

Ethnoscience Techniques

Ethnoscience is the study of perceptions, knowledge, and classification of the world as reflected in their use of language. Ethnoscience has been used by many different disciplines. Most ethnoscience research has dealt with specific domains, such as folk medicine; classifications of plants, fish, and birds; and pest management (Bentley and Rodriguez 2001). In the field of economics, the use of local taxonomic categories has been applied to analyze the effects of different types of soil on the adoption of new maize seed varieties.

Bellon and Taylor (1993) asked farmers about the various soil types on their land, what characteristics they attributed to each type, and how they ranked those soils in terms of their suitability for maize production. Their hypothesis was that farmers' perceptions of the soil qualities on their farms significantly affect their decision on whether to adopt new technology. Their results showed that the perceptions of land qualities did indeed affect the adoption of new seed varieties. It was suggested that this type of analysis can be taken one step further by examining local classifications of such economic terms as benefits, costs, insurance, interest, security, and risk, in order to determine whether these are locally meaningful concepts.

1. Folk taxonomy

Folk taxonomy is considered an important indicator of diversity relating to how crop populations may be treated differently. Eyzaguirre (2003) noted that by developing many names for crop types, farmers are effectively segregating populations and often treating them differently. Local knowledge about a crop variety helps to transmit plant knowledge around the community such as knowledge of associated pests and diseases. Folk taxonomies have hierarchical levels similar to formal biological classifications of kingdom, phylum, class, order, family, genus, and species (Berlin 1992). In folk taxonomy, the common levels are:

- **Life-form** - a high level of plants or animals that share some general shape or characteristic in morphology. Examples: tree, vine, bush, fish, snake, bird, mammal.
- **Generic** - the most common basic level. Examples are dog, grass, and rice ant. Folk genera often do not correspond to scientific genera but sometimes to Linnaean species or family. For instance, "dog" is a folk genus and a Linnaean species; "ant" is a folk genus and belongs to Linnaean family formicidae.
- **Specific** - usually separated from each other by a few characteristics. In some languages, such as Spanish, Bahasa Indonesia, and Malaysia, the generic name comes first, as in a Linnaean name. In English, Filipino, Chinese, Vietnamese and Thai, it is the other way around. Specific names tend to be a mnemonic device -- like color, shape, and utility -- that makes the names easy to remember. Figure 1 shows farmers' classification of leaf feeding insects in Leyte, Philippines.

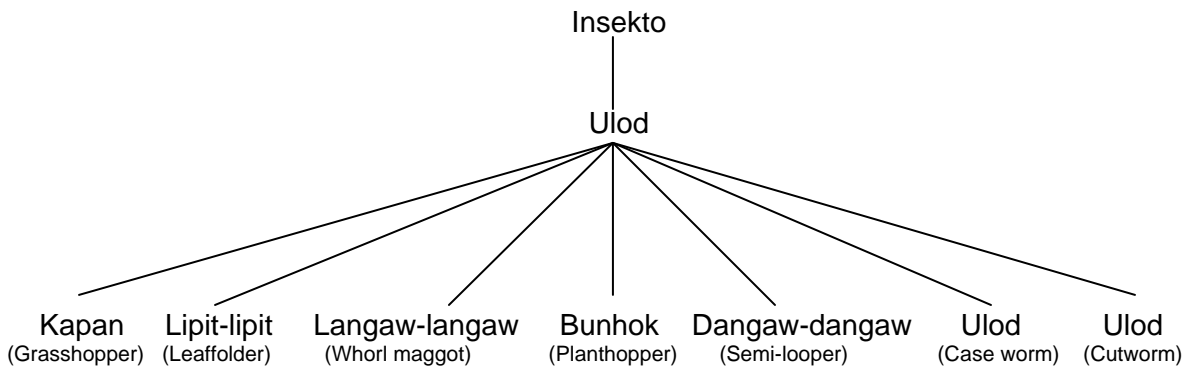


Figure 1. Farmers' classification of leaf feeding insects, Leyte, Philippines

Besides being hierarchical, folk taxonomy may be applied in naming parts of an object or stages of the crop (partonomy). Farmers may have names that fuse groups of parts that biologists differentiate or they may have finer definitions of parts than what biologists describe. For instance, Figure 2 illustrates stages of the rice crop named by Filipino farmers.

