

AN ADOLESCENT SCREENING TEST
OF
SEMANTIC APPROPRIATENESS

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Pragmatics has been defined as the relations between signs and their users (Bates 1976). Although this may be an efficient definition, a more workable definition of pragmatics is one which emphasizes social consequences of events and actions. Pragmatics, then, deals particularly with the relationships between words or expressions and the way in which people use them. Pragmatic skills or competencies include a wide range of language abilities, some of which are: the ability to perceive nonverbal communication cues, perceiving inappropriate semantic feature usage, the ability to apply meaning to differences in intonation patterns, the ability to select appropriate vocabulary for different communicative needs or settings, and the desire or motivation to alter the attitudes, beliefs, and/or behaviors of a hearer (Lucas 1980). This study is concerned with the pragmatic area of perceiving semantic appropriateness.

According to Wiig and Semel (1980), learning disabled children may have significant problems in pragmatics. Johnson and Myklebust (1967) state that learning disabled children often have been described as ineffective in dealing with nonverbal communication cues in interpersonal interactions. Newton (1976) and Wiig and Semel (1975) conclude that children and adolescents who have learning disabilities may also evidence disorders of pragmatics.

The typical adolescent with normal language development should not experience difficulties in pragmatics. According to Piaget (1928) the adolescent should be functioning in the stage of Formal Operations. This is a period in which the person learns hypothetical reasoning. He is able to function purely on a symbolic, abstract level. His conceptualization capacities have matured. The child enters this stage at approximately ten years six months of age and continues in it through adolescence and into adulthood.

Wiig, LaPoint, and Semel (1976) state evidence suggesting that the learning disabled child reaches a performance plateau and that developmental factors no longer produce an increase in language abilities. The learning disabled child seems to remain in Piaget's Concrete Operations stage of cognitive development. Wiig (1976) and Ochs and Schieffelin (1979) conclude that children and adolescents

Figure 1

"Is there something wrong with this sentence?"

YES NO

- ___ ___ The wingless bird flew from the tree to our back door.
- ___ ___ If I am tired, I run around the block.
- ___ ___ The circus clowns performed tricks and made everyone laugh.
- ___ ___ A boy with his hands in his pockets was wrestling with his friend.
- ___ ___ It is a pretty sight to see the flowers blooming in spring.
- ___ ___ Last night the apple called her on the telephone.
- ___ ___ My sister cooks dinner and makes up all the beds after everyone else is asleep.
- ___ ___ My brother took the hatchet and chopped down the tree.
- ___ ___ Later in the evening when I finish supper, I watch the sun rise.
- ___ ___ Since it was such a lazy summer day, the table decided to relax.
- ___ ___ Mary and Joe got married four years ago in her hometown.
- ___ ___ Susan wore her rubbers on sunny days so she wouldn't get her feet wet.
- ___ ___ When the airplane crashed in the ocean, the parachutes paddled to shore.
- ___ ___ John hit the football with a racket.
- ___ ___ It was raining so hard yesterday, Paul took off his shirt to get a suntan.
- ___ ___ He looked into the refrigerator for something to eat for dinner.
- ___ ___ Ted was going to Europe; he didn't know whether to go by boat or by bus.
- ___ ___ Last week the bee stung her on the back of her leg.
- ___ ___ Snow skiing in Miami will soon be a favorite sport.
- ___ ___ The meatball frowned when it saw the children fighting.

who are learning disabled have significant problems with the abstract, pragmatic skills of language such as divergent production of semantic units and classes, dysnomia, and cognitive-semantic processing. Wiig and Roach (1975) state that language disabilities observed among learning disabled children in the elementary grades may persist into adolescence.

Language therapy is recommended for adolescents who evidence pragmatic delay (Wiig and Semel 1980). But before therapy can begin, an accurate diagnosis is essential. Curtiss, Prutting, and Lowell (1979), Damico and Oller (1980), and Damico (1981) have developed procedures for analyzing language samples for pragmatic usage. These procedures are thorough but impractical for therapists who have to service large caseloads or for screening procedures.

The purpose of this study is to compare scores made by three groups of adolescents on a clinician-devised screening test of semantic appropriateness. The author asks the following questions regarding the group scores. Will the learning disabled students score significantly lower on the test than will the students who are classified neither learning disabled nor language delayed? Within the learning disabled group, will the students classified both learning disabled and language delayed score significantly lower on the test than will the students classified only learning disabled?

