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ABSTRACT
                Two studies examined certain aspects of discourse
analysis to determine their value in classroom use. The first study
explored the relationships among information recalled as assessed by
informal reading inventory comprehension questions, unaided
retelling, and schema based retelling. Subjects were 15 fourth,
fifth, and sixth grade students who read two passages each--one at
the fourth grade level of readability and the other at their
individual grade level. The results showed that using descriptive
schema to analyze unprompted retelling bore a reasonable relationship
to standard methods of evaluating comprehension. The second study
examined the difficulties of first and second language learners in
the comprehension of six types of propositions as defined by P. D.
Pearson and D. D. Johnson. The study involved 160 seventh grade
students, who were divided into groups according to their reading
level and by whether they spoke English at home. Results suggested
that continued reading assistance should be given to
English-as-a-second-language students in order to bring them to the
levels of proficiency of their English-speaking peers. (FL)

Application of Discourse Analysis: IRI's and ESL Learning

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The application of research to classroom practise is a problematic venture at best. Recent writings (Samuels and Pearson, 1980) have warned us of over hasty application and others have chided us for inadequate research (Tuinman, 1980) but no clear alternative has been presented. Consequently it is instructive to refer back to Hilgard's (1964, p.405) "steps on the road from pure-science research to established educational practices." Hilgard (1964, p.406) outlines six steps which show the progression from pure to applied settings:

1. Not directly relevant (to practical problems),

2. Relevant subjects and/or topics,

3. School-relevant subjects or topics,

4. Laboratory, classroom, and special teacher,

5. Tryout in "normal" classroom,

6. Advocacy and adoption.

From the above scheme we can readily see that much research falls under #2 or #3 and that they are at least two steps removed from classroom application.

This paper reports two exploratory studies in which selected aspects of discourse analysis are examined in order to move them one step closer to classroom use. The first study sought to explore the relationships among the recalled information as assessed by SRI comprehension question, unaided retelling, schema-based retelling, and mean length of t-unit of retelling.

The second study explores the difficulties of first- and second-

language learning (ESL) in the comprehension of propositions as

suggested by Pearson and Johnson (1978). The data was collected

and analyzed by graduate students Noreen Rossnagel and Terri Ann

Pollock.

STUDY #1

The problem of writing questions for informal reading inventories

has not been satisfactorily settled (Guthrie, 1977) either practically

or experimentally. Yet often the type or level of question is thought

to affect its difficulty or to determine the level of thinking it

elicits (Davidson, 1970; Tatham, 1978). If these are real concerns

then what is required is a systematic method of generating questions

related to a specific text. The present study follows the suggestion

by McConaughy (1980) that basing questions on simple description story

schema might be a viable alternative.

The problems selected for study were: (1) What is the relation-

ship among four measures of comprehension: prompted literal questions

(PQ), non-prompted retelling (NP), schema-related retelling (SR), and t-units

contained in non-prompted retelling (TU)?; (2) Is there a significant

difference among the four measures?; (3) Are there grade level

differences?; (4) Are there qualitative differences in the measures?

Method and Materials

Two fourth-grade stories (A,B), one fifth-grade story (C)

and one sixth-grade story (D) were selected from the Standard Reading

Inventory (1966) to serve as stimulus passages.

Each subject silently read passage A; fourth-graders in addition

read passage B; fifth graders read C; and sixth graders read passage

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D. The order of presentation was balanced to eliminate order effects.
After each reading they were asked to retell the story (NP and
were asked the 10 SRI questions (PQ). The results we͏ . ͏ribed
and analyzed for their relationship to a story schem⋯ ⋯ McConaughy,
1980), which resulted in SR scores. The number of t-u͏ ⋯ ͏e ⋯
retelling were counted to produce TU scores.

Sample

Five average students in each of grades 4, 5 and 6 we⋯ selected
from one school in a Winnipeg school division. Subjects wa⋯ identified
as average by being within ± 1 month of the grade placement on the
Canadian Test of Basic Skills. Eight male and 7 female students made
up the sample.

Results

When pooled over grades on the common passage A, the following
correlations resulted.

	PQ	NP	SR	TU
PQ	–			
NP	0.86*	–		
SR	0.65*	0.86*	–	
TU	0.28	0.38	0.41	–

* $p < .01$

Figure 1 - Intercorrelations of four comprehension measures:
          Non-prompted retelling, prompted questions, schema
          related retelling, t-units (*$p < .01$).

There is a significant relationship among the variables PQ, NP, and
SR. The t-units were not significantly related to any of the other
measures.

A two-way ANOVA of the four measures and three grade levels

indicated a significant grade effect (F=8.89, p<.05) as well as a

significant treatment effect (F=128.16, p<.01). The interaction

effects were not significant. Post hoc analysis indicated that the

differences between grade four and five were not significant but that

differences between grades four and six and five and six were sig-

nificantly different. Post hoc analysis of the treatments indicated

no difference between PQ and SR but significant differences among

the others.

A qualitative analysis of the twenty story elements indicated

strong trends across grades for initiating action, final attempts,

and final resolutions. Internal responses and goal statements were

most poorly completed.

