

# AAT-Taiwan Progress and Exploratory Use of Generative AI for Vocabulary Contribution

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# Update on Translation Status of AAT-Taiwan

English-to-Chinese Translation

*Contribution of 3,803 translated Concepts (Feb. 2020- Oct. 2024)*

Details of the AAT-TW contribution (Feb. 2020- Oct. 2024)

Total Contribution: 26,774

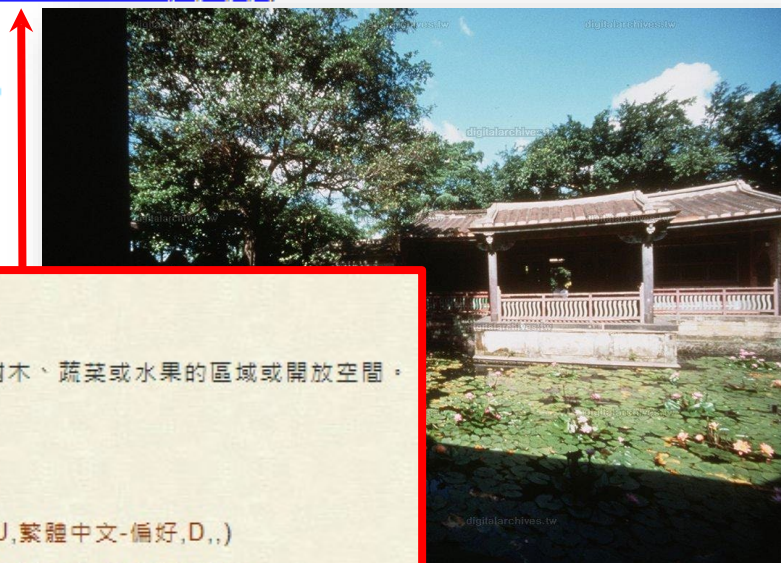
Example: AAT 300008090 gardens (open spaces)

Facets	Hierarchies	Total
Associated Concepts	Associated Concepts	178
Physical Attributes	Attributes and Properties	115
	Design Elements	102
	Color	54
Styles and Periods	Styles and Periods	<b>623</b>
Materials	Materials	259
	People	111
Agents	Organizations	119
	Living Organisms	<b>454</b>
Activities	Functions	69
	Events	62
	Processes and Techniques	<b>384</b>
Objects	Settlements and Landscapes	68
	Furnishings and Equipment	80
	Components	121
	Visual and Verbal Communication	106
	Single Built Works	<b>350</b>

Note: Area of ground or open space; usually, but not always, where flowers, shrubs, trees, vegetables, or fruits are grown and cultivated.

Terms:

- gardens (open spaces)** ([preferred](#), C,U,LC,English-P,D,U,PN)
- garden (open space) (C,U,English,AD,U,SN)
- 庭園 (植物庭園) (C,U,Chinese (traditional)-P,D,U,U)
- 庭院 (植物庭園) (C,U,Chinese (traditional),UF,U,U)
- 園 (C,U,Chinese (traditional),UF,U,U)
- tíng yuán (C,U,Chinese (transliterated Hanyu Pinyin)-P,UF,U,U)
- tíng yuan (C,U,Chinese (transliterated Pinyin without tones)-P,UF,U,U)
- t'ing yüan (C,U,Chinese (transliterated Wade-Giles)-P,UF,U,U)
- tuinen (C,U,Dutch-P,D,U,U)
- tuin (C,U,Dutch,AD,U,U)
- gaarden (C,U,Dutch,UF,U,U)
- jardins (C,U,Portuguese-P,D,U,PN)
- jardim (C,U,Portuguese,AD,U,SN)
- jardines (C,U,Spanish-P,D,U,PN)
- jardín (C,U,Spanish,AD,U,SN)



範圍註：

栽培種植花卉、灌木、樹木、蔬菜或水果的區域或開放空間。

詞彙：

- 庭園 (植物庭園) (P,,U,繁體中文-偏好,D,,)
- 庭院 (植物庭園) (,U,繁體中文-非偏好,UF,,)
- 園 (,U,繁體中文-非偏好,UF,,)
- t'ing yüan (P,,U,韋氏拼音-偏好,UF,U,U)
- tíng yuán (P,,U,漢語拼音-偏好,UF,U,U)
- tíng yuan (P,,U,漢語拼音(無聲調)-偏好,UF,U,U)