Subjects

A total of forty-five subjects were used in this study. fifteen in each of three groups. The three groups included: (1) adolescents who were classified only learning disabled (2) adolescents who were classified both learning disabled and language delayed, and (3) adolescents who were classified neither learning disabled nor language delayed according to Louisiana Bulletin 1508. Learning disabled means severe and unique learning problems as a result of significant difficulties in the acquisition, organization, or expression of specific academic skills or concepts (Louisiana Bulletin 1508). The diagnosis was rendered based on the student's performance on the Wide Range Achievement Test, Peabody Individual Achievement Test, Woodcock-Johnson Psycho-Educational Battery, and Gates-MacGintie Reading Test. All pupils were 11 to 14 years of age and were enrolled in the public junior high school.

Language abilities were measured by the Fullerton Test of Language Development. The control group consisted of pupils who had never been classified learning disabled or language delayed. They had never been referred for a Special Education Team Evaluation

and had never received any form of special education services. The three groups used in the study were matched according to age, sex, ethnic background and grade in school. The number of subjects used to validate the test prior to the study was two hundred subjects of similar age, sex ratio, ethnicity, and grade placement.

The problems of the learning disabled are manifested in school as significantly poor performance in such areas as reading, writing, spelling, arithmetic reasoning, oral comprehension or expression, or the acquisition of basic concepts. The learning disabled include such conditions as attention deficit, perceptual handicaps, process disorders, minimal brain dysfunction, brain injury, dyslexia, developmental aphasia, or sensory-motor dysfunction (Louisiana Bulletin 1508).

The term learning disabled does not include children who have learning problems which are primarily the result of visual or auditory acuity or motoric handicaps, mental retardation, a behavior disorder, or environmental, cultural, or economic disadvantage. Evidence of an academic deficit is demonstrated by performance greater than one and one-half standard deviation below the mean in four or more deficit areas.

Language delayed pupils displayed impaired receptive, associative, or expressive disorders of phonology, morphology, syntax, or semantics (Louisiana Bulletin 1508). A pupil may be classified language delayed if, according to appropriate diagnostic procedures used, the expressive and/or receptive skills indicate a difference of twelve or more months from the level of language skills expected for the child's cultural and social background, chronological age, stage of development other than language, or sex.

All subjects must have passed the hearing screening procedure administered at 250 Hz, 500 Hz, 1000 Hz, 2000 Hz, and 4000 Hz for both ears at 20 dB. Each pupil had to hear all frequencies in both ears to pass.

Procedure

Each subject was tested individually. The testing was completed in the examiner's office at a small table, with the examiner seated across from the child.

First, The Token Test for Children was administered following the instructions in the manual, to control for possible auditory processing difficulties. If any processing difficulties surfaced on the test, the child was eliminated from the study. Otherwise, the examiner continued by showing the subject vocabulary flash cards.

All words used in the test were printed on 3 x 5 inch cards, one word per card. Any words unfamiliar to the child were taught to him prior to the test.

Next, the examiner gave the test for semantic appropriateness, consisting of twenty sentences (see Figure 1). The following instructions were given to each subject. "I am going to read these sentences to you. As I read them aloud, you read them silently to yourself as we go along." The examiner then read the first sentence orally, pointing to the words as she read them, then paused slightly, and read the same sentence orally again. The examiner then asked, "Is there something wrong with this sentence? Something funny or weird? If there is, check 'yes'. If there's not, check 'no'. Do you understand?"

A fifty percent random verbal reinforcement schedule was used ("good" or "fine") to reinforce for cooperation and attending. All verbal comments from the students about the test were acknowledged by the examiner with a smile and the statement. "You're doing well." Each pupil was allowed to change his answer to any of the sentences during the testing procedure.

Results

Pragmatic test scores and characteristics of the forty-five subjects used in this study are shown in Table 1. Twenty points was a perfect score on the pragmatics test. Group 1A is the learning disabled group; Group 1B is the learning disabled/ language delayed group. Group 2 is the control group.

