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Linguistics in Practice: The Navajo Reading Study

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The history of the relations between theory and practice in the area of language education is replete with misunderstandings and misapplications. If it were not for the constant educational problems posed by the widespread lack of congruence between the language of the home and the language the schools are expected to teach (Spolsky 1974a), the field of applied, or, as I prefer to call it, educational linguistics would never have maintained its prominence. The scope of the field of educational linguistics is defined by the interaction of language and formal instruction; it thus encompasses first and second language teaching and testing, is a serious component in the teaching of reading and in bilingual education, and is relevant to the teaching of literature and other language-related topics. It should be a problem-oriented discipline, focusing on the needs of practice and drawing from available theories and principles of many relevant fields including many of the subfields of linguistics. It should not just be, as it often seems, the application of the latest linguistic theory to any available problem (Spolsky 1974b).

In an earlier paper (Spolsky 1974c), I illustrated the scope of the field by describing work that we have been carrying out at the University of New Mexico relating to Navajo reading and bilingual education. In this paper, I will summarize that earlier work, bringing it up to date and thus presenting an outline of how some linguistic studies have formed the basis for the start of an experimental program in training bilingual Navajo elementary school teachers. The whole description will suggest, I hope, the kind of fruitful interaction between theory and practice that is possible when a reasonably open-minded approach permits each to affect the other. Our theoretical studies have provided the basis for our practice, but have at the same time been made possible and influenced by them.

The Navajo Reading Study

The Navajo Reading Study was originally started in 1969 with the notion that it might be possible to look into the effect of teaching Navajo children to read in their own language first. It was intended then to be one in a series of such studies. Engle (1975) has now made clear that such studies have provided only confused and contradictory evidence on the question of which language children should read first. (For further discussion of this, see Spolsky, Green, and Read, in press.) As a necessary preliminary, it was decided to develop the potential for teaching reading in Navajo.[1]

The first phase of the study was to map out the existing linguistic and educational situation. There were, we quickly found, about 120,000 Navajos; over 50,000 were of school age. Most

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Navajo children went to schools where almost all the children were Navajo, although there were only a handful of Navajo teachers. The majority of the children were in schools (usually boarding schools) controlled by the Bureau of Indian Affairs (BIA), but a large and increasing proportion were in public schools controlled by school districts ranging in size from Gallup-McKinley with about 10,000 pupils to Navajo Compressor Station #5 with 20. There was one Navajo community-controlled school, Rough Rock Demonstration School, soon to be joined by three others (Rock Point Community School, Ramah Navajo High School, Borrego Pass Community School), and a few mission schools.

The Navajo language had long been the focus of attention from linguists and missionaries. A government sponsored orthography developed in the late 1930s (see Young, 1972), had been fairly effectively standardized by the publication of the dictionary and grammar by Young and Morgan (1942) and by publication in the 1940s of a good deal of textual material.[2] Some school-oriented reading material in Navajo had been developed under the auspices of the BIA in the period of its official interest in the language; more was now being prepared at Rough Rock Demonstration School, Rock Point School, and the Navajo Community College. But there was not nearly enough to start teaching first graders to read (Spolsky, Holm and Murphy, 1970).

Our second study dealt with the sociolinguistic situation. A questionnaire was sent to all schools on or near the Reservation. This questionnaire was validated by a specially developed language testing instrument (Spolsky, Murphy, Holm, and Ferrell, 1972) and surveyed in 1969 and again in 1970 the knowledge of Navajo of six-year-old children (Spolsky, 1970, 1974d). Replies to the 1970 survey gave us data on over 3,500 six-year-old children, about 80 percent of the Navajo children who had been born in 1964 and over 80 percent of those actually in school. Of these children, 30 percent were reported to have come to school knowing no English at all, a further 40 percent knew a little English but not enough to do first grade work in it, 20 percent were reported equally at home in Navajo and English, 6 percent were speakers of English who knew a little Navajo, and 5 percent were reported to be monolingual in English. In brief, our survey showed that over two-thirds of the children would be in serious trouble faced, as nearly all were, with a monolingual English teacher.

The practical implication of these sociolinguistic studies was clear: a great need existed for bilingual education. The study had considerable theoretical value as well for we were able to look at the forces affecting Navajo language maintenance. Among those factors that play a role in the maintenance or loss of a language (Kloss, 1966), one of the most important is the existence of a language island. As long as the speakers of a language are isolated physically, socially, and culturally from other languages, there is little reason for them to learn another language. But of all the factors Kloss discusses isolation is also one of the most fragile, for it disappears as contact increases. We were able to study the nature of this process in the case of Navajo where, until quite recently, the language existed in comparative isolation. The size of the Navajo Reservation, the lack of roads or dense settlement, the scattered nature of Navajo living patterns, all meant that the 120,000 Navajos lived in a virtual language island. Historically, there had been contact with neighboring Indian tribes and with Spanish speakers, but until quite recently, these contacts seem to have led to little change in language use. Since about 1940, there has been contact with English, which is slowly taking a major role in the speech community.

