



## Structure of personal narratives in Thai children aged 4 to 6 years old

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### ABSTRACT

**Background:** Understanding children's narratives is crucial as it represents language capacity in a naturalistic context and also relates to children's academic success. However, studies showed that narratives vary not only with age but also in content and structure across cultures.

**Objectives:** To study and compare components and patterns of personal narratives in Thai children aged 4-6 years old. Also, to find narrative structure differences between genders.

**Materials and methods:** Stories of past experiences were elicited from 86 participants aged 4-6 years old. The longest narratives from each participant were analyzed in terms of both narrative components and patterns by using high-point analysis. Comparisons were then drawn for the proportions and differences in narrative structure between age groups and between genders.

**Results:** For narrative components, Thai children told complicating action most frequently. With age, the use of resolution increased significantly from 4-6 years old. For narrative patterns, chronological patterns were found commonly at age 4. Moreover, the incidence of classic patterns rose significantly between the ages of 4 and 6 and reached the highest proportion in usage at ages 5 and 6. No gender difference was found in the narrative structure.

**Conclusion:** Thai children's narrative structure was presented in this study. The abilities to range events in sequence and resolve the high-point of narratives were found more commonly with their increasing age.

### Introduction

Narration is an activity of life that people use to express their identity and personal experiences with others.<sup>1-3</sup> This skill is developed from an early age. Since children are 2 years old, they learn to talk about their real past events in conversation with their parents.<sup>2</sup> Through daily talking, the ways parents support and provide information to their children lead to

the improvement of the children's narrative skills and also influence the style of their narration later.<sup>4</sup> A story that tells about people's own experiences is called a personal narrative. This is the earliest narrative that children use,<sup>5</sup> and it is still used most frequently when they are in preschool to interact with others.<sup>5,6</sup> Even when becoming adults, this kind of narrative is necessary for communication such as for medical or legal situations.<sup>7</sup> Therefore, personal narratives are important throughout the life span.

Moreover, narratives are related to literacy ability. This is because a narrative is created by matching the order of the narratives and the order of real past events.<sup>8</sup> It, therefore, links to decontextualized language skill. Many research studies approved this important relevance. Parents and children

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reminiscing about experiences affected their children's later language ability at kindergarten.<sup>9</sup> Also, oral narrative skills in preschool children correlated with academic performance when they were in primary school.<sup>10,11</sup> Thus, children's narratives can be a predictor of literacy achievement.

To understand children's narratives, not only vocabulary or grammar usage are necessary, but assessing its structure is also essential. Atypical narrative is not related to the abilities of phonology, semantics, or syntax.<sup>7</sup> Therefore, it is crucial to explore the narrative structure simultaneously with other linguistic features. For these reasons, assessing children's narrative structure plays an important role in monitoring and preventing language delays in children. Presently, there are various principles for assessing the macrostructure of narrative and one of the wide uses across the world is called high-point analysis.

### **High-point analysis.**

The high-point analysis is a famously used approach for studying personal narrative macrostructure. This method was first described by Labov and then was later adapted by Peterson and McCabe<sup>12</sup> for studying personal narratives in European North American children aged 4-9 years old. High-point analysis has been found capable of analyzing personal narratives in children appropriately in several populations such as North American, African American, Chinese, Taiwanese, and Korean.<sup>12-16</sup>

Based on Peterson and McCabe study,<sup>12</sup> narrative clauses can be categorized into: (1) *appendages*: Superfluous niceties of narrative comments that are presented at the beginning or the end of the narrative. Four types of this component are: 1) *abstract*: Summaries of the whole story that appear at the beginning; 2) *attention-getter*: Attempts to get the listeners' attention; 3) *prologue*: Statements at the beginning of the story that presents the ending significance, and 4) *coda*: Ending signals of the narrative. These are followed by: (2) *orientation*: Statements that provide the background information including participants, location, time, and other conditions that help listeners understand the narrative more clearly; (3) *complicating action*: The series of specific events that occur until reaching the high-point; (4) *evaluation*: Statements that let listeners know what the narrator thinks about the events that occurred, and (5) *resolution*: Specific events after the high-point that appear to resolve the crisis action.