Status: According to AAT-Taiwan database in Oct 2024  
(some hierarchical concepts that number fewer than 50 are not presented)

# Localization of Chinese and Taiwanese Cultural Terms with English Translations for AAT Contribution

## Localization of Cultural Terms

Top of the AAT hierarchies

.... [Styles and Periods Facet](#)

..... [Styles and Periods \(hierarchy name\)](#)

..... [<styles, periods, and cultures by region>](#)

..... [Asian](#)

..... [East Asian](#)

..... [Taiwanese](#)

..... [<styles and periods of Taiwanese indigenous people>](#)

..... [Amis](#)

..... [Atayal](#)

..... [Bunun](#)

..... [Hla'alua](#)

..... [Kanakanavu](#)

..... [Kavalan](#)

..... [Paiwan](#)

..... [Pinuyumayan](#)

..... [Rukai](#)

..... [Saisiyat](#)

..... [Sakizaya](#)

..... [Seediq](#)

..... [Tao](#)

..... [Thao](#)

..... [Truku](#)

..... [Tsu](#)

Research

Research Home > Tools > Art & Architecture Thesaurus > Full Record Display  
 Art & Architecture Thesaurus® Online  
 Full Record Display

[New Search](#) [Previous Page](#) [Help](#)

Click the icon to view the hierarchy.

[Semantic View \(JSON, RDF, N3/Turtle, N-Triples\)](#)

ID: 300438772

Page Link: <http://vocab.getty.edu/page/aat/300438772>

Record Type: [concept](#)

Amis (<styles and periods of Taiwanese indigenous people>, Taiwanese, ... Styles and Periods (hierarchy name))

**Note:** Cultures and styles of the Amis people lived in Taiwan. The Amis people refer to themselves in two ways: Pangcah meaning "we people" is used in regions north of Taitung, and Amis meaning "northerners" is used in the south. The denomination has to do with routes of migration and interaction among tribes. The Chinese term came to adapt Amis. The Amis territory stretches from the Qilai plain to the Hengchun peninsula, where the Amis people develop an agrarian culture intricately rooted in the low lands of Taiwan's eastern valley and coastal plains. The Amis has the largest population of aboriginals in Taiwan. There are three subcategories of the Amis people based on geographical and cultural-linguistic differences: The Northern group of "Nanshi" Amis, the Middle group of "Xiuguluan" Amis and coastal Amis, and the Southern group of "Falangaw" Amis and Hengchun Amis. The property inheritance of the Amis is matrilineal and traditional matrimony follows the rule of mikadafo which marries Amis men into the brides' homes. The Amis tribe is co-governed by clan chiefs, who assign responsibilities and tasks to male members of different age classes. The Harvest Festival, known as Malalikid, is the most important celebration which unifies traditional beliefs, social structure and tribal identity.

**Terms:**

Amis ([preferred](#), [C,U,English](#), [P,D,U,U](#))

阿美族 ([C,U,Chinese \(traditional\)](#), [P,D,U,U](#))

Pangcah ([C,U,English](#), [UF,U,U](#))

ā mēi zú ([C,U,Chinese \(transliterated Hanyu Pinyin\)](#), [UF,U,U](#))

a mei zu ([C,U,Chinese \(transliterated Pinyin without tones\)](#), [UF,U,U](#))

a mei tsu ([C,U,Chinese \(transliterated Wade-Giles\)](#), [UF,U,U](#))

**Facet/Hierarchy Code:** [X](#)

**Hierarchical Position:**

- [Styles and Periods Facet](#)
- [Styles and Periods \(hierarchy name\)](#) (G)
- [<styles, periods, and cultures by region>](#) (G)
- [Asian](#) (G)
- [East Asian](#) (G)
- [Taiwanese](#) (G)
- [<styles and periods of Taiwanese indigenous people>](#) (G)
- [Amis](#) (G)