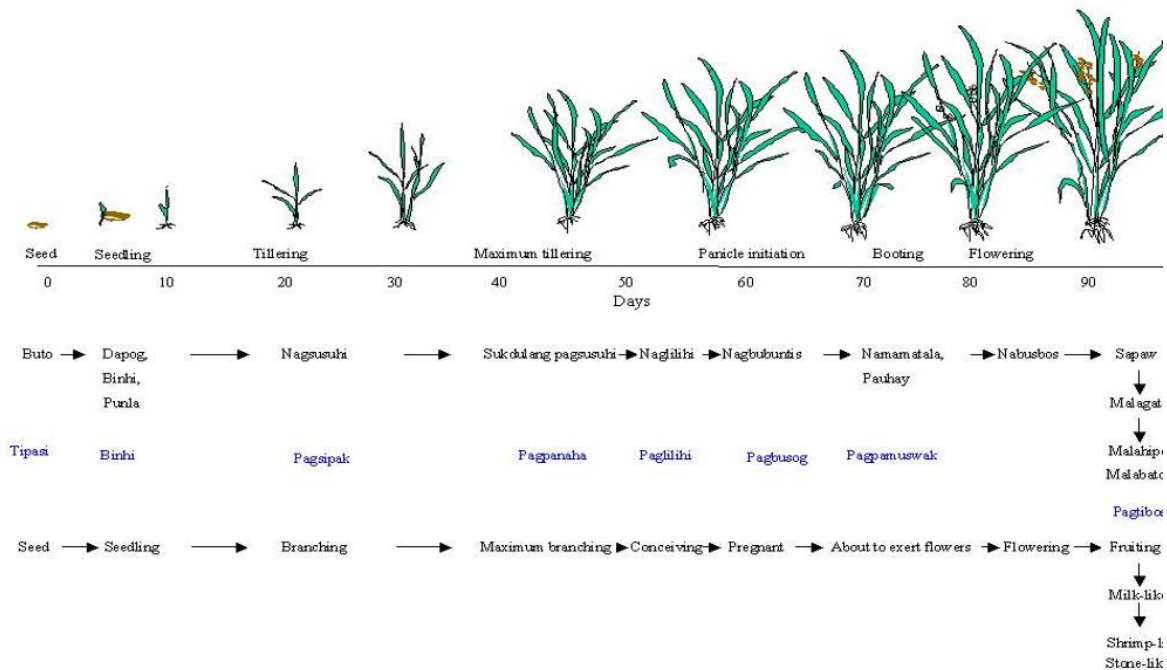


Figure 2. Stages of the rice crop named by Filipino farmers

2. Emic-Etic framework

Etic and emic are terms coined by linguistic anthropologist Kenneth Pike (see Franklin 1996), which were derived from an analogy with the terms “phonemic” and “phonetic”. *Etic* categories involve a classification according to some external system of analysis considered as appropriate by science. This is the approach of biology where the Linnaean classification system is used to define new species. It assumes that ultimately, there is an objective reality that is seen to be more important than cultural perceptions of it. In contrast, *emic* categories involve a classification according to the way in which members of a society perceive and classify their own world.

Thus *emic-etic* roughly means local versus scientific knowledge and this framework provides a convenient tool for researchers to obtain accurate descriptions of farmers’ knowledge or concepts and compare it with scientific knowledge or concepts on the same topic.

Eliciting frames: how to ask questions

- **What:** What is _____?
- **Kind:** What kind of _____ is it?
What are the kinds of X?
What is the difference between X and Y?
Show a person an example of an organism and ask, “What is this?” or “What is its name?”
- **Part:** What are the parts of X?
What (separated) part of _____ is it?
- **Use:** What is _____ used for?
- **Source:** Where does _____ come from?

Some methods for eliciting folk knowledge

Bentley (1999) suggested these methods for eliciting folk knowledge:

- There is knowledge associated with each concept.
- Do not ask leading questions; questions that suggest the answers.
- Do not preach. Preaching is the number one cause of silence.
- Share some information with local people, especially if they ask a direct question, of it is natural to slip in a comment.
- Use interviews, group interviews preferred.
- Listen to people without interrupting, just listen.
- Do not make fun of people.
- Hang out.
- Have rapport and patience.

- Use short questionnaires.

Emic-Etic Framework

Location : _____ **Date:** _____

Topic : _____

Variable/Character Descriptions	Emic (Local Knowledge)	Etic (Research Knowledge)

References

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