東台灣特殊教育學報 第一期
民國87年(1998)9月第217-255頁(1)

美國聾校學生手語說故事能力與英語故事寫作能力之相關研究

楊 宗 仁
國立台北師範學院特殊教育學系

摘 要

長久以來，聾生的語言教育都是以口語及綜合溝通法為主；但接受此種教育的聾生的閱讀與寫作能力很少超越小學四或五年級的程度。部分學者認為主要的原因可能是聾生的聽力障礙使得他們的口語無法達到精熟的地步，以致於他們有困難以其口語來協助他們發展閱讀與寫作的能力。因此，有些學者主張教導聾生手語，然後透過手語來學習閱讀及寫作。但目前少有研究探討手語能力與閱讀能力、寫作能力之間的關係。

本研究是以美國加州佛瑞蒙(Fremont)聾校的學生為對象，探討聾生手語說故事能力與英文寫作能力之間的關係，藉以瞭解手語能力佳者，其英文寫作能力是否也較佳。參與本研究的聾生都要讀一本沒有文字的圖畫書，然後以手語將圖畫書的內容說給一個聾研究人員聽；此外，所有的聾生也都要以英文將他(她)所看到的故事寫下來。研究結果發現手語能力與英文寫作能力之間有顯著的相關。對於父母也是聾人的聾生這一組來說，這兩者之間的相關係數更加的高。但對於父母為聽人的聾生這一組來說，手語說故事能力與英文寫作能力之間沒有顯著的相關。此外，父母為聾人的聾

生比父母為聽人的聾生有著更高的英文寫作分數；年齡大者也比年紀小者有著更高的英文寫作分數；高手語能力組也比低手語能力組有著更高的英文寫作分數；但在控制智力因素後，高手語能力組與低手語能力組只有些微的顯著差異。

本研究雖然發現手語與英文寫作之間有著顯著的相關，並不能證明聾生手語能力高低是其英文寫作能力好壞的主要原因。這兩者之間的因果關係必須同時追縱聾生手語及其寫作能力的發展方能加以釐清。最後本文就本研究的限制、缺陷進行說明及探討，並對聾生語言教育及未來的研究方向提出了一些建議。

The Connection between ASL Narration and English Writing in Deaf Students

Tsung-Ren Yang

Introduction

One of most important educational goals for deaf children is literacy development (Quigley & Kretschmer, 1982; Paul & Quigley, 1994) since an overwhelming majority of 18- to 19-year-old deaf students do not read or write above a 4th grade level (Quigley & Paul, 1986). Because the traditional philosophies of deaf education, "Oralism" and "Total communication," have not proven successful, a new paradigm is in order. After linguistists demonstrated that sign language is a bona fide language and descriptions of the grammar of American Sign Language (ASL) were published during the late 1970 (Klima & Bellugi, 1979; Lane & Grosjean, 1980; Wilbur, 1979), some deaf educators began to advocate applying bilingual approaches in English and ASL in educating deaf children. However, there are few scientific studies that systematically explore the relationship between ASL and English literacy in deaf children.

Since ASL is so different from English, people may wonder whether or not ASL impedes English literacy development rather than facilitates its development. Most evidence of connections between ASL and English literacy comes from the comparisons of deaf children of deaf parents (DCDP) and deaf children of hearing parents (DCHP). Many researchers

found that DCDP have better reading and writing achievement, including vocabulary and syntax, than that of DCHP (Balow & Brill, 1975; Meadow, 1968). It is assumed that deaf parents use ASL to interact with their deaf children. Hence, we may hypothesize that ASL proficiency contributes to literacy development for deaf children. However, some researchers argue that parental acceptance is also an important factor for the high literacy achievement of deaf children of deaf parents (Meadow, 1980; Paul & Jackson, 1993). Anecdotal reports have shown that deaf parents are more likely to accept their deaf children than hearing parents. One way to prove that ASL leads to the development of English literacy is to teach parents ASL and evaluate the effect of the language impact on the development of literacy skills in the deaf child. Another way is to assess the relationship between ASL proficiency and English literacy in deaf children which is the approach Prinz and Strong (in press) and this study adopt.

