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STUDENT TEACHERS' VIEWS OF LANGUAGE

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Teachers' views of language as a learned, an inherited, or an interactive phenomenon may be thought to have important implications for classroom practice. Little is known about such views. Final-year Bachelor of Education students (N = 220) were asked to indicate on a seven-point scale the extent of their agreement or disagreement with each of 116 statements chosen to reflect, in approximately equal numbers, various theories of language: behaviourist, cultural relativist-determinist, interactionist, preformationist-predeterminist. Following exploratory analyses, responses to 29 statements were factor analysed. Five significant and explicable factors accounted for 78.4% of the total variance and the emergent factor structure suggests that the range of these students' opinions was influenced somewhat more by the rationalist than by the empiricist tradition.

Since it is generally recognized that linguistic comprehension and effective communication are central to educability, it is natural that educationists have been interested in the acquisition by young children of vocabulary and complex grammatical structures and in the possible environmental antecedents of individual differences in language competence. It seems clear that, if teachers are to know when language development is proceeding normally and to make informed curriculum planning decisions, they should have some awareness of problems concerning the origins of language, the differences and similarities between the language of children and of adults, and the extent to which certain cognitive abilities are language dependent.

Syllabuses in colleges of education reflect a recognition of the importance of language and, commonly, their content would seem to suggest that student teachers' conceptualizations of language may be influenced, to some degree, by perspectives from philosophy and from the social sciences. Little is known about the extent of these influences upon students' ideas

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or upon their professional judgments; yet, presumably, a teacher's view of language as a learned, an inherited or an interactive phenomenon may have important implications for classroom practice. Many questions, not necessarily articulated, are answered implicitly in the selection of particular teaching procedures: whether teachers can do anything more than build upon abilities already acquired; whether maximum benefit is to be expected from simply providing adequate language models or, additionally, from attempting systematic expansion of the children's utterances; to what extent comprehension precedes language production and how articulatory skill is related to grasp of morphological rules; whether the rule-governed system of adult language is acquired as a whole or as a set of sub-systems which are later integrated.

Professionals concerned with practical decisions are not infrequently impatient with those whose main concern is with the development of theory and this may sometimes be true of teachers' attitudes to language theorists whom they may see as offering them answers to questions which they have not asked in terminology which they have little wish to acquire. This view is understandable if one considers what awaits the practising teacher who consults primary sources concerned with phonological, syntactic, and semantic development. He or she may learn, for example, that utterances become longer with age, that nouns and content words are more frequent in the early stages of syntactic development, that children speak more rapidly than adults, that girls are relatively more advanced than boys, that language development is related to socio-economic class, and that the rate of language acquisition is related to the amount of verbal stimulation in home and school (4). Apparent contradictions may appear even less helpful; for example, Ervin (5) suggests that overt imitation is without value in language development, while Slobin (17) considers that it plays a very important role.

Though this picture is distorted, it does seem that the area of language is one where theoretical formulations are somewhat numerous in relation to evidence. No doubt it would be possible to suggest many classifications, but one approach, which seems to offer a useful conceptual framework for studying the views of student teachers, is that which categorizes theories in terms of their differing emphases on the importance of heredity and environment, a problem around which have centred many of the most important controversies in the study of language. The empiricist tradition tends to take experimental science as a kind of paradigm, sense experience becoming the unique repository of truth and to reject the doctrine of idealism which proposes that the mind may first encounter the world with a range of concepts owing nothing to experience. Rationalism, on the

other hand, while not relying solely upon deduction, tends to regard the senses as providing experience which the understanding can interpret according to its own a priori laws. The philosophical background is further elucidated by Katz (8).

Ausubel (1) proposes a schema in which there are four main approaches to the study of development, each containing a continuum of positions. In historical order, these are what Ausubel calls behaviourism, cultural relativism-determinism, interactionism, and preformationism-predeterminism. Houston (7) applies a similar classification to studies of language.

