SOCIOLINGUISTIC DIFFERENCES: US TEACHERS in RESIDENTIAL SCHOOLS & NON-RESIDENTIAL SCHOOLS

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Abstract

Anthropological research on the US Deaf Community has presented the view that, for deaf children who do not have deaf parents, residential schools are prime places of early enculturation and acculturation into the language and culture of the US Deaf community. Residential schools are often the first places where deaf children see other deaf people and natural forms of signing being used for everyday communication. However, statistical research to support this view is lacking. In order to test the hypothesis that residential schools play a unique role in the enculturation/acculturation of deaf people into the US Deaf Community, the present study examined empirical data supplied by a large number of residential school and non-residential school teachers on their background characteristics and the forms of communication they prefer to use in their classrooms. Using this data, we tested for significant differences between residential school and non-residential school teachers and discuss implications of the research for the hypothesized importance of residential schools in enculturation/acculturation of deaf students into the language and culture of the US Deaf community.

Introduction

From the beginning of anthropological and linguistic research on the Deaf Community in the United States in the 1960s through the present, researchers (Stokoe, Casterline, and Croneberg 1965, Meadow 1972, Markowicz & Woodward 1978, Padden & Humphries 1988, among others) have stressed the importance of residential schools in proposed models of enculturation and acculturation into the language and culture of the US Deaf Community.

The reason for this lies in the demographics of many deaf populations. Only 5 to 7% of deaf people in the United States have two deaf parents and can be therefore be enculturated into the language and culture of the US Deaf Community in the home. Yet it is clear that a great many more than 5 to 7% of the deaf population are users of sign language varieties that approach

 ISSN 0302-1475

American Sign Language and are socialized into the culture of the US Deaf Community. Researchers have posited that residential schools are prime places of early enculturation and acculturation into the language and culture of the US Deaf Community, since they are often the first places where deaf children see other deaf people and natural forms of signing being used for everyday communication. However, much of the research that posits the importance of residential schools in the enculturation or acculturation process lacks statistical evidence, since such research has been done from either a theoretical anthropological perspective or from studies involving participant-observation techniques.

If residential schools do serve a unique role in the enculturation/acculturation patterns of deaf children, there should be statistically significant differences in important sociolinguistic characteristics between residential and non-residential schools. In order to test this hypothesis, the present study examines empirical data supplied by a large number of residential school teachers and non-residential school teachers on their background characteristics and preferred forms of classroom communication. Using this data, we test for any significant differences between residential school and non-residential school teachers. After a discussion and summary of the analysis, we discuss implications of the research for the hypothesized importance of residential schools in the enculturation/acculturation of deaf students into the language and culture of the US Deaf Community.

Data collection

Data analyzed in this paper were collected in the Spring of 1985 by the Gallaudet Research Institute's Center for Assessment and Demographic Studies (CADS). The population for the study was drawn from those programs supplying data to the Annual Survey of Hearing Impaired Children and Youth, a survey which collects demographic and educationally relevant data on more than 50,000 hearing impaired students.

From the 1983-84 Annual Survey database, 4,500 students were randomly selected and assigned to one of three subject area stratification groups: reading/English, mathematics, and social studies. Questionnaires were sent to the programs enrolling these students, with instructions to distribute them to the reading/En-

glish, mathematics, or social studies teachers of the students. Students were stratified in this way to ensure that teachers in a variety of academic contexts were represented in the database. Since sampling was carried out on an individual basis, some teachers received two or more questionnaires. The primary aim of the analysis was to describe the background characteristics of teachers and their communication patterns; therefore, the duplicate responses for these teachers were eliminated from the data base. The resulting file contained information on 1,950 teachers. Of these 1,950 teachers, 164 (8%) did not provide a clear indication of the type of program they taught in. Of the 1,786 teachers who clearly answered questions related to the type of program they taught in, 560 (31%) said they taught in residential school programs, 240 (13%) stated that they taught in special day schools for deaf people, and 986 (55%) reported that they taught in regular local schools. Of the 986 teachers who reported that they taught in regular local schools, 691 (70%) said they taught in special classes for deaf students and 295 (30%) said they taught in mixed classes of hearing and deaf students.

Teacher background

The residential school and non-residential school teachers in this study shared some basic background characteristics related to the larger majority society in the United States; however, they differed in a number of other background characteristics related to the Deaf Community in the United States. The great majority of these teachers in the study were white (91%). A very large proportion of the teachers also reported that they were certified to teach deaf and hard of hearing children (88%) and that they had continued their education beyond the bachelor's level (89%). The majority reported having Master's degrees or Master's degrees with additional courses (62%).