**Additional Notes:**

**Chinese (traditional):** 阿美族 (阿美族) 指「北方人」，與遷徙路線、族群互動關係有關，後轉譯為「阿美族」。原鄉北起奇萊平原，南至恆春半島。於縱谷與海岸等低地發展出精巧的水域與農作文化，為原住民族人口最多者。基於地域、語言、文化價值觀分為三群。北群：南勢阿美；中群：秀姑巒阿美、海岸阿美；南群：卑南（馬蘭）阿美與恆春阿美。1970年代後移住西臺灣都會區形成獨特的都市原住民文化風貌。過去進行mikadafo (從妻居) 原則，財產繼承採母系為準；部落則由長老共議，指派青壯年男子按年齡分組，執行專任事務。「豐年祭」(Malalikid) 則為當代族群再現其傳統信仰、社會結構和社會認同的重要場域。

**Related concepts:**

- reflected in [Malalikid](#)
- [Malalikid](#) (<festivals of Taiwanese indigenous people>, cultural holidays, ... Events (hierarchy name)) [300438546]
- reflected in [Sea/river worship](#)
- [Sea/river worship](#) (<festivals of Taiwanese indigenous people>, cultural holidays, ... Events (hierarchy name)) [300438767]

**Sources and Contributors:**

- 阿美族..... [AS-Academia Sinica, VP]
- ..... [AS-Academia Sinica data (2014-)]
- 潘旅情音韻自創音書-第一卷(阿美族/卑南族) (1915)
- 移民、近鄉與傳統祭典-北臺灣都市阿美族原住民族的豐年祭儀典與文化認同 (2007)
- 臺灣大學人類學研究所碩士論文 (2011)
- 臺灣阿美族之社會組織及其變化: 從招贅婚到嫁娶婚 (2007)
- 潘旅情音韻自創音書-第一冊阿美族(奇密社/馬蘭社) (1913)
- 潘旅情音韻自創音書-第二冊阿美族(奇密社、大巴寮社、馬太寮社、海岸篇) (1914)
- 阿美族親屬制度的再探討: 以碧山社為例 (1987)
- a mei tsu..... [AS-Academia Sinica, VP]
- ..... [AS-Academia Sinica data (2014-)]
- a mei zu..... [AS-Academia Sinica, VP]
- ..... [AS-Academia Sinica data (2014-)]
- Amis..... [AS-Academia Sinica, VP Preferred]
- ..... [AS-Academia Sinica data (2014-)]
- 潘旅情音韻自創音書-第一卷(阿美族/卑南族) (1915)
- 移民、近鄉與傳統祭典-北臺灣都市阿美族原住民族的豐年祭儀典與文化認同 (2007)
- 臺灣大學人類學研究所碩士論文 (2011)
- 臺灣阿美族之社會組織及其變化: 從招贅婚到嫁娶婚 (2007)
- 潘旅情音韻自創音書-第一冊阿美族(奇密社/馬蘭社) (1913)
- 潘旅情音韻自創音書-第二冊阿美族(奇密社、大巴寮社、馬太寮社、海岸篇) (1914)
- 阿美族親屬制度的再探討: 以碧山社為例 (1987)

**Subject:** [\[AS-Academia Sinica, VP\]](#)

..... [\[AS-Academia Sinica data \(2014-\)\]](#)

**Note:**

English..... [\[AS-Academia Sinica, VP\]](#)

Chinese (traditional)..... [\[AS-Academia Sinica data \(2014-\)\]](#)

**Exploring Generative AI  
for AAT Development:  
A Case Study on  
"Traditional Chinese  
Musical Instruments" in  
the Confucius Ceremony**