Additionally, Peterson and McCabe<sup>12</sup> suggested further patterns of the narratives which were subsequently adjusted to be a clinical research tool for speech-language pathologists.<sup>5</sup> Narrative patterns can be categorized into seven patterns as follows<sup>5,12</sup>: (1) *one-event narrative*: The narrative has only a single event; (2) *two-event narrative*: The narrative has two past events; (3) *miscellaneous narrative*: The narrative has more than two past events but there is no logical or causal sequence of these events in the real world; (4) *leapfrog narrative*: The narrative has more than two complicating actions from a single experience. However, they are not in chronological order. Also, the narrator may jump to another event by leaving out major events which leads to difficulty in understanding for listeners; (5) *chronological narrative*: The narrative is a description of successive events.

No high-point is presented; (6) *end-at-the-high-point narrative*: The narrative has complicating actions ordered chronologically until reaching the high-point, but no resolution at the end, and (7) *classic narrative*: The narrative has a well-ordered sequence of events that build to the high-point, and then resolves it successively. At the high-point, the narrator may dwell on evaluation.

As children continually develop their narrative ability with age, Peterson and McCabe<sup>12</sup> described the development of narrative macrostructure whereby children of an early age produced two-event narratives as their longest narratives. When children were 4 years old, they were then better able to combine several events but missed some important events in the form of the leapfrog narrative. At age 5, children can range events in order to reach the high-point in the form of end-at-the-high-point narrative. Lastly, when children were 6 years old and older, they were skillful in producing classic narratives. It is, therefore, evident that age affects children's narrative structure.

However, age is not the only factor affecting the narrative structure, previous studies have shown that social class<sup>17</sup> and maternal narrative supports<sup>18</sup> are also influenced. Among these several factors, one of the greatest impacts on a narrative that can be marked is culture.

### **Cultural differences**

There were several cross-cultural studies that showed the different eliciting strategies parents used for everyday talking with their children.<sup>19,20</sup> Besides, the emphasis on children's narratives in the classroom is also distinct between societies.<sup>21</sup> These resulted in the difference in children's narratives across populations.<sup>22-24</sup> Comparisons across cultures about children's narrative development have been studied widely. Elaborative narratives with highly-expressed self-evaluation were commonly seen in individualistic cultures such as North American culture, reflecting the encouragement to talk more about their past and feelings that their parents provided.<sup>2</sup> On the other hand, collectivist cultures such as Asians have lower expression and provide less information as it is assumed that knowledge is shared in their populations.<sup>25</sup> For example, Minami<sup>26</sup> found that Japanese mothers requested less description and provided less evaluation but more frequent turn exchange through conversation than the US mothers; Japanese children consequently produced fewer utterances per turn in their talking.

Within Asian cultures, there are also studies showing that even though they shared some characteristics, there is a distinctive style in which each of the narratives was presented. Japanese children, as in Minami's study,<sup>27</sup> tell succinct narratives which have a collection of three experiences. For Chinese children, Zhang *et al.*<sup>14</sup> found that they were experts in using complicating action, orientation, and evaluation that can lead to longer narratives with age, and also found that chronological patterns were used mostly in Chinese children aged 4-6 years old. Moreover, Lai *et al.*<sup>15</sup> compared preschool narratives between Korean and Taiwanese children aged 3-5 years old, and the results showed that narratives from Taiwanese children contained more internal state terms than those from Korean children, while Korean children notably developed their narrative structure much more than Taiwanese

children at the age of 5.

Therefore, it is important to consider cultural narrative characteristics to not misunderstand cultural differences and language impairment that may lead to wrong assessment results and inappropriate intervention plans.<sup>5,22,28,29</sup>

That is also a collectivist culture. Conversations between Thai caregivers and their children were found to be short and unelaborated but valued in temporal contextual information compared to English-speaking caregivers. There was then a prediction of Thai children's narratives that they would be succinct.<sup>25,30</sup> If this assumption was proved along with a better understanding of Thai children's narrative characteristics, it would help speech-language pathologists and other pediatric specialists find the best and most applicable interventions for children.