It seems wise to recognize that each of Ausubel's categories, when applied to language, reflects a number of positions; furthermore, the categories cannot be regarded as wholly discrete. It might be reasonably easy to agree that Mowrer (12) and Staats (18) share a very different paradigm from McNeill (11) and Lenneberg (10) but elsewhere there are difficulties. For example, it may be broadly true to say that an empiricist orientation is evident in the first three approaches identified by Ausubel while the fourth is rationalist, though Piaget's position cannot easily be categorized as either; the Kantian nature of some of his ideas is apparent (14) yet it has long been felt that, in some ways, his affinities are with the neo-behaviourists (2).

The present paper describes an exploratory study of student teachers' conceptualizations of language and its acquisition. The students, in their final year of study in the Bachelor of Education course, were asked to indicate the extent of their agreement or disagreement with statements chosen to reflect four theoretical positions regarding the requisition of language.

METHOD

Sample

All students, 170 women and 50 men, in the fourth year of the BEd course in a college of education participated in the study. The investigation was carried out at a time when the students had already successfully completed the various school placements required by their course regulations but had still to sit their final degree examinations. It might reasonably be hoped that, at such a time, both classroom reality and theoretical knowledge would be fresh in their minds.

Procedure

Each student completed a questionnaire consisting of 116 statements

concerning the nature of language and language development. Each item reproduced, or closely paraphrased, a statement in published theoretical or empirical work on language. The intention was to have equal numbers of items drawn from writers representative of the four theoretical orientations: behaviourism, cultural relativism-determinism, interactionism and preformationism-predeterminism. It would, of course, be presumptuous to claim that the intention was fully realized; personal judgment was involved in the selection and, in some cases, there could be much debate about whether a particular statement was characteristic of a writer's thought and about an author's inclusion within a particular grouping.

The order of the statements within the questionnaire was randomized and, intentionally, there was a good deal of redundancy. Respondents indicated, on a seven-point scale, the extent of their agreement or disagreement with each item.

The questionnaire was completed, during class time, by two groups of approximately equal size. Participation was voluntary. The students were reminded that various theories of language acquisition exist and were informed that the exercise was an attempt to discover something about the views of future professional educators. They were also promised (and received) early information about the results.

Analysis

A 116 x 220 matrix presents substantial problems of data reduction before meaningful interpretation becomes possible. It was decided that preliminary exploration of the data should be in two stages. Firstly, a hierarchial grouping analysis (20) was carried out on the normalized matrix. The results of this procedure indicated that reduction of the items to fewer than five clusters would produce a marked increase in the average intra-group difference. Secondly, responses to 65 items selected equally from the five clusters were factor analyzed. The principal axes method was used and various rotational methods were applied: oblique, quartimax, and varimax. It appeared that the last of these offered the best prospect of simple structure.

RESULTS

Factor analysis of responses to a large number of variables of the kind included in this investigation tends to produce a large number of factors and no fewer than twelve factors were required to account for 76.5% of the total variance. However, although all of these were 'significant' in terms of Kaiser's criterion (6), it was not at all obvious that statements

which loaded heavily on the later factors encapsulated ideas which the earlier factors did not also embrace.

The varimax rotation concentrates on simplification of the columns of a matrix and, following this procedure, there were also 29 rows which could be regarded as simple in that each represented a statement, or variable, which loaded significantly on a single factor (6). Responses to these 29 statements were re-analyzed, again using the principal axes method with varimax rotation. This yielded five significant and explicable factors accounting for 78.4% of the total variance.

The following are examples of statements loading heavily on each of the five factors. Factor loadings are given in brackets.
Factor I: 'The child has a number of innate linguistic mechanisms which are applied to the particular language to which he is exposed' (0.5601).
Factor II: 'Our thought is linguistically determined' (0.5836).
Factor III: 'Language is acquired through the selective reinforcement of natural infant vocalisations and gradual shaping of vocal behaviour through operant conditioning techniques employed by parents and teachers' (0.8474).
Factor IV: 'Language is a human phenomenon, not approximated by animal communication' (0.6987).
Factor V: 'There are empirical and theoretical objections to the idea that imitation is essential for language acquisition' (0.6118).

Factor I and Factor V, accounting respectively for 24.4% and 9.5% of the total variance, seem fairly clearly compatible with a preformationist-predeterminist view of language. The six statements loading heavily on the first factor refer to neurological structures and biological predispositions underlying the acquisition and use of language and to deep structures containing features of linguistic universality. The three statements loading on the fifth factor attribute minimal importance to the role of imitation in language acquisition and assert that the capacity to acquire language is relatively independent of intelligence and of environment.