There are two distinct classes of contact with English: external contacts which occur when a Navajo speaker leaves the Reservation, and internal contacts which occur in those situations where English intrudes into the life of the Reservation. External contacts range from living and working in an off-Reservation town such as Los Angeles, Denver, Chicago, or Albuquerque, all of which have large Navajo populations, through attendance at a school off the Reservation in a border-city dormitory or a university, to occasional trips to the nearest town off the Reservation. Each stage of this continuum influences the degree to which a Navajo learns and starts to use English. For the external contacts to influence language use on the Reservation, it is necessary for the speaker to return home. Thus, while distant work has a major effect on an individual speaker's language pat-

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tern, his or her likelihood of returning and influencing the Reservation is less; and while occasional visits to town will have the least effect on an individual, these effects will be more noticeable in the community.

Of the various potential contacts with English on the Reservation, the one with greatest pressure is the school. Traders generally have learned Navajo; churches and missions mainly use Navajo; public health service officials use interpreters, as do most other officials who do not speak Navajo themselves. Radio stations broadcast in Navajo over 150 hours a week. But the school is still almost completely monolingual in English. In looking at the increase in the use of English on the Navajo Reservation, we expected to find two main centers of diffusion: off-Reservation towns, and schools on the Reservation. Our studies permitted us to demonstrate the influence of these two factors and to show in some way the relative strength of each. We compared language use scores with two measures of accessibility: ease of access to the school, and ease of access to the nearest off-Reservation town. Accessibility we counted as a measure of distance with factors added for difficulties of roads (improved paved roads were taken at face value, gravel roads multiplied by two, graded dirt roads by three, and ungraded dirt roads by four). The study showed a correlation of about .5 between the mean language score and the accessibility score. The nearer a community is to an off-Reservation town, the more contact it has with English and the more likely parents are to speak some English at home. Similarly, we studied the school itself as a center for diffusion of English. In two schools, we compared language scores with individual accessibility finding small positive correlations in each case. Even stronger evidence is provided by variation between kinds of schools. It is almost always the case that children attending public schools live closer to school than those who attend Bureau of Indian Affairs schools. A comparison of public schools and BIA schools in the same locality (where the basic difference was that the public school children lived close enough to the school to commute while the BIA children lived a good distance away and so were required to board) showed clearly that the public school children knew much more English than the boarding school children when they first came to school. Our studies then demonstrated the importance of accessibility to the centers of diffusion of English as a major factor in language maintenance and loss.

A third area of our preliminary studies was the actual language used by the six-year-old children who would be learning to read. We based our study on a recorded collection of speech of six-year-old children. Between October, 1969, and June, 1970, 22 different adult interviewers tape-recorded conversations in Navajo with over 200 children, most of them six year olds. All the interviews were transcribed by a trained Navajo in normalized orthography and keypunched for computer processing. The corpus consists of a total of 11,128 sentences. It contains 53,008 word tokens, a total of 8,775 different word types. We have produced a number of statistical measures, a complete concordance, an alphabetical frequency listing, a list sorted alphabetically from the end of the word, an ordered frequency list, a concordance of English loan words in the text, and a number of spelling lists (Spolsky, Holm, Holliday, and Embry, 1973). The computer based study had a number of side products: a study of English loan words in Navajo (Agnes Holm and others, 1974), and a sociolinguistic study (Spolsky, 1974e); it was of considerable use in two more basic studies of Navajo orthography (Holm, 1972) and grammar (Kari, 1973).

Use of a computer in this study allowed us to work with as large a corpus of language as we could collect in the time available. Our difficulties, as so often is the case in computational linguistics, were with matters of linguistic theory rather than of computing. A major problem was the unsolved question of the nature of the word in Navajo: how many affixes should be written as part of the verb and how many as separate words; and how does one deal with the unbelievably complex morphophonemics in choosing head words. The computer showed its ability not just as an aid in handling large bodies of data, but as a heuristic device that makes clear to the researcher the limitations of his or her understanding of the material being studied.

Developing Reading Materials in Navajo

The more practical result of the language study and of the previous surveys was to start developing materials in Navajo. In this work,

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which over the last four years has involved us in printing close to 50 different Navajo reading books, we have maintained from the beginning two basic principles: one concerning the method of writing the book and the other concerned with its production. It is basic that all books we develop should be written originally in Navajo by speakers of the language rather than translated from English. As a result, it has proved necessary for us to give some degree of training to the writers (most of whom have been Navajo student teachers) in the principles underlying the particular curriculum area with which they are working. For example, in our first summer, we spent several weeks explaining to three writers on our staff the various approaches that are used in writing initial reading material. Their first books were experiments in Navajo to apply these principles. In more recent material, which has been directed to particular subject content areas, we have similarly been much more concerned that the writer develop an original Navajo book based on his or her understanding of the field rather than produce a simple translation or even adaptation. In this way, we believe that we are laying the foundation not just for a set of valuable classroom materials, but also for a well trained and experienced cadre of material writers. The second principle has been to try to make every book we produce in Navajo as attractive as the books that children will see in English. As was mentioned earlier, written Navajo is not common on the Reservation. It seemed to us that if Navajo children see writing in Navajo only on cheap teacher-produced material—mimeographed or dittoed—the language will continue to have a secondary status in its written form. We therefore have done our best to use good design, with color or other methods raising the general quality of the product.

