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Language Across the Curriculum

Overview of Presentation

1. Everyday text-types vs. Academic text-types
2. Academic rhetorical functions and sentence patterns
3. Academic vocabulary
4. LAC: Language awareness and content awareness
5. Q & A

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Everyday Language vs. Academic Language: Everyday text-types vs. Academic text-types

Everyday text-types vs. Academic text-types

- Everyday language is different from academic language
- E.g., Everyday text-types are different from academic text-types:
- Features of everyday text-types
  - Narrative (storytelling) mode: linear, chronological
- Features of academic text-types
  - Both non-linear & linear modes of thinking:
  - "The logic of academic language" vs. the logic of everyday language

Difficulty in Understanding Academic text-types

- Knowledge & linguistic structures in science language
  - Highly complex and condensed structures for students to comprehend
  - E.g. *An organ is a structure in an animal or a plant, which is composed of several different tissues grouped together to make a functional unit.*

- The logic of academic science language is different from the logic of our usual, everyday language, and academic language has a high density of information units in a sentence

- ESL/EFL students will need a transition phase: e.g., from short, simple sentences to complex sentences, and then to extended paragraphs (e.g., observations, explanations, etc. => answer texts to common 'question types/words' in assessment)

Difficulty in Understanding Academic text-types

- Since everyday language is different from science language,

- explicit teaching of the logic of science (e.g., non-linear, non-narrative modes of thinking) and linguistic features of science language is very important: what science teachers have picked up as 'common sense' has to be taught to students explicitly.

- The challenge:

  - E.g., How can we teach L2 science language? (e.g., English science language for HK students whose English proficiency is limited)

Everyday text-types: E.g., Casual Dialogues

English Classroom

- E.g., a dialogue between two students chatting informally on popular culture issue.

Everyday text-types: E.g., Comics

□ E.g., *Garfield, Peanuts*

Everyday text-types: E.g., Advice Columns

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- □ E.g., letters to magazine columns for advice on personal problems and their matching replies.

Everyday text-types: E.g., Recipes

☐ E.g., a recipe on how to make doughnuts.

Everyday text-types: E.g., Advertisements

□ E.g., Print advertisements, TV commercials

Everyday text-types: E.g., Media Reviews (e.g. film, music, etc.)

- E.g., a film review on *Harry Potter and the Philosopher's Stone.*

Everyday text-types: E.g., Personal correspondence (letters/emails)

☐ E.g., emails between friends.

Everyday text-types: E.g., Stories (myths)

- E.g., *Orpheus and Eurydice* (a Greek myth).

Everyday text-types: E.g., General argumentative essays

- E.g., a discussion on whether file-sharing is sharing or stealing intellectual property.

Everyday text-types: E.g., Application Letters & Resumes

- ☐ E.g., an application letter and resume for applying the position of flight attendant.

Everyday text-types: E.g., Poems & Songs

- E.g., *The Road Not Taken* (by Robert Frost), *Imagine* (by John Lennon)

Everyday text-types: E.g., Feature articles in newspapers

- ☐ E.g., an article on virtual identity.

Academic text-types: E.g., Table and charts

- □ E.g., a table showing money supply in Hong Kong.

Academic text-types: E.g., Graphic organizers (flow charts)

- □ E.g., a flowchart showing the different functions of a tropical rainforest ecosystem.

Academic text-types: E.g., Expositions

☐ E.g., an essay on building a sustainable city.

Academic text-types: E.g., Definitions

Science Classroom

- E.g., the definitions of different kinds of living things.

Geography Classroom

Academic text-types: E.g., Explanations

- E.g., an explanation on the effect of deforestation on hydrosphere.

- E.g., an explanation on the water cycle.

Geography Classroom

Science Classroom

Academic text-types: E.g., Classifications

- E.g., the classifications of different groups of vertebrates.