1. Jin Gu  
晉鼓



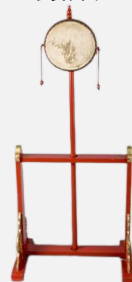
2. Jian Gu  
建鼓



3. Ying Gu  
應鼓



4. Tao  
鼗鼓



5. Bo Fu  
搏拊



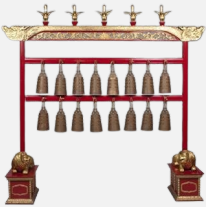
6. Yong Zhong  
鏞鐘



7. Bo Zhong  
搏鐘



8. Bian Zhong  
編鐘



9. Bian Qing  
編磬



10. Te Qing  
特磬



11. Paipan  
拍板



12. Sheng  
笙



13. Zhu  
祝



14. Yu  
敔



15. Qing  
琴



16. Se  
瑟



17. Dong Xiao  
洞簫



18. Feng Xiao  
鳳簫



19. Dragon Flute  
龍笛



20. Chi  
箎



21. Xun  
埙

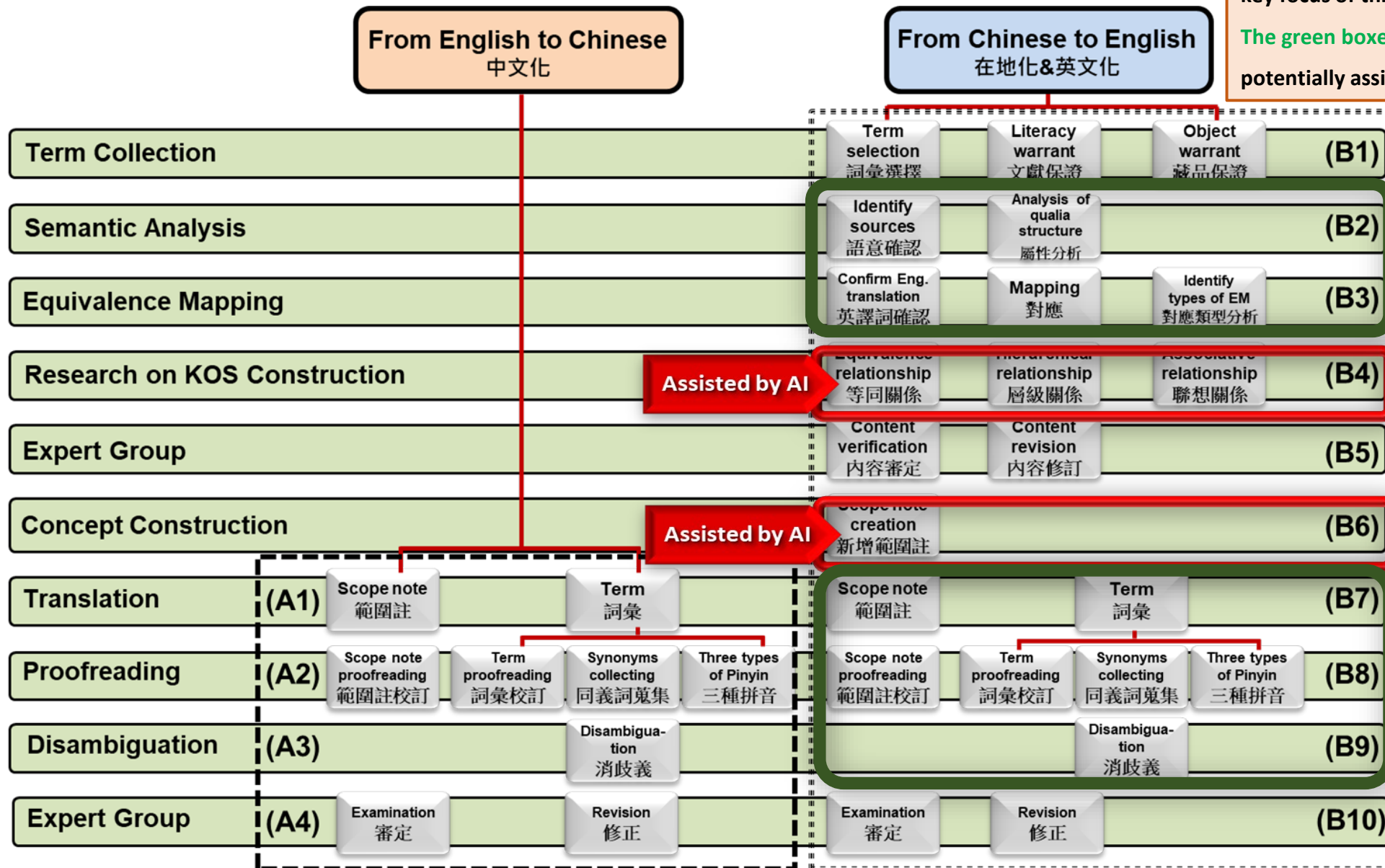


21 terms selected from "Taipei Confucius Temple"

# Workflow of AAT Translation and Localization

The red boxes highlight the **core task** in AAT, where exploring **vocabulary relationships** and **scope notes** is a key focus of this study.

The green boxes indicate tasks where AI could potentially assist, with **future research** planned.



