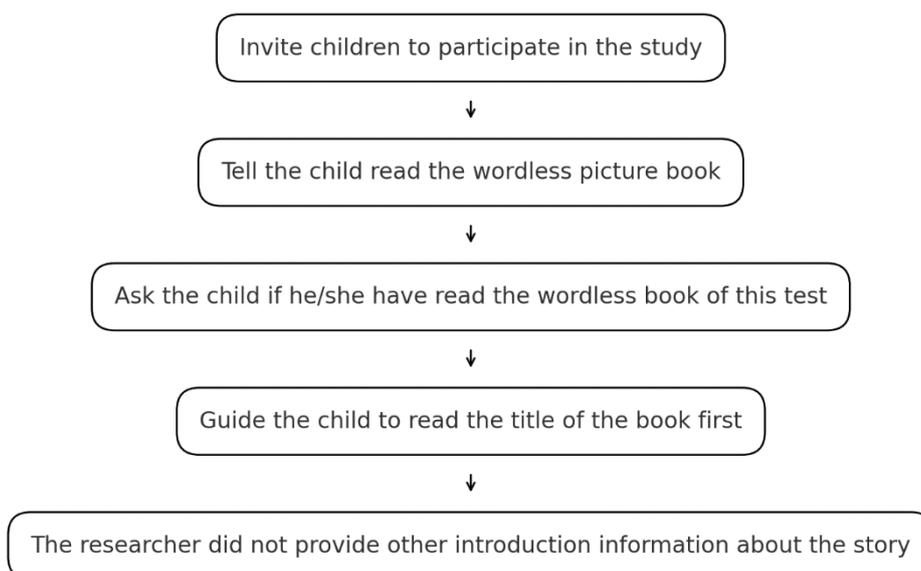
Exemplar interpretation: The scenes showed a little girl who were walking alone in the forest. She seemed to be feeling lonely. Suddenly, one by one, pine cones fell from the sky on her body. The girl became anxious and angry. She began to cry. A little squirrel appeared. It took a pine cone and handed it over to the crying little girl.

(b) Procedures

The wordless book narration task was carried out in the preliminary study to collect the narrative samples of children's verbatim data for the T-F-I analysis. The reading task was carried out during school hour, in a classroom that was familiar to those six children. The children were invited to the classroom in turn for the reading task. Xixi was first invited to the classroom and she was instructed to sit together with the researcher on a big floor mat, at the reading corner. The researcher presented the book and asked if Xixi had seen the book before. Upon confirmation that it is the first time she was seeing it, the researcher passed the book to her and told her that she could flip through the pages to look at each page in turn. The researcher sat quietly waiting for her to finish scanning the pages. After she completed seeing the book, the researcher asked her to turn back to the first page and narrate the whole story using her own words as illustrated in the wordless picture book.

During the narration, the researcher used very general and limited verbal prompts, such as 'This....', 'The girl...' and 'Over here...' which are neutral and do not impose any obvious pre-determined meanings. The narration produced by Xixi was recorded using a audio recorder for later transcription and analysis purposes. After the narration, the researcher helped the student relate the story to some observable meanings as a wrap-up for the activity. The researcher let the student to decide if he or she would like to look or explore the book again. After the activity is finished, the researcher thanked the student for her participation and sent her back to her original classroom. The same procedure was repeated for the other 5 young children in this study.

Figure 2: Procedure of Wordless Picture Book Narration Task



(c) Analysis

In order to answer research questions, we coded the transcripts gathered from the six children. The first author marked instances when their reading indicated that they were imagining the thoughts, feelings or intentions of characters. First, 'thinking' statements are statements which demonstrate the attributions of thoughts in a character, for example, "She picked it up and took a look." "The little girl was walking and saw a pine cone behind her." Next, 'feeling' statements are those that demonstrate the attributions of feelings, for example, "The little girl gets angry." "She is very sad." Lastly, 'intention' statements are statements that demonstrate the attributions of planning shown by a character. For example, "They became good friends." "Then she shouted at the tree for a while." Each description is given 1 score with a ceiling score of 10 for each dimension (refer to Table 2).

RESULTS AND FINDING

This section presents and discusses narrative data collected from the wordless book narrative task (refer to Tables 2 to 5). The scores of TFI in the three dimensions of children of different gender are very different. For example, from the total scores of the six children, the average social imagination score of the three girls is about 1.93, and the average social imagination score of the three boys is 1.77. The social imagination score of girls is higher than that of boys. The highest score among the six children is also obtained by a girl (Jiayue social imagination score 2.3 points). In addition, there is another phenomenon. Judging from the scores of each dimension of TFI of the six children, the scores of the F (Feeling) dimension are relatively low, with a total average score of only 0.35.