Table 1. Characteristics of The 45 Subjects

Subject by group	Grade in school	age	sex	ethnic background	scores on test
Group 1A					
1	7	13-02	M	C	18 pts.
2	8	12-11	M	C	18
3	8	13-04	M	C	19
4	6	11-01	M	C	15
5	6	11-00	M	C	17
6	6	11-04	M	C	17
7	7	12-09	F	C	16

Table 1 - Continued

Subject by group	Grade in school	age	sex	ethnic background	scores on test
8	7	12-10	M	B	18
9	7	11-11	M	B	17
10	8	14-01	M	C	16
11	7	13-02	M	C	15
12	8	13-11	M	C	16
13	8	13-03	M	C	17
14	8	13-08	M	B	15
15	6	11-05	M	C	18
Group 1B					
1	7	12-08	M	C	18
2	8	13-04	M	C	16
3	8	12-11	M	C	15
4	6	11-03	M	C	16
5	6	12-01	M	C	17
6	6	11-00	M	C	16
7	7	12-05	F	C	18
8	7	13-00	M	B	19
9	7	12-06	M	B	18
10	8	13-01	M	C	16
11	7	13-01	M	C	15
12	8	14-02	M	C	17
13	8	14-00	M	C	16
14	8	13-09	M	B	17
15	6	11-09	M	C	18

Table 1 - Continued

Subjects in group	Grade in school	age	sex	ethnic background	scores on test
Group 2					
1	7	12-09	M	C	20
2	8	13-10	M	C	20
3	8	13-02	M	C	19
4	6	11-02	M	C	19
5	6	12-09	M	C	20
6	6	11-11	M	C	19
7	7	13-07	F	C	19
8	7	13-02	M	B	19
9	7	12-11	M	B	20
10	8	14-00	M	C	20
11	7	12-11	M	C	20
12	8	13-05	M	C	20
13	8	13-06	M	C	18
14	8	14-02	M	B	20
15	6	12-11	M	C	19

C = Caucasian

B = Black

The results summarized in Table 2 indicate that there was a significant difference (t-test for independent measures; level of confidence = .0005; df = 28) between the scores obtained by the control group (Group 2) on the test of pragmatics and the scores of the learning disabled students (Group 1A). The t score calculated for Group 1A and 2 equaled 7.19. The t value for Groups 1A and 1B was not significant.

Table 2. Statistics of Test of Semantic Appropriateness

	x	SD	t values		
			Group 1A	Group 1B	Group 2
Group 1A	16.8	2.5		n.s.	7.19
Group 1B	16.8	2.5	n.s.		7.19
Group 2	19.46	.77	7.19	7.19	

A significant difference (*t* test for independent measures; level of confidence = .0005; *df* = 28) between the scores of Group 1B and Group 2 was found as well.

The informal test item control procedure carried out on two hundred students revealed not one item was missed more often than any other test item. This testing procedure also provided the normative base for the scores.

Discussion

The results of this study support the hypothesis that (1) adolescents who are classified learning disabled score significantly lower on a test of semantic appropriateness than adolescents who are not classified learning disabled, and (2) that adolescents who are classified language delayed and learning disabled will score significantly lower on the same test than adolescents who are not language delayed or learning disabled. The data collected in this study does not give credence to the hypothesis that adolescents who are classified both learning disabled and language delayed would score significantly lower on a test of pragmatics than adolescents who are classified only learning disabled.

This evidence supports previous research with learning disabled pupil (Newton 1976 and Wiig and Semel 1980). This study assessed only one area of pragmatics. It would be useful to obtain more information on other pragmatic skills as well.

Wiig and Semel (1980) recommend therapy for students who have diminished pragmatic skills. They suggest some intervention techniques, but these are limited. More research is needed on effective intervention for pupils with pragmatic deficits. Once the pupils are receiving therapy, an additional question must

be raised. Does therapy, in fact, facilitate development of these pragmatic skills?

The subjects in this study were selected carefully. Each potential subject submitted to several screening procedures before eligibility was determined. The most difficult extraneous variable to control for, was auditory processing. The majority of learning disabled children screened for this study were ineligible because they possessed auditory processing difficulties. Out of eighty-five pupils, only thirty-five had no difficulty with auditory processing skills. The question remains, how would those students with the processing problems have performed on the pragmatics test? Would auditory processing difficulties have affected the test scores, and if so, to what degree?

The results of this study reveal that there was not a significant difference between the scores of Group 1A and Group 1B. This finding suggests that all learning disabled students, whether they are also classified as language delayed or not, have some degree of pragmatic deficit.

The test items used on the pragmatic test of semantic appropriateness appear to be valid based on the scores of the two hundred normative subjects and the procedure used to control for ambiguous test items. A tally was made to see how often each test item was missed. Based on visual observation of the tally, none of the test items needed to be eliminated from the test. Another question is raised at this point. Are twenty items too many for a screening device? Too few? This test may be used as a screening device, but the number of items is open to further research.

The variables of age, sex, and ethnic background were not systematically observed in this study. None of the previous studies in the literature have dealt with the effects of age, sex, and ethnic background on the development and use of pragmatics. This is another area for further research. Pragmatic skills must continue to be assessed systematically.

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