Title	How to assess readers' prior knowledge
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How To Assess Readers' Prior Knowledge

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Reading research has shown that a reader's prior knowledge contributes greatly to comprehension.

Extensive research has been undertaken to show that prior knowledge contributes to

(a) understanding

(b) remembering and

(c) interpreting information given in a text.

In fact research by Holmes (1983) and Johnston (1984) show that students who possess prior knowledge seem better able to handle inferential questions.

Granted prior knowledge is crucial for understanding text, how can a teacher in a classroom assess the students prior knowledge?

How can knowing students' prior knowledge help the teacher?

1. It helps the teacher develop her lessons according to students' prior knowledge or lack of it.

   Students' prior knowledge can be used to build new concepts. Teacher can select texts carefully to avoid repetition and boredom or facilitate learning to ensure successful lessons.

2. It enables the teacher to detect any inaccurate information the student may have.

3. It provides a good guide to the extent of understanding and learning a student may derive from a text.

How can a teacher assess a students prior knowledge? Here are some techniques.

1. **Free recall**

In this task, the teacher tells the students what the topic of the text is. She then asks them to imagine what they think it contains. Alternatively, if a picture accompanies a text, the teacher can show the students the visual and ask students to guess the topic and the content. For example a passage entitled **Weather** could generate responses like Types of weather/things to do on a rainy day, the weather (climate) in Singapore/things that depend on weather etc.

The students' ideas are put on the board. Once the students feel that they have exhausted all possibilities the teacher stops the recall.

2. **Word association**

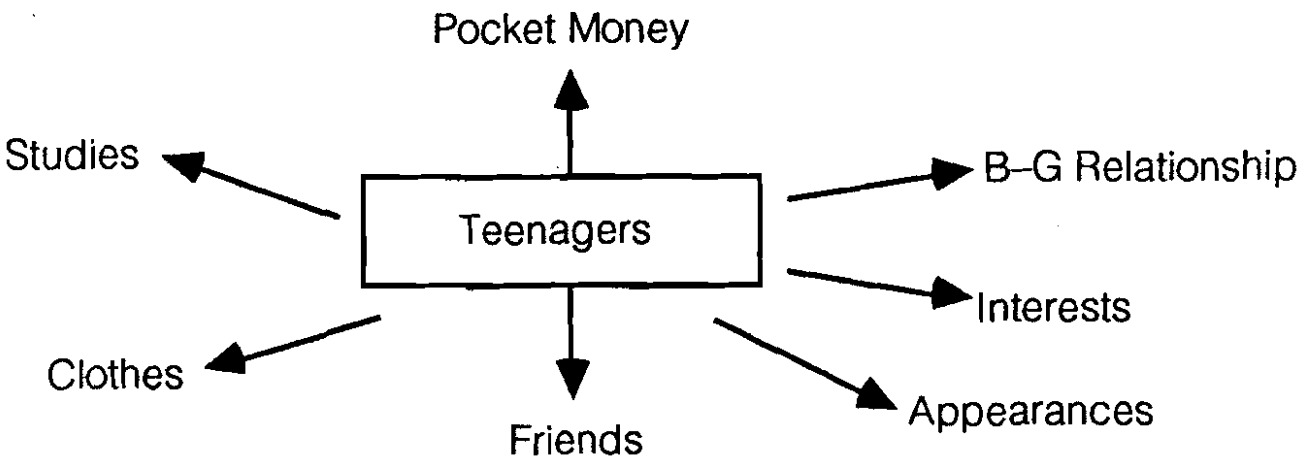
In this task, the teacher uses a list of sub-topics. As she states each sub-topic the students give their responses. This is again recorded on another section of the board. This can be tied in with semantic mapping. In response to the sub-topics given by the teacher, the students draw up a list of connected words. A sub-topic like Crops and Weather could lead to a list of words like, flood, drought, damaged, moonson. In addition to finding out what the students already know this activity also informs the teacher of possible misconceptions they may already have.