Discussion

Using descriptive schema such as proposed by McConaughy (1980)

to analyze unprompted retelling appear to bear a reasonable relation-

ship to standard methods of evaluating comprehension since there were

significant interrelationships among the three measures PQ, NP, and

SR.

By adding the results from the ANOVA one could conclude

that schema-based analysis is most like the results obtained from

literal level questions. This is as one would expect since McConaughy's

(1980) simple description schema draws primarily on temporal sequence

of action and explicitly stated facts.

STUDY #2

This study addresses the problem of why so many non-native

speakers of English fail to derive from print the meaning that is necessary for fluent reading even when their speech and oral comprehension are reasonable (Wolk, 1972). Downing's (1973) cognitive clarity theory, for example, predicts that learning to read and write in two languages should be easier. However, Cziko (1978) found that a relatively high level of competence is needed to use discourse constraints in reading.

The purpose of the second study was twofold: (1) will students whose home language is not English have more difficulty than English speakers with questions involving six types of propositions and; (2) will students whose home language is not English and whose reading level is classified as high, middle, or low, achieve differently than their English counterpart on specific proposition level tasks?

Method and Materials

A 48 item test was constructed to represent six of the propositional levels proposed by Pearson and Johnson (1978): paraphrase, association, main idea, figurative language, ambiguous statements, and sequence. Difficulties with objective scoring and discrimination ability of some items necessitated the omission of the proposition levels labelled comparison, causal relations, and anaphoric relations. The Spearman Brown prophecy formula resulted in a reliability of 0.939.

Procedure

The test was administered to groups of 25-30 subjects with two teachers present. No rigid limit was set and most subjects completed the task in approximately 40 minutes. Students were encouraged to ask questions about any words they could not read.

A two-way ANOVA was performed for the total test scores as well as for the six specific propositions.

Subjects

A total of 160 subjects completed the testing. Previous analysis indicated that English only was spoken in 41% of the homes, no English was spoken in 35% of the homes, and the remaining 24% spoke English and one or more other languages intermittently.

Each subject completed the reading comprehension subtest of the Stanford Diagnostic Reading Test (Brown) and was rated as a high (G.E.=7.0+), middle (G.E.=5.0 to 6.9), and low (G.E.=4.9-) reader on that basis.

Results

The ANOVA for total test scores resulted in significant differences for achievement levels ($F_{2,151}$= 98.41, p<.01) and for language level ($F_{2,151}$=31.769, p<.05). These findings indicated that there were statistical differences among the three language groups (English only; Non-English; Mixed) and among students assigned to the various ability levels (High, Middle, Low). Comparing the means, the Non-English group consistently had the lowest means, the mixed-language group came next, and the all English group had the highest means.

		Reading Level		
		High	Middle	Low
	English	41.83(3.445)	34.75(4.196)	28.82(7.012)
Language	Mixed	38.75(4.264)	34.61(7.040)	25.46(4.772)
	Non-Eng.	36.09(5.838)	28.50(6.004)	18.94(5.983)

Figure 2 - Group means & standard deviations for analysis by reading level and language spoken at home.

A second analysis considered the variations in achievement on each of six types of propositions (paraphrase, association, main idea, figurative language, ambiguous statement, and sequence) when language background was considered. The results of such comparison was highly significant ($F_{1,111}=16.133$, $F_{1,111}=36.545$, $F_{1,111}=8.066$, $F_{1,111}=39.774$, $F_{1,111}=8.935$, $F_{1,111}=16.399$, $p<.01$). Since no interaction effects were significant it was concluded that the proposition types did not affect subjects differently at high, middle, and low reading achievement levels.

Discussion

Because the recall of connected discourse is related to the reader's knowledge structure and because cultural background can influences the make-up of this structure, it follows that Non-English students could have more difficulties with processing the various propositions selected for this study. The data certainly support this contention.

The results of this study suggest that continued reading assistance should be given to ESL students in order to bring them near the levels of their English-speaking counterparts.

GENERAL DISCUSSION

The two exploratory studies reported here have made a tentative venture into the land of the schemers.

First, they have built on the already existing literature but have extended somewhat the utility of the theory. In the initial study, the feasibility of using story schema to analyze IRI retelling

protocols was examined. The second study examined English and ESL

subjects' ability to respond to six types of propositions.

Second, the results indicate promising avenues of further research.

The possibility of finding a more structured and systematic procedure

for generating IRI questions is certainly an attractive option and

the identification of proposition level differences in first and

second language speakers (although with similar reading ability)

appears promising for ESL learning.

Third, these studies again point out the importance of using

terms precisely and the dangers of borrowing terms from other fields.

This applies especially to terms such as schema, schema theory,

proposition, constructive comprehension, macrostructure, discourse

analysis, and others currently in vogue.

Finally, as pointed out initially, these findings should be

regarded as a slight progression in Hilgard's model--from level #2

to level #3. Nothing reported here suggests to teachers "what ought

to be done on Monday", but it has brought us a little closer.

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