Recently, Strong and Prinz (in progress) have shown that ASL competence is positively related to English literacy development in deaf children (the study is described in more detail below). The correlation between ASL and English literacy in deaf children is highly significant. Since their study focuses on ASL comprehension and production (especially grammatical structures of ASL) and English literacy, the question remains as to whether or not ASL narration is positively related to English narrative writing. We know that narrated stories are constructed with a complexity that approaches the kinds of experiences we have in everyday life (Mandler , 1984). Narratives not only provide a means of assessing discourse units beyond the sentence level, but it also provides information regarding the ability of the child to solve problems, logically order ideas, relate past experience to present events, use appropriate linguistic devices to create a cohesive text and take into account the needs of a naive listener or reader. In

addition to linguistic knowledge, narrative discourse also touches children knowledge of people and their social world.

Despite the evidence suggesting the pervasive English language-learning difficulties of deaf students and the connection between narrative abilities and later literacy acquisition (Wallach & Miller, 1988), research into the narrative discourse competencies of deaf/hearing-impaired students has been limited. There are few studies which explore the relationship between ASL narratives and English narrative writing in deaf/hearing impaired children. The following section reviews the limited literature on either ASL narratives or English narrative writing in deaf children, respectively.

ASL Narratives and English Narrative Writing

Discourse and narrative strategies as well as knowledge of syntax and semantics are required in developing communicative competence. In their comprehensive review, Hoffmeister (1982) and Prinz (1981) indicated that most studies found that deaf children develop their syntax and semantics of sign language similar to hearing children acquiring a spoken language. Regarding discourse development in deaf children, early studies found that deaf children exhibit some difficulties in normal conversation as compared to hearing children (Kretschmer & Kretschmer, 1978), such as responding appropriately to the comments of others (Krestschmer & Kretschmer, 1994, p. 275). However, Prinz and Prinz (1985) demonstrated that deaf children successfully acquire discourse strategies and rules, such as attention-getting de-

vices, requests and responses, turn-taking and the ability to appropriately interrupt, and to establish eye gaze, following the similar pattern of discourse development of hearing children. Other studies also indicated that when both nonverbal and verbal communication acts are considered, the quantity and quality of hearing impaired children communication efforts parallel those produced by hearing children through spoken means alone (Christensen, 1988; Day, 1986). The differences between these studies may result from the different methodologies, such as settings, the characteristics of subjects, the conversation partners, and the type of education deaf students have had, etc. . The question in order is whether deaf children develop their narrative abilities parallel to hearing children and whether signed narratives are positively related to English narrative writing.

Retelling or Recalling Stories

Story-retelling tasks have been shown to elicit longer stories, more complete episodes, and more story grammar components than tasks involving the creation of original stories (Merritt & Liles, 1989). This method is particularly good for very young children. It can also examine how deaf children organize narrative structure in their memory. The following section reviewed how deaf children retell stories by sign language, spoken language, or written language.

---

[1] In this review of the literature, the terms of "deaf" and "hearing" impaired refer to children with a severe-to-profound hearing loss.

Griffith and Ripich (1988) studied the story structures used in the recall and construction of stories by hearing-impaired children. Three stories were presented with or without pictures in both signs and speech simultaneously. Then deaf children were required to sign the stories to a deaf child who had not heard the stories. Their findings indicated that their subjects were using a story grammar structure like hearing children when retelling the stories. However, the recalls of hearing-impaired students were significantly shorter than those of hearing students. The use of pictures improves hearing-impaired students' accurate recall of story events and of particular story structures not usually salient to elementary school children. Their analyses also revealed that DCDP (deaf children of deaf parents) outperformed DCHP (deaf children of hearing parents) in retelling stories, and in addition, they performed as well as did hearing children.

Griffith, Ripich, Dastoli (1990) further analyzed the propositions and cohesion used in the retelling of stories by the same subjects in Griffith and Ripich study (1988). The child was presented with three stories and told to listen, watch, and remember so that she/he could sign the story to a friend who had not heard the stories. All stories were presented in both signs and speech simultaneously. Their results revealed that recall of hearing-impaired students was significantly shorter than that of hearing students. Their findings also indicated that when stories are very simple, hearing-impaired students generate mostly complete propositions; however, as complexity increases, semantic errors result in fewer complete propositions. Pictures did not make a difference in this study. The results also found that DCDP were more likely to use classifiers, while DCHP tended to leave out referents. Griffith et al. concluded that hearing-impaired students have very limited knowledge of how to modify propositions and of how to connect parts of the story for the listener.