Science Classroom

Academic text-types: E.g., Lab reports

Science Classroom

- E.g., a lab report on the spaces between particles and the movement of gas particles

- E.g., a lab report on the solubility of sugar in water

Modeling explicit analysis of a simple science report: The Barn Owl (Adapted from Rees, 1996, p. 57)

Text-type: Expository Report / Information Report

- **Describing things (parts of wholes: giving information on aspects or parts of one thing)**

• **A Report on Barn Owls (written by 2 children following joint work by their class)**

Purpose and organization

- Has a general classification as orientation
- Has description grouped under subheadings
- Includes physical and behavioral characteristics
- Uses subheadings to define paragraphs
- Each paragraph begins with a reference to the subejct, e.g. `` ` The Barn owls...", "It..."
- Highlight endangerment and urgency for actions to conclude text

A Report on Barn Owls

Introduction
The Barn Owl is a bird of prey. It is an endangered species. It lives in barns and trees. They are nocturnal.

Description
Its face is like a plate which is used as a satellite dish.
The sound bounces off.

The colour
It has brown speckles and a white face.
It has white under the wings and a white belly.
There are furry-speckled feathers on its back.

Habitat
The Barn Owl lives in barns and chimneys.
The Barn Owl does not make nests.

Food
It is a carnivore and it eats mice, rats, wild gerbils and baby rabbits.

Movement/Speed
The Barn Owls fly fast and silent and glides and it flies low, so that their prey can't hear it coming.

Conclusion
The Owl is endangered because people are moving to barns and also because mice eat chemicals and the owls eat the mice and they die.

Language features

- Constant use of subject reference
- Use simple present tense
- Use verbs for behavior (*eats, fly, pick up*)
- Subject and verb generally consistent with some exceptions; e.g. *The Barn Owl... they*
- Use simple sentence structures, with connectives such as *because, so that*

Ways of describing

- Use adjectives and noun, e.g. *sharp claws furry speckled feathers, endangered species*
- Frequently use very specific adjectives, e.g. **satellite** *dish*
- Use an appropriate simile, e.g. *face like a plate*

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Academic rhetorical functions

E.g., Sentence Patterns for Comparing X & Y: Similarities

Subject	is + comparing words		Object
Magnesium	is	like similar to comparable to as important as	aluminium.

Subject	comparing verbs	Object	
Magnesium	resembles parallels	aluminium	in many ways.

E.g., Sentence Patterns for Contrasting X & Y

X	is	+ contrasting words	Y
Iron	is	unlike different from	aluminium.
	differs from		

Contrasting phrases	Subject	
Unlike iron, In contrast to iron, Compared to iron, In comparison to iron	aluminium.	is light.

X		is + contrasting words	Y
Iron	is	heavier than less abundant than not as soft as	aluminium.
		relatively comparatively	soft metal.

Other frequent academic rhetorical functions

E.g., Definitions: Defining concepts

☐ What is a definition?

- A **definition** is an exact word or phrase of the meaning, nature, or limits of something.
- A definition usually answers the question *what*…

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E.g., Simple definitions:

What is Science?

Science is the study of nature and how it affects our environment and us.

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There are different branches in Science. Some common examples are Physics, Chemistry, Biology, Geology and Astronomy.

- **Physics is the study of matter, energy, and natural forces.**

- **Chemistry is the study of the properties, composition and reactions of substances.**

- **Biology is the study of living things.**

- **Geology is the study of rocks, soil and the structure of the Earth.**

- **Astronomy is the study of the Sun, the Moon, stars, planets etc.**

□ **E.g., Teaching students the sentence patterns to write science definitions:**

□ **What is the sentence pattern of a definition?**

- The pattern of a definition is simple. It uses the simple subject (S) + verb (V) + clause structure.

- Besides, the definition of a term consists of its general class and characteristics.

Subject	Verb	Relative Clause		
A laboratory	is	a place	where	experiments are performed.
Term	=	General Class	Relative Pronoun	Giving Specific Characteristics

Vertebrates are animals that have a backbone. Some examples are humans, frogs and snakes.

Invertebrates are animals that do not have a backbone. Some examples are bees, lobsters and snails.