The similarities reported above for residential school and non-residential school teachers have little importance in the US Deaf Community. When we begin to examine other characteristics that have importance in the US Deaf Community, the differences between residential school and non-residential school teachers become quite clear. As Table 1 demonstrates, there are a number of striking differences between the background characteristics of

residential school and non-residential school teachers. These differences relate to the hearing status of the teachers, to their social interaction with deaf adults, to their sign language competence, and to sources of their acquisition of sign language.

Table 1: Differences in Teacher background characteristics.[1]

Responses	*Residential*	*Non-Residential*
Hearing status		
Hearing	75% 419/558	95% 1160/1223
Hard of Hearing	05% 29/558	04% 46/1223
Deaf	29%	01% 17/1223
Socialize w/ d. adults		
None or nearly	11% 61/555	48% 579/1214
A little or some	52% 288/555	44% 535/1214
Much	37% 206/555	08% 100/1214
a lot	27% 148/555	07% 88/1214
all or nearly all	10% 58/555	
Expressive signing,	*self-report*	
Sign greatly inferior	21% 117/559	52% 641/1223
Sign <, =, > English	79% 442/559	48% 582/1223
slightly inferior	30% 166/559	26% 317/1223
equal to	41% 232/559	21% 257/1223
superior to	08% 44/559	01% 8/1223
Receptive skill,	*self-report*	
Sign greatly inferior	26% 146/559	59% 712/1216
slightly inferior	74% 411/557	41% 504/1216
equal to	35% 180/557	28% 347/1216
superior to	33% 180/557	12% 147/1216
Sources of sign acq.		
Deaf friends	62% 341/551	41% 419/1023
SL classes	70% 387/551	91% 934/1023

As Table 1 indicates, there are very important differences in the hearing status of residential school and non-residential school teachers. In residential school programs in this study, 20% of the

1. In a few cells to prevent mathematical anomaly, percentages have been rounded up or down one point (all tables).

teachers were deaf and 5% were hard of hearing; in non-residential school programs, only 1% of the teachers were deaf and 4% were hard of hearing. Differences in hearing status of residential school and non-residential school teachers were highly statistically significant (X^2 =1 99.16, df =2, $p < 0.0000$).

Teachers also differ greatly in their social interaction with deaf adults. The great majority of residential school teachers (89%) reported some social contact with deaf adults outside the classroom, while only slightly more than half (52%) of the non-residential school teachers reported such contact. More than one-third of the residential school teachers (37%) reported that a lot or nearly all of their social interaction outside the classroom involved contact with deaf adults, while only a very small percentage of the non-residential school teachers (8%) reported such social interaction with deaf adults. Differences in social interaction with deaf adults by residential school and non-residential school teachers were highly statistically significant (X^2 =330.47, df =2, $p < 0.0000$).

As might be expected from the above differences in the variables of hearing status and in social interaction with deaf adults, residential school and non-residential school teachers rated their signing skills differently, also shown in Table 1. The majority of non-residential school teachers (52%) rated their expressive sign language skills as "greatly inferior" to their English skills, while only 21% of the residential school teachers did so. Similarly, the majority of non-residential school teachers (59%) rated their receptive sign language skills as "greatly inferior" to their English skills, while only 26% of the residential school teachers did so. Differences in self- reported sign skills for residential school and non-residential school teachers were highly significant for expressive (X^2 =154.27, df = 1, $p < 0.0000$) and for receptive skills (X^2 =158.70, d =1, p<.0000).

In addition to the above differences in reported sign language competence, residential school and non-residential school teachers described very different sources for their sign language acquisition. The majority of residential school teachers (62%) reported that deaf friends were an important source of sign language acquisition, while only 41% of the non-residential school teachers

said that deaf friends were an important factor in their sign language acquisition. On the other hand, the very great majority of non-residential school teachers (91%) reported that sign language classes were an important source of sign language acquisition, while only 70% of the residential school teachers said that sign language classes were an important factor in their sign language acquisition. Differences in sources of sign acquisition between residential school and non-residential school teachers were highly significant for the variables "deaf friends" ($X^2 = 61.99$, $df = 1$, $p < 0.0000$) and "sign language classes" ($X^2 = 116.23$, $df = 1$, $p<.0000$).