### Current study

In the current study, the researcher investigated personal narratives in Thai children aged 4 to 6 years old to find the difference in narrative structure between age groups in terms of both narrative components and narrative patterns. It was hypothesized that children at different ages would produce different narrative structures. Furthermore, gender comparisons were also conducted to find any differences in the narrative structure.

## Materials and methods

### Participants

A total of 86 participants were randomized from three public schools in Bangkok, Thailand, which were also randomly selected. All participants were recruited for this study by the following criteria: (1) aged between 4-6; 11 years old (2) no report for speech and language delay from their parents; (3) Thai citizen; (4) passed the UTAH screening test for children aged 2-9 years old (Thai version); (5) use Thai as their mother tongue, and (6) parents consented to participate in this study. There were two exclusion criteria: (1) cannot cooperate, and (2) respond by telling fewer than 3 stories.

The parents of participants were mostly not university graduates, had family income between 10,000 to 30,000 baht/month, and were company employees or self-employed.

**Table 1** Demographic information of the participants.

Age groups (years)	Boys (number)	Girls (number)	Age range (months)	Mean age (months)	Median age (months)
4	11	15	55-59	58.13	58
5	15	15	60-71	65.10	65.5
6	15	15	73-83	76.97	76

### Procedures

To collect narrative samples, one appropriate method is to use a story prompt which is a brief story of the interlocutor's experience to help participants recall their own experiences more easily. Therefore, before the interviews,

16 story prompts were created by the researcher on several topics; topics that can help to elicit complex narratives from children such as visiting a doctor<sup>31</sup> or misbehaviors,<sup>23</sup> and topics that were found in discussions between Thai caregivers and children such as weekend activities or looking after younger siblings.<sup>30</sup> These story prompts were then scored to find the content validity by 5 experts who had more than 15 years of experience working with children; 1 preschool teacher, 1 clinical psychologist, and 3 speech-language pathologists. Consequently, the best 8 story prompts were chosen and tried in conversation with 18 children; 6 children for each age group, and all of them studied in the same schools as the participants. The 5 story prompts that resulted in children mostly telling a long narrative in return were finally selected to use in this study.

The narrative sample collecting process was conducted in a quiet room in the schools where the participants studied. The interviewing process started by building a rapport between the researcher and each participant by using toys, drawing, and talking. After that, the researcher used a conversational map<sup>5</sup> to collect the participants' narratives. Each story prompt was told and participants were then asked to share their own related experiences. After that, the researcher repeated this process until all story prompts were used. During this period, the researcher provided neutral sub prompts such as "Ahh", "What's next?", "Anything else?" or just repeated their words to motivate participants to continue their stories without guiding them about what they should tell. The interview with each participant was between 15 to 20 minutes. After finishing the conversations, participants received a toy and colored pencils as rewards.

All interviews were recorded in audio. Because the length of narratives indicates their complexity, the longest narrative from each participant was chosen to be the narrative sample for this study. A total of 86 narrative samples were transcribed and divided into clauses by these two measures: (1) when the narrators paused their stories, and (2) if the following utterances show connections of consequence, contrast, reason, or time. These criteria were chosen to fit the style of the Thai language, in which utterances were arranged in sequence.<sup>32</sup>

All narrative samples had their structure in both components and patterns determined by the researcher. Each clause was analyzed to evaluate what type of narrative component it was: appendages, orientation, complicating action, evaluation, or resolution. Then, the whole narratives were scored on the basis of their narrative patterns:<sup>33</sup> a one-event narrative (1 point); a two-event narrative (2 points); a miscellaneous narrative (3 points); a leapfrog narrative (4 points); a chronological narrative (5 points); an end-at-the-high-point narrative (6 points), or a classic narrative (7 points). Meanwhile, 20% of narrative samples (18 narratives) were randomized and sent to another speech-language pathologist who specialized in paediatric speech-language therapy for over 15 years to score the structure as well. After comparing the score results between the researcher and the speech-language pathologist, the results that were not the same were then re-evaluated to

reach a consensus and were checked a second time with another researcher. The rest of the narrative samples were then scored by referring to the consensus guidelines.