Yoshinaga-Itana and Snyder (1985) examined the semantic discourse features of written narratives of hearing-impaired children which explore the relationship between form and meaning in the writing of 49 normal-hearing and 49 hearing-impaired children aged 10-15 years. Subjects were shown the Accident/Emergency picture from the Peabody Language Development Kit and asked to write the best possible story about it. The analyses indicated that normal-hearing and hearing-impaired subjects had similar characteristic developmental trends for both syntactic and semantic written-language variables. However, normal-hearing children generally outperformed their hearing-impaired peers in the use of propositions and text cohesive devices.

Weiss and Johnson (1993) investigated the relationship among age, MLU and narration in seven school-aged, hearing-impaired children. Each child used oral language as his or her primary communication mode. Subjects were asked to retell a movie story, E.T., to the examiner, who mentioned that she had not seen it. The results showed that neither age nor MLU was a good predictor for story grammar and story cohesion but MLU was good at predicting the complex syntax of stories produced by subjects. Weiss and Johnson interpreted their findings as follows: "(1) most subjects were not competent storytellers so their findings may just reflect a floor effect; (2) their study was greatly influenced by the small number of subjects employed; (3) the fact that neither age nor MLU showed itself to be useful as a predictor for narrative and cohesion could be taken as further evidence that children with hearing impairments are very often at risk for depressed language learning."

Gaines, Mandler, and Bryant (1981) investigated the comprehension and retention of stories read by orally trained, congenitally, profoundly deaf children, and by hearing children. Children were asked to read one normal

and two experimentally confused stories and write down what they remembered about the stories. The results showed that the number of propositions recalled did not differ between the hearing and the deaf groups on the normal story but the deaf children were superior in amount recalled for both stories with misspelled words and with confused references. However, the deaf children made significantly more distortions in their recall than did the hearing children. Gaines et al. (1981) concluded that orally trained deaf children may transfer the broad reconstructive strategies used for lip-reading purposes to reading style and thus engage in more guessing and reconstructive activity during reading than do hearing readers. Another possible interpretation is that the deaf children were smarter than the hearing children since their performance IQ was 117 and they are older than the hearing children although they were matched in reading age.

Sarachan-Deily (1985) investigated the story recall and inference of 20 deaf students and 20 hearing students. Hearing students were instructed orally and deaf students were instructed manually and orally. Both groups of students received identical written instructions. The students were told to read a story and to remember what happened so they could rewrite the story later in their own words. The results showed that the hearing students recalled significantly larger numbers of propositions than deaf students, but both deaf and hearing students recalled similar numbers of story inferences in their written narratives.

Self-generated Stories

Since children may not be able to remember stories they heard or read during story retelling tests even if they know the stories well, some researchers adopt self- generated story tasks to avoid memory problems. In

self-generated stories, children have more space to embed their personal experiences, social knowledge, and imagination into their stories. The following section reviews how deaf children generate stories by sign language, spoken language, or written language.

Marschark, Mouradian, and Halas (1994, Experiment I) examined the narrative discourse structure of 22 deaf children and 23 hearing participants. The children were asked to tell a story about finding a new civilization existing deep inside the earth. The results showed that signed stories by deaf children and oral productions by hearing children had similar discourse structures as indicated by the patterns of causal goal-action-outcome (GAO). Furthermore, deaf and hearing children produced stories of comparable lengths in terms of discourse structures. Marschark et al. (1994, Experiment II) also examined written compositions as well as signed/oral narratives from deaf and hearing children. The procedure was the same as in Experiment I except that two story themes were assigned, one for oral/signed stories and one for written stories. The results showed that there were no significant differences between oral/signed stories and written stories produced by deaf children and hearing children in terms of narrative structure of GAO. However, deaf students produced significantly shorter stories than their hearing age-mates, as reflected in the total number of words in the written stories. Correlation analyses also showed that older deaf children tended to produce fewer incomplete GAOs and more complete GAOs. In terms of grammatical and stylistic attributes of written stories, hearing children outperformed deaf children.

Klecan-Aker and Blondeau (1990) examined the written stories of eight hearing-impaired school-age children by adopting story grammar and the T-unit (minimal terminal unit) which is defined as "one main clause plus any subordinate clause or non-clausal structure that is attached or em-

bedded in it." (Hunt, 1970, p4). Subjects were instructed as follows: "I want you to write a story. Remember, as you write, that stories have a beginning, a middle, and an end." The children were given as much time as they needed to complete a story. Results showed that the hearing-impaired subjects generated true stories containing common story grammar but used fewer clauses and words per T-unit than normal-hearing peers.