Frayer (Frayer, Frederick & Klausmeier 1969) considers it essential to teach concepts in a related manner so that students can identify concepts by components in the learning process. This can be done by looking at

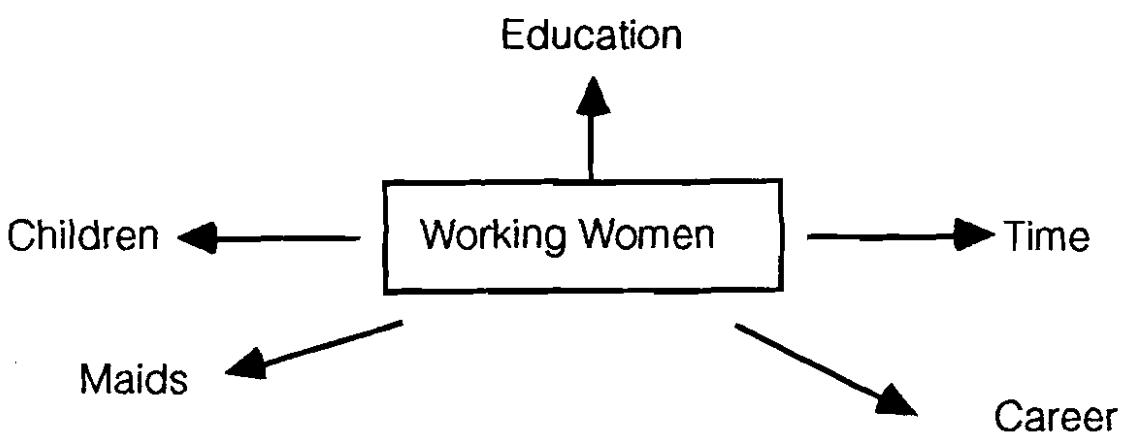
- relevant and irrelevant attributes
- similarities and differences
- supraordinate, subordinate aspects of concepts

One way in which a Frayer model can be graphically displayed in given below.

A topic on **Teenagers** could lead to the following semantic map

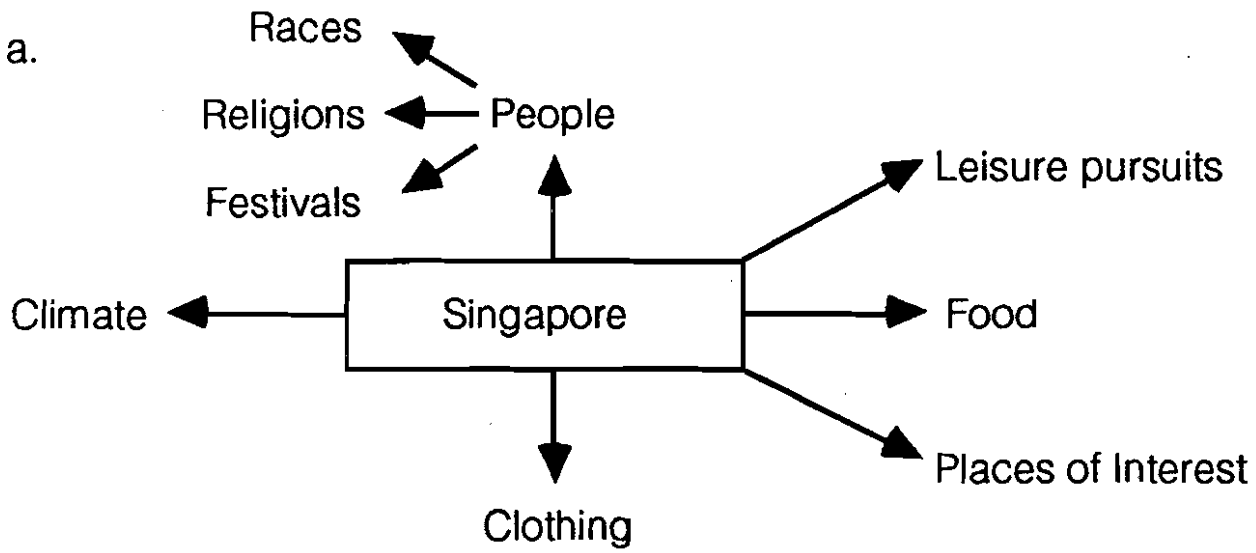


or one on **Working Women** to this map:

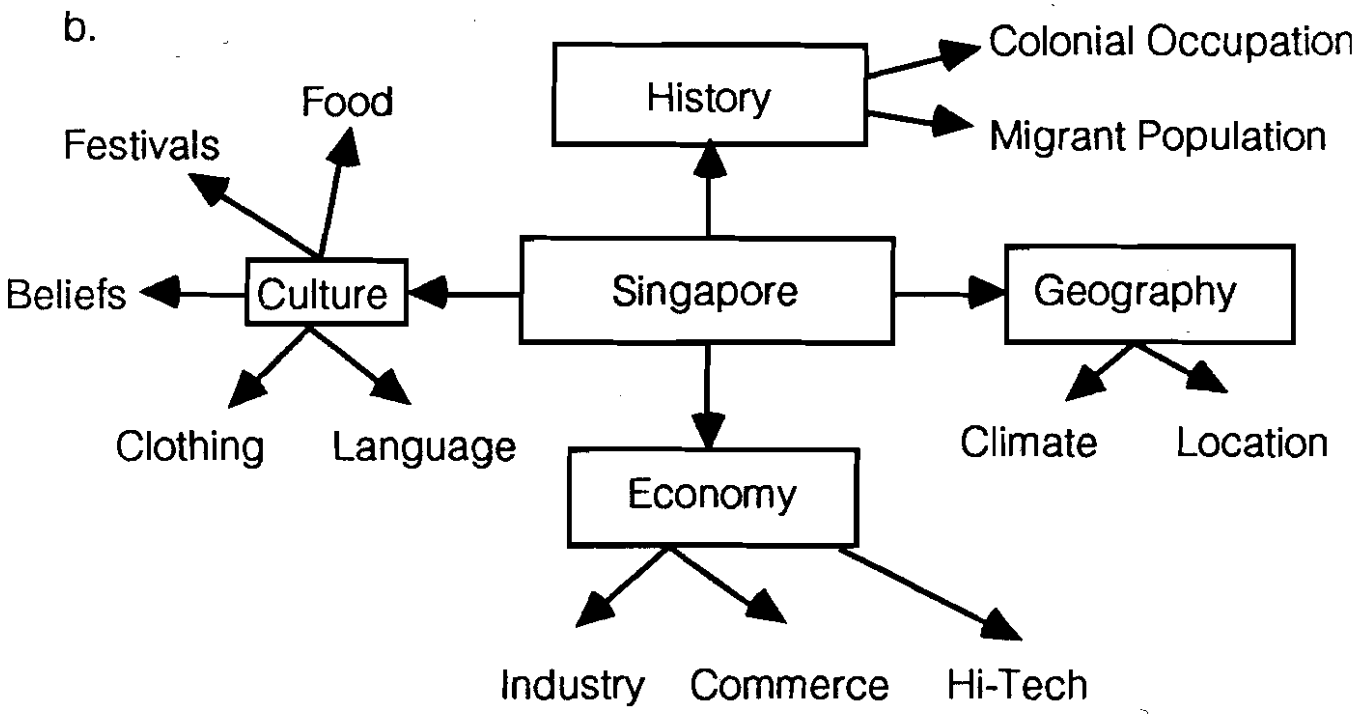


A semantic map on a description of Singapore could look like this:

a.



b.



For example, the sub-topic 'houses to match the weather' could generate student responses like brick, mud houses, stonewalls, roofs etc.

3. **Questions**

The teacher develops structured questions based on the sub-topic. These questions are 'probing' and general in nature. It will give the teacher information on the extent of background knowledge the students possess. E.g. Can you tell the difference between the 2 words weather and climate? Why do you think houses in hot countries have thick, white stone walls? Why are the roofs of houses in Singapore sloping?

4. **Recognition**

The teacher frames a question for each sub-topic. The questions have multiple-choice answers. For a good class, the teacher can read out the question and the choices. Students write out the letter of the correct answer. For a weak class, the teacher can print out the questions and the options or only the options and give students about 10 minutes to complete the questions, eg. In Indonesia a lot of houses are built on stilts because

1) it allows air to flow freely around the house and keep it cool.

2) many Indonesians live in the countryside.

3) wood is cheaply available.

5. **Sharing Experience**

For this task the students are encouraged to discuss/share their experiences about the topic. Each time the teacher helps the students focus on the topic by asking them what they had learnt about the topic. Students could talk about a visit to Malaysia and describe the types of houses they saw or describe the problems of/on a rainy day.

A teacher does not have to use all these techniques at once to derive a fair estimation of students' background knowledge. A combination of these techniques or just anyone single technique can be used depending on the ability level of the class and the time the teacher had at her disposal for a particular reading lesson. The selection of anyone technique will also depend on the text the students will have to handle, the nature and amount of the information they need to know beforehand in order to understand the text fairly well and the effort they are expected to expend or the teacher is prepared to expend to ensure the students' understanding. Whatever the reason may be, teachers must realize that it is impossible to do a complete and thorough assessment of the students' prior knowledge. Half the battle is won if teachers understand the important role played by a student's prior knowledge in text comprehension and employs means to facilitate the tapping of this background information.

References

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