## Results

### Narrative components

All types of narrative components were found in the narrative samples, but the subtypes of appendages were however found only as abstract and coda. The examples from the narrative samples are presented as follows: (1) appendages: abstract “น้องหนูโดนเข็มฉีดยาเพราะน้องหนูโดนหมากัด” (My sister was injected because she was bitten by a dog), coda “ก็แค่นี้” (That's all.); (2) orientation “ตอนที่มันปิดเทอมให้เหงา (when there was a school break); (3) complicating action “แล้วพีกหยอดแล้วมันหันหัวนิ่วไปงมนู” (Then he stopped and it hit my thumb); (4) evaluation “เจ็บมากเลยค่ะ” (That's really hurt), and (5) resolution “แล้วจากนั้นก็ไปรักษาขับพ่อ พอรักษาให้หายแล้ว” (After that I was cured with dad, he cured then I got well).

**Table 2** The number of clauses in each narrative component, the total number of clauses, and the mean of clauses in each age group.

Narrative Components	Number of clauses		
	Age 4 (n=26)	Age 5 (n=30)	Age 6 (n=30)
Appendages	22	18	32
Orientation	74	86	92
Complicating action	125	196	195
Evaluation	85	80	130
Resolution	5	31	30
Total number of clauses	311	411	479
Mean of clauses	12	13.7	16

All narrative components were calculated and shown in Table 2. From the mean of clauses, it can be seen that the means increased through averages of 12, 13.7, and 16 clauses in the ages 4, 5, and 6 sequentially. However, the Kruskal-Wallis test in Table 3 showed that there was no difference between each age group.

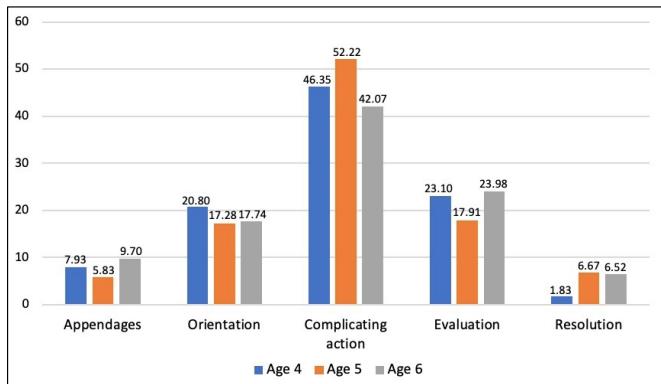
**Table 3** Means, standard deviations, mean ranks, and the Kruskal-Wallis test summaries for the total number of clauses in each age group.

Age groups	Mean	SD	Median	Mean rank	Kruskal-Wallis Chi-square	df	Asymp sig.
4	12	7.39	10	35.79	5.209	2	0.074
5	13.7	7.46	10	42.73			
6	16	8.24	13	50.96			

*Note:* Asymp sig.: asymptotic significance, df: degree of difference.

Each narrative component was then calculated separately. Because both the number of each age group and the number of clauses from each narrative sample were not equal, the data were converted to the mean proportion. Figure 1 showed that Thai children aged 4-6 had the same three highest proportions in the use of narrative components:

complicating action, evaluation, and orientation respectively. By this, complicating action was by far the most frequently used.



**Figure 1.** Mean proportion of narrative components in age groups 4-6 (%).

To compare each narrative component between age groups, the Kruskal-Wallis tests were conducted and shown in Table 4. Across all age groups, only resolution indicated a statistically significant difference ( $p=0.012^*$ ). Pairwise comparisons were then analyzed and shown in Table 5. There remained a statistical significance only between ages 4 and 6 ( $p=0.010^*$ ).

### Narrative patterns

To understand the use of narrative patterns in Thai children aged 4-6 years old, the proportion of each type of narrative pattern from the different age groups was assessed as shown in Figure 2.