Yoshinaga-Itano and Downey (1992) explored the story-telling ability of 284 children and adults (aged 7-21 years) who had severe to profound hearing loss. The children were asked to look at the Accident/Emergency picture from the Peabody Language Development Kit, and wrote the best story they could without prompting or teacher assistance. The results showed that most subjects exhibited the competence in making inferences, elaborating stories, sequencing topics, using connective devices, and using story grammar propositions. Since the hearing children are not included in this study, it is not clear that the performance of language-impaired children is parallel to hearing children.

Griffith and Ripich (1988) studied the story structure generated by hearing- impaired, non-disabled, and learning-disabled children. The students were shown a five-picture series story from the book, Frog On His Own, which contained no printed words. They were told to look at the pictures and make up and sign a story to go with them. The results show that hearing-impaired students performed significantly better than either nondisabled or learning-disabled students. Griffith and Ripich suggested either the hearing children were not used to being asked to make up stories, or they were more adept at gleaning information presented audibly rather than by pictures alone.

In Griffith, Ripich, and Dastoli study (1990; see the section on retelling stories), they found that deaf students used very few modified

propositions in the self-generated stories, suggesting that propositions had not been mastered by most of them. Furthermore, the self-generated stories, as compared to retelling stories, had the highest number of incomplete propositions, suggesting that the difficulty was not related simply to memory factors.

The literature review above suggests that if investigations focus on the high level story structure, such as story grammar, GAO (goal-action-outcome), or story inferences, deaf children performances parallel those of hearing children regardless of whether the stories are signed, orally told, written, self-generated or retold. If researchers look at the number of words and clauses and microstructures of narratives, such as propositions and cohesive devices, then deaf children may not be as competent as hearing peers, especially in written stories. These findings also suggest that deaf children have the ability to use discourse structure and story grammar to organize their stories. Syntactically speaking, they may have some problems using correct and complete propositions and cohesive devices in their narratives. However, it is not clear whether it is still the case for signed narratives of DCDP since most studies do not separate DCDP from DCHP. There are several possible interpretations of the deaf children difficulties telling or retelling stories. The first one is that most deaf children do not acquire a first language, either a spoken language or a sign language, as early as hearing children do, so they typically do not have the same narrative experiences during early development as normal-hearing children do. It may be difficult for deaf children to go into the syntactic details of the story in the absence of such common experiences. The second interpretation is that: ASL and English are two different languages so the comparisons of syntactic features and microstructures of narratives between them may not be so easy or even appropriate. The third interpretation is that deaf children may apply

the syntax and structure of ASL to English writing so their written stories do not reflect their knowledge of narratives. Additional research is required to figure out which interpretation fits these findings.

So far, only Marschark et al. study investigated deaf children signed and written narratives together. They found deaf students did use the story structure of goal-action-outcome (GAO) in both signed and written narratives. However, it is not clear whether ASL narratives are positively related to English narrative writing in deaf children, about which this investigation is concerned.

Previous Findings of ASL Literacy Project

Prinz and Strong (in press) are conducting a four-year project exploring the relationship between ASL competence and English literacy in deaf children. Their pilot study and first year data (Strong & Prinz, in progress) indicated that ASL competence is positively related to English literacy in deaf children. The relationship is significant for the younger students as well as for the older deaf children. Their study also revealed that deaf children with higher ASL skills earned higher English literacy scores than those with lower ASL skills. Furthermore, deaf children with deaf mothers outperformed deaf children with hearing mothers on English literacy. However, the relationship is not statistically significant for an older group with deaf mothers. Strong and Prinz concluded that attainment of at least a medium level of ASL may play an important role for young deaf students, particularly those from hearing families, in their acquisition of English literacy.

Encouraged by Strong and Prinz findings (in progress), this study

further investigates whether or not ASL narratives are positively related to English narrative writing in deaf children. Based on Strong and Prinz findings and results from related studies in the literature, the following research questions were proposed:

Question 1: What is the relationship between ASL narratives and English narrative writing among deaf students, aged 8-15 years?

Question 2: Do deaf students with deaf parents outperform deaf students with hearing parents in written English narrative and ASL narratives?