Classroom communication preferences

The questionnaire designed for this study was constructed not only to describe the background characteristics of teachers of deaf and hard of hearing students but also to describe the communication patterns they used in classrooms with their students and to distinguish the channels and codes of communication used. Teachers were asked if they signed, spoke, or signed and spoke during their instruction of individual students randomly selected for the survey. For teachers who signed, the following questions were asked to determine the degree to which the signing was in English or ASL and the extent to which various channels were used.

1. When teaching this student in the classroom, do you normally:
   A. Speak and sign at the same time
   B. Sign only
   C. Other
2. If you sign only, do you use lip movements for most or all English words?
   A. Yes
   B. No
3. The following list consists of phrases which have been used to characterize types of signing. Which of these best describes the signing that you use when teaching this student? (Choose only one.)
   A. American Sign Language (ASL or Ameslan)
   B. Pidgin Sign English (PSE)
   C. Seeing Essential English (SEE I)
   D. Signing Exact English (SEE II)
   E. Signed English F. Linguistics of Visual English (LOVE)
   G. Other

4. Read the following two English sentences:

He is looking at me. **I am looking for him.**

A. When communicating the meaning of the two English sentences above to the named student in the classroom, indicate how you would communicate each of the following:

(a. Would fingerspell; b. Would use separate sign or gesture; c. Would include as part of another sign; d. Would omit)

He (a, b, c, or d?)	**I** (a, b, c, or d?)
is (a, b, c, or d?)	**am** (a, b, c, or d?)
look (a, b, c, or d?)	**look** (a, b, c, or d?)
-ing (a, b, c, or d?)	**-ing** (a, b, c, or d?)
at (a, b, c, or d?)	**for** (a, b, c, or d?)
me (a, b, c, or d?)	**him** (a, b, c, or d?)

B. When communicating the meaning of the two English sentences above to this student in the classroom, indicate how you would normally sign the following words: (a. Would use the same sign for each; b. Would use a different sign for each; c. Would not sign one or both of these words)

He and **him** (a, b, or c?)
I and **Me** (a, b, or c?)
Am and **Is** (a, b, or c?)
Look in both sentences (a, b, or c?)

In relation to channel differences, teachers fit into four basic patterns: (1) those who sign without voice or without mouthing of words, (2) those who sign without voice but with mouthing of a large number of English words, (3) those who sign and speak at the same time, or (4) those who speak without signing. These four patterns form a continuum from a channel that is considered "very deaf" by deaf community members to channels that are considered "very hearing". Table 2 shows this continuum with the responses of residential school and non-residential school teachers.

Table 2: Channel differences in classroom communication.

Pattern	Channel	Residential	Non-Resid'l
1. Very deaf	Sign only	02% 13/551	<1% 3/1188
2.	Sign & mouth	11% 59/551	>1% 9/1188
3.	Speak & sign	83% 447/551	55% 649/1188
4. Very hearing	Speak only	04% 22/551	44% 527/1188

Table 2 indicates that residential school teachers are more likely to communicate in ways that are more sociolinguistically "deaf" than non-residential school teachers. For example, residential school teachers are much more likely not to use voice when signing (to be in patterns 1 & 2) than non-residential school teachers ($X^2 = 116.42$, df = 1, $p < 0.0000$). In addition, residential school teachers are much more likely to sign (to be in patterns 1, 2, and 3) than non-residential school teachers ($X^2 = 282.07$, df = 1, $p < 0.0000$).

It should be noted that none of the teachers who use speech only use sign language interpreters.

In relation to code differences, teachers fit into five basic patterns, according to the degree of influence from English: (1) those who show no influence from English in their signing, (2) those who sign in English word order but have no other English influences; (3) those who sign in English word order and with English function words but sign with ASL vocabulary and without English inflections; (4) those who sign with English word order, English function words, and English inflections but use ASL vocabulary; and (5) those who sign with non-ASL vocabulary and with English word order, English function words, and English inflections. These five patterns form a continuum between codes that are considered "very deaf" by deaf community members to codes that are considered "very hearing." Table 3 shows this continuum with the responses of residential school and non-residential school teachers.

Table 3: Code differences in classroom communication.