## Steps of Translation in Chinese

- A1) 詞彙內容翻譯/ Translation
- A2) 詞彙內容校訂/ Proofreading
- A3) 詞彙消歧異/ Disambiguation
- A4) 專家審訂/ Expert Group

## Steps of Term Localization

- B1) 詞彙蒐集/ Term collection
- B2) 語意分析/ Semantic analysis
- B3) 等同對應/ Equivalence mapping
- B4) 知識組織架構研究/ KOS construction research
- B5) 專家審訂/ Expert Group
- B6) 概念建構/ Concept construction
- B7) 詞彙內容翻譯/ Translation
- B8) 詞彙內容校訂/ Proofreading
- B9) 詞彙消歧異/ Disambiguation
- B10) 專家審訂/ Expert Group

# Research Design: Approach to Conducting the AI Study

※ ChatGPT-4o (referred to as AI) to explore the application of AI

		Synonym Identification	Scope Note Writing
1. Data Sources		Select 21 musical instrument terms from the Taipei Confucius Temple website.	
2. Document Collection		For each term, 4-6 related documents were collected to provide definitions and contextual information.	
3. Reference Standards Writing		Synonyms manually identified following <b>AAT rules</b> to serve as <b>ground truth</b> .	Scope notes manually written <b>based on Pustejovsky's Qualia Structure</b> and <b>AAT rules</b> as <b>reference standards</b> .
4. AI exp	4-1. Samples Selection	3 representative terms (建鼓, 拍板, 龍笛) selected as <b>golden samples</b> for Initial AI testing.	3 representative terms (晉鼓, 編鐘, 編磬) selected as <b>golden samples</b> for Initial AI testing.
	4-2. Prompt Design Strategy	Design prompts for <b>3 strategies</b> to guide AI in returning accurate synonyms.	Design prompts for <b>5 strategies</b> , guide AI to write scope notes.
	4-3. Establishing Evaluation Criteria	<b>Recall metric</b> used to measure how well the AI identifies all the synonyms that were marked by humans.	<b>Five evaluation criteria</b> were developed based on literature and AAT rules to compare AI vs. human results. The criteria are as follows: <b>1. Correctness 2. Completeness 3. Conciseness 4. Fluency 5. Coherence.</b>
	4-4. Initial AI Testing	Use 3 <b>golden samples / reference standards</b> to conduct initial AI experiments to evaluate the performance of AI and optimize prompt.	
	4-5. Results Evaluation and Prompt Optimization	Quantitative scoring and qualitative analysis of AI outputs. Qualitative analysis focused on three steps: <b>1. identifying problems 2. diagnosing causes 3. refining prompts.</b> The prompts will be refined iteratively based on AI output to <b>find the optimal prompt.</b>	
	4-6. General AI Testing	After the optimal prompt was identified, it was <b>applied to the remaining 18 terms</b> . The evaluation process was repeated to assess the AI's ability to generalize across different terms.	
	4-7. Final Optimal Prompt	The experiment concluded with the selection of the <b>best-performing prompt as the final optimal prompt.</b>	

# Results: Final Optimal Prompt Structure (Synonym Identification & Scope Note Writing)

- Utilizing the concepts and methods of 'prompt engineering,' the design of a structured prompt consists of **six components**:

Aspect	Structured Prompt	Explanation	Example (SPO-Structured Synonym Identification)	Example (AAT-Guided Scope Note Writing)
Task	Task Role	Assign a specific professional role to the AI to focus its responses on the appropriate context, resulting in more relevant outputs.	You are an expert in Chinese music history, specializing in instruments used in the Confucius Ceremony.	You are an expert in Chinese music history, specializing in instruments used in the Confucius Ceremony.
	Task Context	Provide background information or describe the usage scenario to help the AI better understand the task's goals and data content.	We need your help to create the index for the Art & Architecture Thesaurus (AAT).	We need your help to create the index for the Art & Architecture Thesaurus (AAT).
	Task Goal	Clearly describe the specific goals for the AI to guide it toward producing focused and goal-oriented responses.	Please read the following text and identify all synonyms of the {instrument term}.	After reading the following text, write a scope note in Traditional Chinese for {instrument term} according to Scope Note Rules.
Instruction	Instruction Rules	Define explicit execution steps or analytical methods to guide AI on how to process or analyze the data.	Instructions: 1. Identify synonyms using the SPO (Subject-Predicate-Object) structure. The structure should be consistent as	Scope Note Rules: 1. Correctness : Avoid overgeneralizing. Clarify the meaning by specifying the time and its usage, and inform the user if the meaning has changed over time, while omitting any uncertain or conflicting information. Ensure that the description is objective and neutral.
	Instruction Examples	Provide one or a few examples to help the AI understand the kind of output you are seeking.	"Instrument Term - Key Phrase used to identify synonym - Synonym of Instrument Term."	2. Completeness: Describe its key attributes that distinguish it from other similar or related concept terms, including its distinguishing characteristics, appearance, materials, and uses. Also, guide users to related or different terms when appropriate.
	Instruction Format	Impose restrictions on the length, style, or format of the output to prevent irrelevant or overly verbose information.	2. First, list each identified synonym step by step, specify the original sentence from the text where the synonym was found. Finally, summarize everything in a table format in Traditional Chinese with the following structure: "Instrument Term" "Key Phrase used to identify synonym" "Synonym of Instrument Term"	Instructions: Please generate the output according to the following structure: Limit the scope note to 150 Chinese characters or fewer. After identifying the instrument term, list the Chinese

# Examples of Results: Synonym Identification & Scope Note Writing



## (1) Synonym Identification

AI can accurately find all synonyms identified by human based on S-P-O structure

Using ChatGPT-4o to identifies all the synonyms, with *Jiangu* (建鼓) as an example

## (2) Scope Note Writing

AI can accurately capture important features of conceptual vocabulary, and generate clear scope notes based on AAT Guideline

Using ChatGPT-4o to write a Scope Note, with *Bianzhong* (編鐘) as an example



## Subject – Predicate – Object (S-P-O Triple)

Instrument Term	Key Phrase for Synonym Judgment	Synonym	Original Sentence
Jian Gu (建鼓)	Also referred to as	Xian Gu (縣鼓)	"Xian Gu is also referred to as Jian Gu."
Jian Gu (建鼓)	Considered the same	Jin Gu (晉鼓)	Wei Zhao of the Three Kingdoms believed that Jin Gu and Jian Gu were the same instrument.
Jian Gu (建鼓)	Same instrument with a different name	Ying Gu (檜鼓)	"In the diagram, Jian Gu is written as Ying Gu, the two are actually the same instrument with different names."
Jian Gu (建鼓)	Also called	Ying Gu (檜鼓)	Jian (Jian) Gu is also called Ying Gu.
Jian Gu (建鼓)	Also referred to as	Zhuan Ban Gu (轉班鼓)	Also referred to as Zhuan Ban Gu.
Jian Gu (建鼓)	Collectively referred to as	Shu Gu (樹鼓)	In the Yuan Dynasty palace, Jian Gu, Shuo Bi, and Ying Bi were collectively referred to as Shu Gu.

編鐘是一種中國古代青銅打擊樂器，最早可追溯至商代，並於西周和春秋戰國時期達到巔峰。由多個形狀與大小不同的鐘組成，每個鐘發出特定音高，常見組合為16枚。編鐘主要在宮廷雅樂中使用，象徵統治者的權力與地位，常見於祭祀、宴享和重大禮儀中。其形制隨時代變化，包括從扁形至圓形，並經歷不同紋飾演變。編鐘在祭孔典禮中，用於每樂句之始，擊響引導樂隊齊奏。

(1) **Timeframe:** It mentions the earliest origins in the Shang dynasty and its peak in the Western Zhou and Spring and Autumn periods.

(2) **Composition:** It outlines that a set of "bianzhong" typically consists of 16 bells of varying sizes and shapes, producing distinct pitches.

(3) **Usage:** it includes the instrument's primary role in court music, and was used in significant rituals and ceremonies, including Confucius Ceremony.

(4) **Appearance:** It describes how the shape and decoration of the bells changed over time, from flat and oval shapes to round ones with different patterns.