Methodology

This study is based on the first year data of Prinz and Strong ASL Literacy Project (in press). In this section, a brief description of subjects, tests, and procedures of the ASL Literacy Project is provided when it is related to this study. The detailed information of the ASL Literacy Project related to methodology is available in their papers (Prinz & Strong, in press , Strong & Prinz, in progress).

Subjects

From a pool of 200 students at the California School for the Deaf in Fremont (CSDF) between the ages of 8 and 15 years, 161 deaf children were selected to participate in this study. Students who presented additional handicapping conditions and who were assigned to the school special unit (such as students with learning disabilities) were not included in the study, as

were those whose parents did not give permission, or who left the school during the testing year. Students whose Performance IQ on the MAT (see below) was below 90 were also excluded to avoid contamination of cognitive abilities. Table 1 illustrates the basic profile of the subjects. The subjects were divided into two age groups, Group 1 including ages 8 through 11, and Group 2 comprising ages 12 and older at the time of testing. Deaf students with hearing parents (DSDP) as well as deaf students with deaf parents (DSHP) were included in the study. For seven students, parents' hearing status (PHS) information is currently still unavailable. The following table illustrates the breakdown of the sample by age and parental hearing status. The subjects' performance IQ (MAT scorce) for the entire group, the younger group, and the older group, are 11.4 years, 10.3 years, and 12.1 years, respectively. Among the subjects, there were 112 children with two hearing parents and there were 42 subjects with either one (only two subjects) or both parents being deaf (40 subjects).

Table 1: Distribution of subjects across age group and PHS*

	Younger Group	Older Group	Total
Deaf Parents	15	27	42
Hearing Parents	41	71	112
Total	56	98	154

Tests

In this study, the tests of ASL narratives and English narrative writing were developed for research purposes in order to assess ASL and

English skills for deaf students aged 8-18 years. These two tests had been pilot-tested on a group of 25 participants from the CSDF. The final version of these tests was modified according to the pilot test. The test required a videocamera, a video monitor, and test booklets. Scoring of tests took between 30 and 40 minutes, depending on the skill level of the test-taker. The following is a description of these two narrative tests and a test of cognitive abilities.

Test of ASL Grammatical Structures and Narrative Discourse

Students were required to look at pictures from a wordless children story book (illustrating how a dog, Carl, takes care of a baby) and then sign the story to the researcher. The time was unlimited and the students could look at the pictures during the test. The ASL test examined the following features (see narrative score sheet in Appendix I):

1. ASL Grammatical and Semantic Features: embedding, chaining, indexing, quotations, vocabulary, appropriate terms, time expression, stressing, and complex sentences.

2. Story Grammar Features:

2.1 Time and Place: topic introduction, logical event sequencing, location name, accurate setting of scene/objects, direct consequence;

2.2 Character: names of characters, portrayal of characters ;

2.3 Role: role shifting, role explanation, role relationships ;

2.4 Elaboration: elaboration of actions, definite ending.

3. Global Features: fingerspelling, fluency, story duration, sensibility, and attempts at humor.

The Test of English Narrative Writing

This test was developed by modifying The Test of Written Language (TOWL) according to the research purposes. Students read the same picture book again and were required to write the story in English. This task examines the following writing skills (see Appendix II):

1. Discourse Features : events sequence, location, characters, etc.(see Column in Appendix II);
2. Contextual Vocabulary : words with 7 or more letters ;
3. Syntactic Maturity: based on the number of ung rammatical phrases or sentences;
4. Spelling: based on the number of misspelled words ;
5. Contextual Style: basic writing mechanics, such as periods, commas, etc..

Matrix Analogies Test–Short Form (Naglieri, 1985)

To assess the impact of cognitive abilities on ASL narratives and English narrative writing, the Matrix Analogies Test (MAT), a standardized test of nonverbal intelligence (performance IQ), was selected because it has a broad North American Standardization. The MAT was individually administered and scored.

Data Collection and Scoring

The tests of narratives were part of the comprehensive tests of ASL competencies and English literacy skills (Prinz & Strong, in press). All tests took place in a quiet room during the school day for two sessions of one hour each. The ASL tests were conducted during one hour and the

some subjects received the ASL tests first and others the English tests first. Instructions were given on videotape in ASL, and the researcher answered further questions in person if necessary. The ASL tests were conducted by deaf researchers fluent in ASL, the English tests by hearing researchers who were also highly proficient in ASL. No hearing persons were present during the ASL testing. The MAT was also given during one of these testing periods. All signed responses were videotaped and subsequently scored from the videotape. Subjects were paid for their participation.