Teacher Training

In the last two years, the main emphasis of our work has moved to teacher-training. The importance of this became clear particularly towards the end of 1972 (Spolsky, 1973) when the full implications of the great disparity between Navajo-speaking children and English-speaking teachers started to be noticed. In addition, as we developed a wider view of the nature of evaluation of language education (Spolsky, Green, and Read; Read, Spolsky, and Neundorf), it became apparent that the most important effect of a bilingual program for the Navajo would show up in the general economic, political, and social situation even before it could be expected to have an influence on children's reading scores. A decision that Navajo children are entitled to have teachers who can speak to them when they first come to school would need to be implemented by training or hiring a thousand Navajo-speaking teachers. Given the basic poverty of the Navajo people, and given the virtual absence of well-paying jobs anywhere other than outside or on the edges of the Reservation, a policy to develop a thousand Navajo teachers would suddenly produce a basic change in the economic and social situation. Also, the school would no longer be an alien institution staffed by strangers speaking another language, but would have a real chance to become an integral part of Navajo society. This quickly became the official policy of the Navajo Tribe's Division of Education. We were therefore more than willing to assist one project, started with Title VII funds under BIA auspices at Sanostee and Toadlena to train a group of Navajo teachers.[3]

During the three years that we have been working with the Sanostee-Toadlena project, more than ten Navajos have completed Bachelor's degrees and received temporary state certification as teachers and a number of others are well along with their programs. Again, we have felt it to be our role to work experimentally to apply certain basic principles to the operation. The most significant aspect of this in the case of the Sanostee-Toadlena project has been that almost all of the training has been carried out on-site at the schools on the Reservation rather than on the university campus. Certain principles were involved as well as several practical features. The students who were trained were selected completely by the local Navajo community; most of those chosen would have been unable to leave family and local commitments to come to the university, 120 miles away. On a more theoretical point, our concern was to provide people who would be able to integrate an institution (the school) with the community. It seemed quite inappropriate to do so by removing the trainees from their own community for four years and placing them in a setting with values of the alien society. We

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chose rather to take the best available university professors from the campus and transport them (often by plane) to the very schools in which the trainees would be expected to teach. They brought with them the knowledge, the standards, and the techniques that they use on the main campus of the university but were forced, it became clear, to make all the necessary adaptations to the very different realities of the people and way of life that they found in a BIA boarding school in the middle of the Navajo Reservation. The effect of the process has been exciting both for students and teachers.

The model developed for on-site teacher training has now been more generally accepted. The university faculty has given approval for teacher education programs to be carried out elsewhere on-site in circumstances similar to those established for Sanostee-Toadlena. Following this authorization, the Department of Elementary Education is educating over 130 students (Navajo and Pueblo) in three separate programs.

As the teacher training progressed, the foundation was laid for the development of a Navajo bilingual curriculum. Until there are enough qualified teachers, any curriculum prepared by outsiders or amateurs will involve guesswork. The close combination of teacher training and curriculum planning has proved difficult but rewarding.

I would certainly not yet claim that we have reached the kind of blend of theoretical linguistics with practical education that the field demands. As many will note, we have somewhat neglected the more basic linguistic studies; however, we have been able to draw on the expertise of a number of scholars, both Navajo and non-Navajo, working on the language and we would certainly have benefitted from even more close association. If anything, the central emphasis of the work has been on the sociolinguistic situation involved. Our theoretical studies have helped us understand the sociolinguistic patterns and needs; our practice has made a start towards meeting these needs.

Work in language education certainly will not solve all the problems that the Navajo are facing today as they move towards national identity: it won't remedy the difficulties of maintaining the best of traditional life while achieving a reasonable economic base for existence in a technological society. But it offers a reasonable contribution to understanding and dealing with the problem.

NOTES

1. This might be an appropriate place to pay tribute to the imagination and assistance of the B.I.A. officials, Dr. Thomas Hopkins and Ms. Evelyn Bauer, who provided initial stimulus and Dr. Joseph Ramey who handled administrative matters for the project while it had BIA support; and to the Ford Foundation (especially Ms. Marjorie Martus) for its support of the study for over five years.

2. For a basic study of the Navajo orthography, see Holm 1972.

3. Director of the project has been Wally Davis; principals of the two B.I.A. schools involved are Agnes Bluett and Robert Myrtue. As this paper is being written, the Office of Bilingual Education has declined to continue funding of the Sanostee project. We will continue to work with a more recent project at Ramah Navajo School.

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