Example of a science definition (Derewianka, 1990, pp. 20)

The Rough Maidenhair fern is a creeping monomorphic wintergreen mountain fern which belongs to the *Adiantum* family. It is a native of Asia, southern Australia and New Zealand. It is found in mountainous areas where it grows in cool crevices. Like all maidenhair ferns it is of delicate appearance and they young fronds are a bright colour when unfurling.

General classification statement

Description (location, habitat, appearance)

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Glossary for Science Subjects

- On-line English-Chinese Glossaries of Terms Commonly Used in the teaching of Science Subjects in Secondary Schools (link)

- English-Chinese Glossary of Terms Commonly Used in the Teaching of Biology in Secondary Schools (2003 link / 2009 link)

- English-Chinese Glossary of Terms Commonly Used in the Teaching of Chemistry in Secondary Schools (1999 link / 2007 link)

- English-Chinese Glossary of Terms Commonly Used in the Teaching of Physics in Secondary Schools (1991 link / 2007 link)

- English-Chinese Glossary of Terms Commonly Used in the Teaching of Science (S1-3) in Secondary Schools (link)

Some examples

- E.g., glossaries in local Integrated Science textbooks

Technical vocabulary

English	Chinese
vertebrate	脊椎動物
invertebrate	無脊椎動物
mammals	哺乳動物
sargassum	馬尾藻類海草
deforestation	砍伐森林
photosynthesis	光合作用
API (air pollution index)	空氣污染指數
carbon dioxide	二氧化碳
fermentation	發酵作用
haemoglobin	血紅素
law of reflection	反射定律

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Curriculum Context:
Content & topic to contextualize language learning:
e.g., Air Pressure

Academic text-types: e.g., Lab Report

Rhetorical functions:
e.g., Compare & Contrast

Sentence Patterns
Academic Vocabulary

Progression of Academic Language Learning Targets Across the Levels

Junior secondary years

- Acquiring basic technical vocabulary

- Reading & writing simple sentences for basic academic rhetorical functions

- Reading & writing simple academic text-types

Senior secondary years

- Acquiring more technical vocabulary

- More complex sentences for more academic rhetorical functions

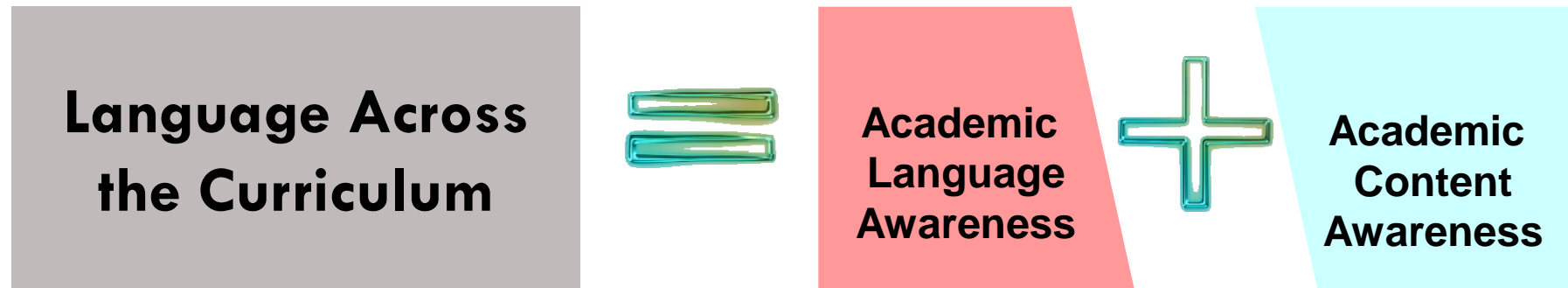- More complicated academic text-types

Tertiary years

- More condensed sentence structures
- A greater variety of ways to express different academic rhetorical functions

- More advanced academic text types

What is Language Across the Curriculum?

- Language Across the Curriculum is about enhancing both academic language awareness and academic content awareness.

Language Across the Curriculum	=	Academic Language Awareness	+	Academic Content Awareness

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Thank you!

Q & A