The ASL narrative discourse was scored by two deaf researchers. Inter-rater reliability was established by having raters score the same set of ten protocols, reviewing and resolving disagreements, and then scoring a second set of ten protocols. The eventual agreement was better than 96% in all cases.

In order to avoid bias in these non-standardized tests, the raw score of each subtest of ASL narratives and English narrative writing was converted into percentiles. The composite ASL test and composite English test were derived from the sum of converted raw scores. The students were evenly grouped into high group(about one third of students) , medium group(about one third of students), and low group(about one third of students) based on their scores on composite ASL narratives and composite English narrative writing, respectively.

Research Hypotheses

According to research questions, literature review, and previous findings of the ASL Literacy Project, the following hypotheses were proposed for data analyses.

Hypothesis 1 (H1):Composite ASL narratives are significantly correlated with composite English narrative writing.

Hypothesis 2 (H2):Deaf students in the high ASL group will score significantly higher on composite English narratives than those in the Medium ASL group.

Hypothesis 3 (H3):Deaf students in the high ASL group will score significantly higher on composite English narratives than those in the Low ASL group.

Hypothesis 4 (H4):Deaf students in the Medium ASL group will score significantly higher on composite English narratives than those in the Low ASL group.

Hypothesis 5 (H5):DSDP (deaf students with deaf parents) will score significantly higher on composite English narratives than DSHP (deaf students with hearing parents).

Hypothesis 6 (H6):DSDP will score significantly higher on composite ASL narratives than DSHP.

Results

The relationship between ASL narratives and English narrative writing was determined through a correlational data analysis. This design was considered most appropriate to the study since no intervention was involved. Based on the correlation between ASL and English, a series of ANCOVA analyses were also conducted to further assess the relationship

between ASL narratives and English narrative writing and the effect of parents' hearing status (PHS) on composite ASL narratives and composite English narrative writing. All statistical analyses were conducted for all subjects combined, separately for each of the two age groups, 8-11, and 12-15 year-olds.

Distribution of ASL and English Proficiency Level

Table 2 indicated about 55% of DSDP were in the high ASL group while only 29% of DSHP were in the high ASL group. In contrast, only 11.8% of DSDP were in the low ASL group while 44.1% DSHP were in the low ASL group. In terms of the effect of age, both the younger deaf group and the older deaf group were almost evenly distributed among three ASL subgroups.

Table 2: Distribution of ASL and English level across age group and PHS

	DP	HP	8-11 year old	12-15 year old
Low ASL	6(11.8%)	44(41.1%)	19(33.3%)	32(33.0%)
Medium ASL	17(33.3%)	32(30.0%)	21(36.8%)	30(30.9%)
High ASL	28(54.9%)	31(29.0%)	17(29.8%)	35(36.1%)
Subtotal	51	107	57	97
Low English	5(12.2%)	40(41.7%)	25(53.2%)	22(23.2%)
Medium English	12(29.3%)	34(35.4%)	13(27.7%)	34(35.8%)
High English	24(58.5%)	22(22.9%)	9(19.1%)	39(41.0%)
Subtotal	41	96	47	95

DP=Deaf Parents; HP=Hearing Parents

Regarding the effect of parents' hearing status (PHS) on English

narrative writing, the distribution pattern was similar to those of ASL narratives. Regarding the effect of age, Table 2 indicated more older deaf students were in the high English group while more younger deaf children were in the low English group which was very different from the distribution of composite ASL narratives.

Testing H1

H1: Composite ASL is significantly correlated with composite English narratives

For testing H1, three correlation analyses were conducted by using a commercially available statistical software program (Systat, 1992). The results showed that the composite ASL narratives was significantly correlated with composite English narratives ($r = .220$, $P < .01$). Table 3 also showed that the composite English was significantly correlated with the ASL subtests, Global Features ($r = .269$, $P < .001$) and Story Grammar ($r = .169$, $P < .05$), but not Grammatical and Semantic Features ($r = .134$, $P < .05$). The subtest of English, Contextual Style, was significantly correlated with all subtests of ASL (see Table 3). The Discourse Feature subtest in English narrative writing was not correlated with the Story Grammar in ASL narratives for either the whole group, or the younger group, or the older group. Further analysis, in the younger deaf group, showed that there was no single significant correlation between the subtests of ASL and the subtests of English. In contrast, the items of significant correlation between ASL and English were almost parallel between the entire group and the older group.