From Figure 2, children aged 4 most used chronological patterns at 30.77%, followed by leapfrog patterns at 23.08%. Two-events and end-at-the-high-point patterns were equal at 15.39% while classic patterns were at 11.54% and miscellaneous patterns were lowest at 3.85%. For children aged 5, the highest proportion for the use of narrative components was observed for the classic pattern at 33.33%. Leapfrog and chronological patterns were at the second rank at 26.67%. End-at-the-high-point patterns were markedly lower at 10% and miscellaneous patterns were minimally presented at 3.33%. Moreover, two-events patterns were not presented at this age. Narrative patterns in children aged 6 showed different proportions in each type. Classic patterns showed by far the highest use at 50% while end-at-the-high-point patterns took second place with less than half of that proportion at 23.33%. Next was chronological patterns at 10% and then two-event and leapfrog patterns at 6.67%. The lowest proportion at 3.33% was for miscellaneous patterns. It was also notable that there was no one-event pattern in any age group.

Despite the trends that were seen in Figure 2, the Kruskal-Wallis test in Table 6 showed that there was no statistically significant difference in any narrative patterns across age groups except for the classic pattern ( $p=0.010^*$ ). Pairwise comparisons then showed that a statistically significant difference was found between ages 4 and 6 ( $p=0.007^{**}$ ) but there was no difference between other groups as shown in Table 7.

Comparisons of narrative components and patterns between genders were conducted. Table 8 showed the results from the Kruskal-Wallis tests revealing that there was no gender difference for all narrative components.

**Table 4** Means, standard deviations, mean ranks, and the Kruskal-Wallis test summaries for narrative components in each age group.

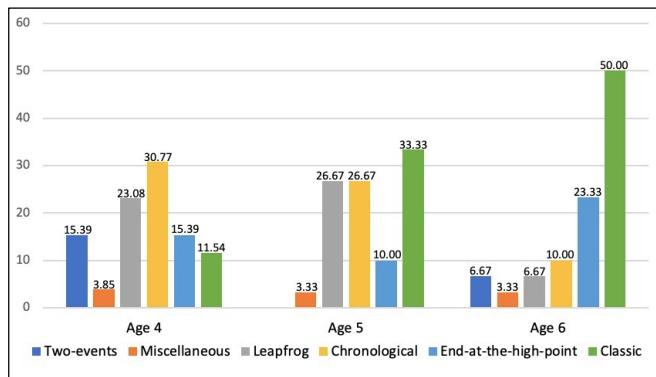
Narrative Components	Age groups	Mean	SD	Median	Mean rank	Kruskal-Wallis Chi-square	df	Asymp sig.
Appendages	4	0.85	0.92	1	43.38	3.861	2	0.145
	5	0.60	0.72	0	37.63			
	6	1.07	0.94	1	49.47			
Orientation	4	2.85	3.34	2	42.37	0.244	2	0.885
	5	2.87	3.46	2	42.70			
	6	3.07	3.16	2	45.28			
Complicating action	4	4.81	2.43	4	35.27	4.132	2	0.127
	5	6.53	3.87	5.5	46.65			
	6	6.50	4.07	5	47.48			
Evaluation	4	3.27	3.76	2	42.50	1.580	2	0.454
	5	2.67	2.88	2	40.02			
	6	4.33	4.30	2.5	47.85			
Resolution	4	0.19	0.63	0	34.06	8.864	2	0.012*
	5	1.03	2.01	0	44.73			
	6	1.00	1.31	0.5	50.45			

**Note:** \* $p<0.05$ , Asymp sig.: asymptotic significance, df: degree of difference.

**Table 5** Pairwise comparisons between age groups in narrative components.

Pairs of age group	Test statistic	SE	Std. test statistic	Adj. sig.
Age 4-5	-10.676	5.557	-1.921	0.164
Age 4-6	-16.392	5.557	-2.950	0.010*
Age 5-6	-5.717	5.355	-1.068	0.857

**Note:** \* $p<0.05$ , Adj. sig.: adjusted significance, Asymp sig.: asymptotic significance, Std. test statistic: standard test statistic.