# Results : Prompt Design Strategy (Scope Note Writing )

Prompt Design Strategy	A	B	C	D	E
Strategy Name	Direct AI-Generated Scope Note Writing	<b>AAT-Guided</b> Scope Note Writing	<b>Cluster-Based</b> Scope Note Writing	<b>AAT-Guided</b> Scope Note Writing Based on <b>Pustejovsky's Qualia Structure</b> <small>Formal、Constitutive、Agentive、Telic</small>	<b>Cluster-Based AAT-Guided</b> Scope Note Writing without Fixed Clustering Rules (B+C)
Prompting Techniques	Zero-Shot Prompting	In-Context Learning Prompting	One-Shot Prompting	Few-Shot Prompting + Chain of Thought (CoT)	One-Shot Prompting + Chain of Thought (CoT)
Description	This approach <b>imposes no explicit rules or restrictions</b> , relying entirely on the model's internal knowledge to generate the scope notes. This method helps us understand the style and quality of scope notes produced by ChatGPT in the absence of specific guidance.	This method guides ChatGPT <b>using AAT guidelines, with key rules extracted as prompts</b> to generate scope notes. It tests if ChatGPT can accurately follow a specific professional framework to produce correct scope notes.	The data are first <b>grouped based on semantic or attribute similarities</b> . Then, scope notes are directly generated from these groups. This method examines how ChatGPT can automatically organize texts and produce scope notes that match the structure of the groups.	This method combines <b>manual writing techniques</b> . ChatGPT first uses <b>Pustejovsky's Qualia Structure</b> to group the data, then generates scope <b>notes based on AAT guidelines</b> . It tests whether ChatGPT can emulate human writing to create more detailed scope notes that follow specific semantic structures.	The data is <b>first grouped by semantic or attribute similarities</b> . Then, scope notes are generated for these groups <b>based on AAT guidelines</b> . This method tests ChatGPT's ability to organize information and create scope notes that follow AAT standards.
Issue Type	Lack of Correctness and Completeness	<b>None</b>	Lack of Completeness and Fluency	<b>None</b>	Lack of Completeness
Rating	(20/25)	★ (25+/25)	(22/25)	(25/25)	(23/25)

✂ Rating: Five evaluation criteria were developed based on the relevant literature and the AAT Editorial Guidelines. The criteria are as follows:

1. Correctness
2. Completeness
3. Conciseness
4. Fluency
5. Coherence.

# Discussion: Characteristics of Different Prompt Design Strategies (Scope Note Writing)

- Different prompt design strategies can lead to variations in writing content and style, and should be selected with consideration for the usage context and target audience.

編鐘是一種中國古代青銅打擊樂器，最早可追溯至商代，並於西周和春秋戰國時期達到巔峰。由多個形狀與大小不同的鐘組成，每個鐘發出特定音高，常見組合為16枚。編鐘主要在宮廷雅樂中使用，象徵統治者的權力與地位，常見於祭祀、宴享和重大禮儀中。其形制隨時代變化，包括從扁形至圓形，並經歷不同紋飾演變。編鐘在祭孔典禮中，用於每樂句之始，擊響引導樂隊齊奏。



*Bianzhong* (chime bells/ 編鐘),  
The Metropolitan Museum of Art

Appearance (Overview-Oriented): The shape and decoration of the bells changed over time, from flat and oval shapes to round ones with different patterns.

Appearance (Detail-Oriented): Bianzhong are distinguished from other bell instruments by their unique shapes such "雙龍鈕" (double dragon handle) and "雲龍紋" (cloud-dragon pattern).

編鐘是中國古代青銅打擊樂器，主要盛行於西周至東周時期。由若干枚不同音高的鐘組成，懸掛於鐘架上，通常為三枚或八枚一組，清代製作沿用銅質。編鐘以其雙龍鈕、雲龍紋等獨特形制區別於其他鐘類樂器。編鐘在古代宮廷雅樂和祭孔典禮中扮演重要角色，具有旋律性和色彩性功能，通常用於每句樂章的開始，並作為大型樂隊中的重要樂器之一。

## AAT-Guided Scope Note Writing

- **Overview-Oriented**, Conservative and Organized, Formal Tone
- Like an assistant, providing a clear and quick overview
- **Ideal for Scope Notes**

## AAT-Guided Scope Note Writing Based on Pustejovsky's Qualia Structure

- **Detail-Oriented**, Visual Appeal, Educational Tone
- like a work partner or teacher, highlights the unique features
- Great for educational or interpretive settings (e.g. museum guides)

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Thanks for your Listening