Table 3: Pearson correlation coefficients between ASL narratives and English narrative writing in deaf students (N=138)

	ASL	GF	SG	GLF
ENGLISH	0.220**	0.269***	0.169*	0.134
CV	0.185*	0.229**	0.110	0.143
SM	0.038	0.109	0.045	-0.052
SP	0.088	0.093	0.110	0.026
CS	0.309***	0.316***	0.244**	0.244**
DF	0.139	0.185*	0.077	0.101

GF: Grammatical and Semantic Features; SG: Story Grammar; GLF: Global Features; ASL : Composite ASL Narratives; ENGLISH: Composite English Narrative Writing; CV: Contexual Vocabulary; SM: Syntactic Maturity; SP: Spelling; CS: Contextual Style; DF: Discourse Features. * P < .05; ** P <.01; *** P < .001

Two additional correlation analyses were conducted to measure the effect of PHS on the relationship between ASL and English. For the DSDP (deaf students with deaf parents), Table 4 showed that the composite ASL was significantly correlated with composite English (r = .424, P<.01; see Table 6). In addition, English subtests, Contextual Vocabulary, Contextual Style, and Discourse Features, were also significantly correlated with the ASL subtests, Global Features, and Grammatical Features, but not Story Grammar. For DSHP (deaf students with hearing parents), the correlation coefficient between composite ASL and composite English was not significant (r =.076). In conclusion, H1 is accepted by the whole group, the older group, and the DSDP but rejected by the younger deaf group and the DSHP.Since there were not enough. Hubjects in the younger deaf group of deaf parents, the correlation between ASL narratives and English narrative writing was not conducted for younger deaf group of deaf parents.

able 4: Pearson correlation coefficients between ASL narratives and English narrative writing in the DSDP (N=40)

	ASL	GF	SG	GLF
ENGLISH	0.424**	0.492***	0.323*	0.271
CV	0.462**	0.493***	0.295	0.391*
SM	0.256	0.326*	0.276	0.062
SP	-0.070	0.046	-0.003	-0.214
CS	0.404**	0.397*	0.298	0.339*
DF	0.431**	0.471*	0.268	0.361*

GF: Grammatical and Semantic Features; SG: Story Grammar; GLF: Global Features; ASL: Composite ASL Narratives; ENGLISH: Composite English Narrative Writing; CV: Contextual Vocabulary; SM: Syntactic Maturity; SP: Spelling; CS: Contextual Style; DF: Discourse Features * P < .05; ** P <.01; *** P < .001

Testing H2, H3, and H4

H2 Deaf students in the high ASL group will score significantly higher on English narratives than those in the Medium ASL group.

H3 Deaf students in the high ASL group will score significantly higher on English narratives than those in the Low ASL group.

H4 Deaf students in the Medium ASL group will score significantly higher on English narratives than those in the Low ASL group.

A series of ANCOVA were conducted to test these hypotheses for the whole sample and the various subgroups. In the following analyses, the composite English narratives was used as a dependent variable and the composite ASL was used as an independent variable. Age, PHS, and performance IQ (PIQ) were used as covariables to explore whether the level of ASL of deaf students was still effective on English.

The analysis of covariance was performed and the results were illustrated in Table 5. The effect of ASL on English was significant (F-ratio =4.58, P=.012) even after age was controlled. A post hoc Bonferroni pairwise comparison indicated that deaf students in the high ASL group outperformed those in the low and medium group on composite English. For the older group, the results parallel the whole group (F=5.834, P=.004) but there were no significant differences between high-, medium-, and low ASL among the younger group (F=.621, P=.543). H2 and H3 were accepted by the whole group and the older group but not by the younger group after age was controlled. H4 was completely rejected after age was controlled.