Pattern	voc	inflec	funct	w/o	Residential	Non-Res.
1. Very deaf	No	No	No	No	01% 6/508	0% 0/615
2.	No	No	No	Yes	20% 102/508	13% 83/615
3.	No	No	Yes	Yes	43% 220/508	32% 196/615
4.	No	Yes	Yes	Yes	28% 143/508	32% 197/508
5. Very Hearing	Yes	Yes	Yes	Yes	07% 37/508	23% 139/615

Table 3 indicates that the majority of residential school teachers (64%) fit patterns 1 to 3, nearer the sociolinguistically "deaf" end of the continuum. Those in 1, 2, and 3 use fewer features of English grammar than those fitting 4 and 5. On the other hand, the majority of non-residential school teachers (55%) pattern in Groups 4 and 5. The difference in code form between residential school and non-residential school teachers is highly significant ($X^2 = 40.53$, $df = 1$, $p < 0.0000$).

It is important at this stage to ask if these significant differences between residential school and non-residential school teachers result simply because there are many more deaf teachers in residential schools than in non-residential schools. If the significant differences were simply due to the larger number of deaf teachers, it might be tempting to suggest that if non-residential schools would hire more deaf teachers, there would not be any differences between residential school teachers and non-residential school teachers. In order to examine this situation in more detail, we decided to eliminate all hard of hearing and deaf teachers from the analysis and to go back and look at previously discussed background and communication variables comparing only hearing teachers in residential programs and hearing teachers in non-residential school programs.

Tables 4, 5, and 6 below present comparative data between *hearing* residential school teachers and hearing non- residential school teachers. Table 4 shows that *hearing* residential school and *hearing* non-residential school teachers differ greatly in their social interaction with deaf adults. The great majority of hearing residential school teachers (86%) reported some social contact with deaf adults outside the classroom, while only slightly more than half (51%) of the hearing non-residential school teachers reported such contact. More than one-fifth of the hearing residential school teachers (20%) reported that a lot or nearly all of their social interaction outside the classroom involved contact with deaf adults, while only a very small percentage of the hearing non-residential school teachers (6%) reported such social interaction with deaf adults. Differences in social interaction with deaf adults by hearing residential school and hearing non-residential

school teachers were highly statistically significant ($X^2 = 174.96$, df = 2, $p < 0.0000$).

Table 4: Differences in Teacher background characteristics.

Responses	Residential	Non-Residential
Socialize w/ d. adults		
None or nearly	14% 60/416	49% 561/1151
A little or some	65% 271/416	45% 516/1151
Much	21% 85/416	06% 74/1151
a lot	20% 83/416	06% 71/1151
all or nearly all	01% 2/416	>1% 3/1151
Expressive signing,	*self-reported*	
Sign greatly inferior	26% 110/419	53% 619/1160
Sign <, =, > English	74% 309/419	47% 541/1160
slightly inferior to	38% 161/419	26% 305/1160
equal to	35% 146/419	21% 236/1160
superior to	01% 2/419	0% 0/1160
Receptive skill,	*self-reported*	
Sign greatly inferior	34% 141/417	60% 688/1154
Sign <, =, > English	66% 276/417	40% 466/1154
slightly inferior	45% 188/417	29% 336/1154
equal to	21% 86/417	11% 130/1154
superior to	>1% 2/417	0% 0/1154
Sources of sign acq.		
Deaf friends	52% 237/411	40% 381/964

Table 4 also demonstrates that hearing residential and hearing non-residential school teachers rated their signing skills differently. The majority of hearing non-residential school teachers (53%) rated their expressive sign language skills as greatly inferior to their English skills, while only 26% of the hearing residential school teachers did so. Similarly, the majority of hearing non-residential school teachers (60%) rated their receptive sign language skills as greatly inferior to their English skills, while only 34% of the hearing residential school teachers did so. Differences in self-reported sign skills for hearing residential school and hearing non-residential school teachers were highly significant for expressive ($X^2 = 89.93$, df = 1, $p < 0.0000$) and for recep-

tive ($X^2 = 80.81$, df = 1, $p < 0.0000$) skills. In addition to the above differences in reported sign language competence, hearing residential school and hearing non-residential school teachers described a very different source for their sign language acquisition. The majority of hearing residential school teachers (58%) reported that deaf friends were an important source of sign language acquisition, while only 40% of the hearing non-residential school teachers said that deaf friends were an important factor in their sign language acquisition. This difference in sources of sign acquisition between hearing residential school and hearing non-residential school teachers was highly significant ($X^2 = 37.60$, df = 1, $p < 0.0000$). In relation to channel differences, Table 5 indicates that hearing residential school teachers are more likely to communicate in ways that are sociolinguistically "deaf" than hearing non-residential school teachers. While Table 5 indicates that the very great majority of hearing residential school and hearing non-residential school teachers use their voices during classroom communication, Table 5 also indicates that hearing residential school teachers are much more likely to sign (be in patterns 1, 2, and 3) than hearing non-residential school teachers ($X^2 = 217.90$, df = 1, $p < 0.0000$). It should be noted that none of the teachers who use speech only use sign language interpreters.