Five statements loading heavily on Factor II, which accounts for 20.0% of the total variance, reflect a cultural relativist-determinist point of view, possibly with interactionist overtones. They stress the function of language in determining thought patterns and perceptions and in influencing the development of rational thought.

Factor III, accounting for 13.3% of the total variance, is behaviourist in nature. The four statements loading heavily on the factor describe language in terms of stimulus-response associations among grammatical

classes and emphasize the role of selective reinforcement and operant conditioning techniques employed by parents and teachers in the general shaping of vocal behaviour.

Factor IV, accounting for 11.2% of the total variance, highlights the need for cautious interpretation. The three statements which load heavily on this factor assert that language is peculiar to man, the major distinction between human and animal behaviour. To suggest discontinuity between language and other forms of animal communication may be considered to imply inadequacy of certain behaviourist viewpoints rather than positive endorsement of any of the alternatives and one may suspect, without proof, that this is how these items were interpreted by the respondents. However, it must also be said that writers who share a common view of language as an exclusively human phenomenon may, and indeed do, represent a considerable diversity of theoretical positions.

DISCUSSION

Factor analysis is such a powerful instrument for imposing structure upon data that it may sometimes be tempting to attribute to the factors an independent reality. In exploratory studies of this kind it is particularly necessary that such a temptation should be resisted and that the interpretation of factors should be tentative.

With this reservation in mind, we may note that, in general, the emergent factor structure in this investigation would seem to suggest that some of the students concerned hold views of language which are more influenced by, and perhaps rather more attuned to, the rationalist than the empiricist tradition. This is not to imply that, as a group, the students who participated in the study are adherents of preformationist-predeterminist theories. Indeed the mean ratings given to statements with behaviourist characteristics were marginally higher. All that can be said is that preformationist-predeterminist statements account for much of the variance and it seems legitimate to speculate about possible reasons why they should do so.

Student teachers cannot, and certainly do not, claim to be specialists in language theory and it seems probable that their reading is predominantly among secondary sources. It is relatively easy, and indeed it is a legitimate task of non-specialist texts, to attempt to outline the principal characteristics of various theories of language but, while this is undoubtedly useful in highlighting distinctive emphases, it carries the risk of oversimplification, if not distortion. Some introductions to language succeed in illustrating the limitations of early language theorists and demonstrate how these

limitations led to the evolution of more inclusive theories (13). Elsewhere one may find, for example, accounts of 'the behaviourist approach' which seem insufficiently conscious of the variations which exist on the behaviourist theme. Thus, criticisms which might reasonably be made of Skinnerian reinforcement principles (16) might be considered to do less than justice to the subtle formulations of Staats (18).

It may be the case that the ideas of the cognitive theorists are currently enjoying a disproportionate level of popularity with some student teachers; these are conceptual models which seem to presage discoveries with obvious relevance to classroom problems. Possibly some students find such theories intuitively appealing, consonant with particular educational ideologies, but their long-term contribution to understanding of language in the context of education (as much as their short-term usefulness for informing classroom decisions) remains open to question. The nature of the second factor which reflects a cultural-relativist point of view, would appear to suggest the continuing vitality of speculation about the extent to which language determines children's world views and about the predominant influence of cultural patterns; it is a vitality which does not seem to have been notably impaired by serious questions concerning the fundamental validity of the approach (15).

If the obtained factor pattern is truly reflective of student teachers' conceptualization of language, one might expect that much classroom practice would be based on the premise that exposure to adequate linguistic stimulation is the basic requirement for language development. Observation of some classrooms would accord with this expectation (3) but, on the other hand, much language instruction seems to be based on a reinforcement model of language acquisition (9). Furthermore, a good deal of primary school practice appears to be influenced by preoccupation with frequency, reinforcement and generalization as explanatory principles. There is no necessary contradiction here since there is no reason to suppose that teachers cannot find one paradigm useful in explaining some aspects of language learning while regarding another as more adequate to account for the broader phenomenon of the ontogeny of language.

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