**Figure 2.** Proportion of narrative patterns in age groups 4-6 (%).

**Table 6** Mean ranks, and the Kruskal-Wallis test summaries for narrative patterns in each age group.

Narrative Patterns	Age groups	Mean rank	Kruskal-Wallis Chi-square	df	Asymp sig.
One-event**	4	43.50	0.000	2	1.000
	5	43.50			
	6	43.50			
Two-events	4	47.12	5.027	2	0.081
	5	40.50			
	6	43.37			
Miscellaneous	4	43.65	0.014	2	0.993
	5	43.43			
	6	43.43			
Leapfrog	4	45.42	4.403	2	0.111
	5	46.97			
	6	38.37			
Chronological	4	47.23	4.004	2	0.135
	5	45.47			
	6	38.30			
End-at-the-high-point	4	43.12	1.955	2	0.376
	5	40.80			
	6	46.53			
Classic	4	34.46	9.287	2	0.010*
	5	43.83			
	6	51.00			

**Note:** \* $p<0.05$ , \*\*No one-event pattern was found in this study, df: degree of difference, Asymp sig.: asymptotic significance, df: degree of difference.

**Table 7** Pairwise comparisons between age groups in narrative patterns.

Pairs of age group	Test statistic	SE	Std. test statistic	Adj. sig.
Age 4-5	-9.372	5.431	-1.726	0.253
Age 4-6	-16.538	5.431	-3.045	0.007**
Age 5-6	-7.167	5.233	-1.369	0.513

Note: \*\* $p<0.01$ , SE: standard error, Std. test statistic: standard test statistic, Adjusted significance.

**Table 8** Gender differences in narrative components.

Narrative Components	Gender	Mean	SD	Median	Mean rank	Kruskal-Wallis Chi-square	df	Asymp sig.
Appendages	male	0.83	0.97	1	42.34	0.193	1	0.660
	female	0.84	0.80	1	44.56			
Orientation	male	3.17	3.02	2	48.10	2.727	1	0.099
	female	2.71	3.53	1	39.31			
Complicating action	male	5.76	3.36	5	42.72	0.078	1	0.780
	female	6.22	3.87	5	44.21			
Evaluation	male	3.78	3.77	2	46.07	0.856	1	0.355
	female	3.11	3.68	2	41.16			
Resolution	male	0.59	1.10	0	41.83	0.508	1	0.476
	female	0.93	1.78	0	45.02			

Note: SD: standard deviation, df: degree of difference, Asymp sig.: asymptotic significance.

**Table 9** Gender differences in narrative patterns.

Narrative Patterns	Gender	Mean rank	Kruskal-Wallis Chi-square	df	Asymp sig.
One-event	male	43.50	0.000	1	1.000
	female	43.50			
Two-events	male	43.65	0.014	1	0.906
	female	43.37			
Miscellaneous	male	45.15	3.372	1	0.066
	female	42.00			
Leapfrog	male	41.79	0.806	1	0.369
	female	45.06			
Chronological	male	42.39	0.300	1	0.584
	female	44.51			
End-at-the-high-point	male	45.94	1.828	1	0.176
	female	41.28			
Classic	male	42.09	0.382	1	0.537
	female	44.79			

Note: df: degree of difference, Asymp sig.: asymptotic significance.

## Discussion

From the results of this study, Thai children's narrative structure develops with age in both narrative components and patterns. However, the statistical analysis showed almost no statistically significant difference between age groups, although it provided trends as noted in the following discussion.

Children's narratives can be predicted from how caregivers elicited narratives and what they focused on when talking with their children.<sup>4</sup> For Thais, conversations between caregivers and their children were concise.<sup>25,30</sup> The results of the current study corresponded with these findings that the length of children's personal narratives, even though becoming longer by mean values in older children,

was still succinct and showed no difference between age groups (as in Table 3).

All narrative components can be found in Thai children's personal narratives from the age of 4 years old. For all age groups, complicating action, which is the backbone of narratives, was by far the most widely used (Figure 1). This is similar to previous studies such as in North American<sup>12</sup> and Chinese children's narratives<sup>14</sup> whereby they also use complicating action as the most frequent narrative component. Moreover, when comparing between age groups it is shown that there is a significant difference in resolution across ages 4 and 6 ( $p=0.010^*$ ). For resolution, it is a narrative component that occurs after the high-point; therefore its increasing use correlated with the more frequent occurrence of the classic pattern which is generally found at the age of around 6 in children.