The average scores of boys and girls revealed similar trend, with the scores of the T (Thought) dimension was the highest, the total average score is 0.82, and the average score of boys and girls is almost the same (0.80 and 0.83). For the I (Intention) dimension, the total average score is 0.68. The average score of girls for the I (Intention) dimension is about 0.73, but the average score of boys is only 0.63. In this dimension, it seems that there is a significant gap between boys and girls.

Table 2: T (Thoughts) Coding of the narrative data

	Xinxi (5years/ /girl)	Yining (5years/ girl)	Jiayue (4years/ girl)	Kang (5years /boy)	Xingye (5years/ boy)	Jingxua (5years/ boy)
T (Thought s)	1. A little girl walked alone. 2. I don't know what hit the little girl. 3. Another pine cone hit it. 4. She shouted into the grass who it was. 5. Another pine cone fell down on her head. 6. It turned out that the little squirrel accidentally got the little girl's head. 7. The little squirrel said it was accidentall	1. There is a lot of grass here. 2. There is a ball on her neck. 3. She also puffs up her big face. 4. There was a tree. 5. There was a cat. 6. It was holding something. 7. There's a little water. 8. She came to a green world.	1. There is a lot of grass here. 2. There is a ball on her neck. 3. She also puffs up her big face. 4. There was a tree. 5. There was a cat. 6. It was holding something. 7. She came to a green world. 8. Here's a little water.	1. A child was walking. 2. Then a small pine cone hit him. 3. Then the child turned around and saw nothing. 4. A strange plant attacked him. 5. He just sat on the small stone. 6. A little squirrel holds a small pine cone. 7. The little squirrel keeps looking at him. 8. Then the man looked at the road. 9. Then he got one	1. Saw a little girl. 2. There was something behind her. 3. Then saw a ball with thorns on it. 4. She got angry and the balls came out. 5. The mouth opened and her face became bigger. 6. The little squirrel came. 7. There is a yellow forest, a red path. 8. The little yellow squirrel came again.	1. Saw a person. 2. A pine cone flew towards this person. 3. She held something in his hand. 4. Another pine cone flew over. 5. And a pine cone flew over. 6. Then the little squirrel ran away. 7. Then a big tree.

y thrown down on the little girl's head. 8. The little squirrel said: "It's because I was going to store food, so I accidentall y got your head".	hand into the soil and the other hand was outside. 10. When the man goes, the squirrel goes. 11. It becomes a tree.
T Score 8/10=0.80 8/10=0.80 8/10 =0.80 11/10=1.00 8/10 = 0.80 7/10 =0.70 Average = 0.82 Girls = 0.80, Boys = 0.83.	

Table 3: F (Feelings) Coding of the narrative data

	Xinxi (5years/ /girl)	Yining (5years/ girl)	Jiayue (4years/ girl)	Kang (5years /boy)	Xingye (5years/ boy)	Jingxua (5years/ boy)
F (Feelings)	1. She looked back angrily. 2. Then she cried.	1. There is a person who is very unhappy walking on the road. 2. She is still angry. 3. She is still messing with her hands like this is very angry. 4. She yells angrily. 5. She was so happy.	1. There is a person who is very unhappy walking on the road. 2. She is still angry. 3. She is still messing with her hands like this is very angry. 4. She yells angrily. 5. She was so happy.	1. I felt like I didn't want to talk. 2. But this man didn't want to eat the pine cone.	1. Then she was sad and sad. 2. She got angry again. 3. Then she got angry again. 4. She became happy again. 5. She got sad.	1. She cried. 2. Then the man was very happy.
F Score 2/10=0.20 2/10=0.50 5/10 =0.50 2/10 = 0.20 5/10 = 0.50 2/10 =0.20 Average = 0.35 Girls = 0.40, Boys = 0.30.						