Table 5: Channel differences, hearing teachers.

Pattern	Channel	Residential	Non-Resid'l
1. Very deaf	Sign only	>1% 2/416	0% 0/1122
2.	Sign & mouth	<1% 6/416	>1% 4/1122
3.	Speak & sign	93% 388/416	54% 611/1122
4. Very hearing	Speak only	05% 20/416	45% 507/1122

Finally in relation to code difference, Table 6 indicates that the majority of hearing residential school teachers (59%) pattern in groups 1, 2, and 3, nearer the sociolinguistically "deaf" end of the continuum. Groups 1, 2, and 3 use fewer features of English grammar than Groups 4 and 5. On the other hand, the majority of hearing non-residential school teachers (56%) pattern in Groups 4 and 5. The difference in code form between hearing residential

school and hearing non-residential school teachers is highly significant ($X^2 = 19.86$, df =1, $p < 0.0000$).

Table 6: Code differences, hearing teachers only.

Pattern	voc	inflec	funct	w/o	Residential	Non-Res.
1. Very deaf	No	No	No	No	0% 0/371	0% 0/568
2.	No	No	No	Yes	18% 67/371	14% 77/568
3.	No	No	Yes	Yes	41% 151/371	30% 171/568
4.	No	Yes	Yes	Yes	32% 119/371	33% 187/568
5. Very Hearing	Yes	Yes	Yes	Yes	09% 34/371	23% 133/568

Summary & conclusion

The residential school and non-residential school teachers in this study shared only a few basic background characteristics related to the larger majority in the United States. In strong contrast to the small number of similarities between residential school and non-residential school teachers, there were a much larger number of statistically significant differences between the two groups in both background characteristics and in classroom communication preferences.

These highly significant differences between residential school and non-residential school teachers are strongly tied to sociolinguistic and socio-cultural factors that have been reported in the anthropological and sociolinguistic literature concerning Deaf Culture in the United States as being of great importance for members The US Deaf Community (cf. Padden and Humphries 1988). High value placed on adult deaf role models, frequent social interaction with members of the Deaf Community, acquisition of sign language, high value of sign language skill, signing that closely approaches ASL in both channel (no voice) and in grammatical code—all these have been reported as highly important elements in The US Deaf Community in anthropological and sociolinguistic studies of deaf people in the United States.

Clearly residential school teachers in this study are significantly closer to Deaf Community linguistic and cultural values than are non-residential school teachers. It is important to note that these differences between residential school and non-resi-

dential school teachers do not result simply because there are many more deaf teachers in residential schools than in non-residential schools. While it is true that the differences between residential school and non-residential schools teachers are much greater when deaf teachers are included than when they are not, it also must be noted that almost all of the differences noted between residential school and non-residential school teachers are highly significant whether deaf and hard of hearing teachers are included in the data base or not.

The highly significant differences between residential school and non-residential school teachers found in this study strongly suggest that residential schools are in some form intrinsically closer to the sociolinguistic and socio-cultural values of the US Deaf Community than are other types of schools. Such highly significant differences between residential and non-residential schools, whether intrinsic or not, would strongly support the anthropologists' claims that residential schools are prime places of early enculturation/acculturation into the language and culture of the US Deaf Community. Certainly one of the reasons for this is the comparatively much larger number of deaf teachers in residential schools. But it also appears that hearing teachers in residential schools apparently have adapted themselves in striking ways to Deaf culture, by attempting to adopt sociolinguistic characteristics valued in the US Deaf Community. While this study has provided important statistical information about residential schools, much more comparative research on residential schools is needed. This research needs to include related comparable data from participant-observation as well as statistical survey methodologies.

Note

Production of this paper was supported in part by Sign Language Research, Inc.

The total number of teachers in this analysis is 1,786. Percentages are based on teachers with reported data, as indicated in parenthesis. All percentages have been rounded to the nearest integer. On the rare occasions where rounding would have resulted in a mathematical anomaly, percentages were artificially raised or lowered one percentage point.

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