Moreover, even though previous studies have shown that Asian children used evaluation less than children from western culture,<sup>28,30</sup> it is interesting that evaluation was the second most frequently used of the narrative components in this study (Figure 1). The reason might be related to the topics of the story prompts which were used when collecting the narrative samples. As in previous studies, topics about children's misbehaviors had matchable content to the high-point structure; there are specific events that reach the climax and also give some resolution at the end.<sup>23</sup> Therefore, the story prompts' topics might affect the findings about the proportion of usage of evaluation in this study.

In terms of narrative patterns, Thai children also produced more complex narrative patterns when they got older. Chronological patterns were commonly found at age 4 in Thais. This is similar to narrative patterns of North American,<sup>12</sup> Latino,<sup>23</sup> and Chinese children<sup>14</sup> at the same age. Moreover, leapfrog patterns which were also normally used at this age in North American<sup>12</sup> and Taiwanese children<sup>15</sup> were also presented as the second rank of the proportion of usage in Thais. This resulted in the conclusion that the developmental level of narrative patterns in Thai children aged 4 resembled previous studies. At age 5, Thai children mostly used classic patterns; this narrative pattern was more frequently used, notably from the age of 4 (from 11.54% to 33.33%), and this development was also obviously seen when Thai children were aged 6 as half of the narrative patterns by proportion were then classic patterns. Furthermore, comparisons between age groups showed significant differences between the ages 4 and 6 ( $p=0.007^{**}$ ). This indicated that children were better able to resolve their stories with age, and the current finding was related to prior studies in which children produced more classic patterns at older ages.<sup>12,14</sup> On the contrary, it can be seen that simple patterns were found less along with children's growth. Two-events patterns were presented at 15.39% at age 4 and decreased to 6.67% at age 6. The reduced use of this pattern is related to prior studies in Chinese,<sup>14</sup> Taiwanese, and Korean children<sup>15</sup> which also had decreased trends when children grow up. However, it is notable that this pattern was not shown at age 5 in Thai children in this study. The reason for this might come from the small number of participants and the research

procedure that required at least three narrative samples from each child which resulted in more opportunities to produce their best narrative.

Gender difference analysis was also included in this study. The results, however, presented no difference in terms of both narrative components and narrative patterns, and this conformed to several earlier studies that confirmed that gender did not affect the narrative structure.<sup>12,14</sup> This might be related to technological advancement today that supports daily communication systems and also the improvement of curricula in the classroom, resulting in gender equality in terms of learning opportunities for children.<sup>34</sup>

One more thing that might affect the results was the social class of the participants. In this study, most of the parents were of similar status, so the results reflected only the children's personal narrative structure in this particular group. Previous studies have shown that children of higher status had better narration skills.<sup>17,35</sup> Therefore, if collecting further narrative samples from other classes, longer or more complicated narrative structures might be seen.

### Limitations of the Study

According to the results, even though participants in this study were separated by their age, the mean and median values of age in months indicated that the gaps between groups were not wide. The reason for this was the Covid-19 situation that resulted in limiting the number of appropriately-aged participants. If the ages of the participants were more different and there were also more participants, the distinct development of their narrative structure would be more clearly observed.

Moreover, despite the overall narrative structure in Thai children presented, the different concerns in types of contextual information and evaluation in children's narratives have not yet been distinguished. Prior studies showed that there were different preferences in children's group comparisons.<sup>12,36,37</sup> Thus, future research is needed for a deeper understanding across both age and gender.

### Conclusion

In Thai children's narratives, the sequence of events was emphasized. They used complicating action most frequently and had significantly increasing use of resolution with age. These corresponded to their narrative patterns. At age 4, Thai children commonly used chronological patterns, while at ages 5 and 6 they mostly used classic patterns. Furthermore, the narrative structure between genders, as predicted, had no difference presented.

### Conflicts of interest

The authors declared that no competing interests existed at the time of publication.

### Ethical approval

This study was approved by the Research Ethics Committee of the Faculty of Associated Medical Sciences, Chiang Mai University (Approval ID: AMSEC-62EX-047).

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