Table 4: I (Intentions) Coding of the narrative data

	Xinxi (5years/ /girl)	Yining (5years/ girl)	Jiayue (4years/ girl)	Kang (5years /boy)	Xingye (5years/ boy)	Jingxua (5years/ boy)
I (Intentions)	1. Then the little squirrel gave the little girl a pine cone 2. She climbed up the tree. 3. Then the little girl was helping it dig a hole. 4. Then she said goodbye to the little squirrel.	1. He puts her hand into the flower 2. She was sitting on the ground. 3. She sat on the ground and gave the pine cone to her. 4. She also climbed the tree. 5. She picked up the pine cone and she went away. 6. she was climbing the tree. very green and a little bit, 6. She also put this with it. 7. .she also put this with it. 8. It's there.	1. She still puts her hand into the flowers. 2. She was sitting on the ground again. 3. She sat on the ground and gave the pine cone to her. 4. She also climbed the tree. 5. She picked up the pine cone and she went away. 6. She was climbing the tree. 7. She also put this with it. 8. It's there. 9. It crawled away. 10. She also went away.	1. Think of how not to be That strange plant hits. 2. Then he brought it up again. 3. Then he climbed the tree to return it. 4. Then the person shouted at me. 5. The little squirrel was going to give him a pine cone again. 6. Then the man filled some Water fills it here. Then they plant a small seed.	1. Then the little squirrel comforted her on it. 2. Give her a ball and it ran away. 3. Brought some water for the little squirrel to drink. 4. Then she played happily with the little squirrel.	1. It turned out that the little squirrel was holding a pine cone. 2. Then the little squirrel was holding a pine cone to give to him. 3. Then the man climbed the tree with the little squirrel. 4. Then they saw a river. 5. Then another fruit was dug up and given to the man. 6. Then filled some water. 7. Then they went away.
I Score	4/10=0.40	8/10=0.80	10/10=1.00	8/10 = 0.80	4/10 = 0.40	7/10= 0.70
Average = 0.68						
Girls = 0.73, Boys = 0.63						

Table 5: O (Others) Coding of the narrative data

	Xinxi (5years/ /girl)	Yining (5years/ girl)	Jiayue (4years/ girl)	Kang (5years /boy)	Xingye (5years/ boy)	Jingxua (5years/ boy)
Others	1. But there was nothing 2. They went to watch the sun go down together	1. It crawled away. 2. She also went away,	1. Very green and a little bit	1. And then the person stopped talking, 2. And looked at the little squirrel again,		
TFI Score	1.40	2.10	2.30	2.00	1.70	1.60
Average = 1.85 Girls = 1.93, Boys = 1.77						

NA = Not Applicable

In general, there were noticeable gender differences in the TFI scores. Specifically, the mean TFI scores for the three boys (Kang, Xingye, Jingxua) were slightly lower than those for the three girls (Xinxi, Yining, Jiayue). This gender difference was also evident when looking at the social imagination subscales separately—T (theory), F (flexibility), and I (intention). For instance, in the I (intention) dimension, there was a significant disparity between the average scores of boys and girls, with girls scoring higher on average.

DISCUSSIONS, RECOMMENDATIONS AND CONCLUSIONS

The findings from this study provide preliminary evidence that the TFI Analytical Framework test can effectively assess the development of social imagination in 3, 4, and 5-year-old children through the use of a wordless picture book. The research showed that children's use of social imagination becomes evident when they express different emotions and interpretations during the reading process, reflecting their understanding of the story. Social imagination is developed through language interactions. During the reading of wordless picture books, children seem to reconstruct their thoughts, feelings, and intentions, internalizing the narratives they create from the images (Tomasello, 2008; Nungesser et al., 2019; Honaker & Miller, 2023). These meta-cognitive and metalinguistic skills are vital for both academic and social development. However, it's important to note that not all children naturally excel in these areas.

This study suggests that reading wordless picture books can help children develop vital meta-cognitive skills, such as social imagination, which is crucial for both academic success and social competence in life. Understanding how children develop social imagination is essential. The TFI scores in this study highlight gender differences in the three dimensions of social imagination among young children. For instance, boys scored significantly lower than girls in the I (intention) dimension. Improving boys' abilities in this area could enhance their overall social imagination scores. Additionally, the overall F (feeling) dimension scores were relatively low across all six children. Targeted improvement in this dimension could significantly boost their total social imagination scores.

This study presents a specific method for quantifying the growth of children's social imagination scores and abilities. Using this approach, educators and parents can evaluate children's social imagination and implement targeted strategies to improve their TFI scores in the dimensions of thought (T), feeling (F), and intention (I). While this method shows promise, there is currently limited

research on specific interventions to enhance these abilities. The findings suggest that TFI measurement effectively captures the development of children's social imagination by analyzing their thoughts, feelings, and intentions. To validate and expand upon these insights, further testing in larger studies is needed. This will help confirm the method's effectiveness and provide a deeper understanding of how to support the development of social imagination in both boys and girls.

In sum, this study provides preliminary evidence supporting the use of the TFI analytical framework test to assess the development of social imagination in young children through wordless picture book reading. The findings highlight the potential of this method to capture how children interpret and internalize narratives, reflecting their cognitive and emotional engagement with the stories. Notably, the study identified significant gender differences in social imagination scores, suggesting that boys, in particular, may benefit from targeted interventions to enhance their skills in areas such as intention (I) and feeling (F). These insights underscore the importance of understanding and nurturing social imagination as a key component of both academic and social development. While the initial results are promising, they also point to the need for further research to develop specific strategies to support and improve social imagination in children, especially in a way that addresses gender disparities. By expanding this research and applying the TFI analytical framework in broader contexts, educators and parents can better support the cognitive and social growth of all children, preparing them for success in school and life.

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