## WORKSHOP 11 THE INTEGRATION OF LANGUAGE ANALYSIS AS AN INTRODUCTION TO SCIENCE

Leader : David Zorc

Chairman : John Newman

## **ABSTRACT**

It is a sad state of affairs if, in our eagerness to introduce children to science and logical thinking, we forget that linguistics is a science and that children already have an immense reservoir of data which can be tapped. While mathematics and the physical sciences cannot be ignored in the overall curriculum, various levels of linguistic analysis can be incorporated to illustrate and exemplify scientific thinking. When a child, regard less of language, coins "I seed it" (for saw) or "beautifuler" (for more beautiful), (s)he is operating on analogy, form of logic. While such errors must be corrected, the operations that give rise to them should be reinforced before they are lost or discouraged. Experience has shown that pupils can work on a wide range of linguistic exercises -- and do this with enthusiasm and enjoyment. Some examples include: awareness of sounds and minimal pairs (bill: pill: vet: wet), homonyms (mint = candy and money factory), homophones (as an introduction to inconsistencies in English spelling: right: write, see r sea), and grammatical exercises (regular and irregular forms of tense, case, plurality, etc.).

While it is hoped that language arts classes already exist in the curriculum, if they do not, various initial forays into linguistics can be made within the confines of mathematics and general science units. This workshop will offer numerous practical examples of how and when this might be achieved in the overall curriculum.

## DISCUSSION

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The workshop leader distributed a handout in which seven levels of linguistic analysis were differentiated: sounds, wordbuilding, sentence-building, vocabulary, meaning, content/use/ situation, social/cultural background. Each of these levels was discussed in turn and some examples of classroom work were given which illustrated how each level can be handled in the classroom. Examples included: minimal pair work, description of sounds, dividing words into bits, antonyms, synonyms, genre, greetings, discourse types, connotation vs. denotation. Participants were asked to find examples of the principles from their own languages. The workshop leader pointed out the various ways in which the linguistic analysis exercises exemplified characteristics of scientific thinking, such as observation, comparison, contrast, definition, classification, abstraction etc.

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## Brief Curriculum Vitae

Dr. David Zorc has been a Senior Lecturer with the School of Australian Linguistics of Darwin Community College since 1976. He teaches Australian Aboriginal and Islander students units in Beginning Linguistics, Creative Writing, Own Language Literacy, Semantics, and Dictionary Making. He has presented papers on these topics at four previous SEAMEO Regional seminars.

April 1985 WORKSHOP: THE INTEGRATION OF LANGUAGE ANALYSIS AS AN INTRODUCTION TO SCIENCE - David Zorc (SAL/DIT)

Some general expectations of scientific thinking OBSERVATION COMPARISON CONTRAST	ť	Overall "levels GENERAL SOUNDS	GENERAL TECHNICAL BASIC I SOUNDS PHONETICS PHONETICS	alysis BASIC UNIT = -EME PHON-	SOME EXAMPLES FOR CLASSROOM WORK minimal pairs description of sounds
DEFINITION CLASSIFICATION ABSTRACTION	ณ์ ต่	WORD-BUILDING SENTENCE- BUILDING	MORPHOLOGY GRAMMAR/ SYNTAX	MORPH— GRAM(M)—	dividing words into bits pointing out irregularities and awareness of regular patterns
GENERAL IZATION HYPOTHES IS	4.	4. VOCABULARY	LEXICON	LEX-	sentence agreement listing of vocabulary sets
THEORY LAWS/"RULES"	ហំ	MEANING	SEMANTICS	SEM	antonyms; synonyms; homonyms
INTERRELATIONSHIPS DESCRIPTION	•	CONTEXT, USE or SITUATION	DISCOURSE	TEXT-	genre, style, greetings sentence & discourse types
	7.	SOCIAL AND/OR CULTURAL	CULTURE ANTHEROPOLOGY	ETHN-	connotation vs denotation language levels

<sup>(</sup>a) Study of each of these can be labelled "-OLOGY", e.g., PHONOLOGY, MORPHOLOGY, ETHNOLOGY, although some fields have more commonly used names, e.g., SEMANTICS, DISCOURSE ANALYSIS, SYNTAX,

SOCIOL INCUISTICS

BACKGROUND

<sup>(</sup>b) Cross-cutting or mixing of levels is an important facet of the creative genius of language use, e.g., MORPHOPHONEME, TEXTOPHONEME, ETHNOSEMENE, etc.

<sup>(</sup>c) Rules belong to each of these levels in that there is a given STRUCTURE for each language, these rules are "-TACTICS", e.g., PHONOTACTICS, MORPHOTACTICS, SEMOTACTICS.