Table 5: Analysis of covariance table for the relationship of composite English with composite ASL level, adjusted for age for all subjects

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
ASL	78853.471	2	39426.736	4.580	0.012
AGE	62262.431	1	62262.431	7.232	0.008
ERROR	1067513.252	124	8608.978		

High ASL Group >Medium ASL group (p=.024), High ASL group >Low ASL group(p=.03)

After ruling out the effect of PHS, the effect of ASL on the composite English was significant (F-ratio=5.930, P=.003; see Table 6). A post hoc comparison indicated that deaf students in the high ASL group outperformed those in the medium group, but not the low group on English . The same pattern appeared again in older deaf students (F=3.944, P=.023)

but disappeared in the younger deaf students (F=1.253, P=.296). Hence, only H2, not H3 and H4, was accepted by the whole group and the older group after PHS was ruled out.

Table 7 showed that the effect of ASL was not significant on the composite English after the effect of PIQ was ruled out. It was still true for both the older deaf students (F=1.984, P=.145) and the younger deaf students (F=.189, P=.829). However, the trend was that deaf students with higher ASL still had the higher composite English than those with lower ASL although it was not significant. H2, H3, and H4 were all rejected after PIQ was controlled.

Table 6: Analysis of covariance table for the relationship of composite English with composite ASL level, adjusted for PHS for all subjects

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
ASL	95983.282	2	47991.641	5.930	0.003
PHS	99243.337	1	99243.337	12.263	0.001
ERROR	1035852.080	128	8092.594		

Table 7: Analysis of covariance table for the relationship of composite English with composite ASL level, adjusted for PIQ for all subjects

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
ASL	47382.339	2	23691.169	2.601	0.079
PIQ	22504.761	1	22504.761	2.471	0.119
ERROR	1038286.135	114	9107.773		

Testing H5

H5: DSDP will score significantly higher on composite English than DSHP.

In the following analyses, PHS was used as an independent variable and composite English was used as a dependent variable. Age and PIQ were used as covariables. Table 8 and Table 9 indicated that DSDP outperformed DSHP on the composite English for all subjects after age and PIQ were controlled, respectively. This pattern was only true for the older deaf students but not true for the younger deaf students. Hence, H5 was accepted by the whole group and the older group but not the younger group after age and PIQ were controlled.

Table 8: Analysis of covariance table for the relationship of composite English with PHS, adjusted for age for all subjects

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
PHS	101627.514	1	101627.514	12.935	0.000
AGE	92998.428	1	92998.428	11.837	0.001
ERROR	958494.702	122	7856.514		

Deaf students of deaf parents > Deaf students of hearing parents

Table 9: Analysis of covariance table for the relationship of the composite English with PHS, adjusted for PIQ for all subjects

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
PHS	63605.621	1	63605.621	7.655	0.007
PIQ	43034.716	1	43034.716	5.179	0.025
ERROR	938904.474	113	8308.889		

DSDP > DSHP

Testing H6

H6: DSDP will score significantly higher on composite ASL than DSHP

Regarding H6, Table 10 indicated that DSDP outperformed DSHP on the composite ASL after age was ruled out for all subjects. As before, this pattern was not true for the younger deaf students (F=.006, P=.937) while it was still true for the older deaf students (F=9.682, P=.003). So, H6 was accepted by the whole group and the older group but not the younger group after age was ruled out.

Table 10: Analysis of covariance table for the relationship of composite ASL with PHS, adjusted for age for all subjects

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
PHS	31080.275	1	31080.275	6.136	0.014
AGE	17570.724	1	17570.724	3.469	0.065
ERROR	688870.344	136	5065.223		

PHS : Parents' Hearing Status Deaf Students of Deaf Parents > Deaf Students of Hearing Parents

After PIQ was controlled, there were no significant differences between DSDP and DSHP for the whole group (F=.3.349, P=.070) and the younger group (F=.006, P=.937). However, for the older group, DSDP still scores higher than DSHP on the composite ASL (F=.5.596, P=.021). Hence, H6 was totally rejected after PIQ was ruled out.

In general, H1, H2, H3, H4, and H5, and H6 were accepted by the whole group and the older group, but not by the younger group if only age and PHS were controlled. However, if PIQ was ruled out, then H1, H2, H3, H4, and H5, and H6 were rejected by almost the whole group and the younger group and sometimes by the older group. From the above analyses, the differences between the older group and the younger group were obvious.

Discussion

For deaf children, learning to read and write is one of the most challenging things in a society in which literacy is highly valued. Without a fluent first language, it is almost impossible to be functionally literate. Many studies (e.g. Mogford, 1993) showed that most deaf people never master a spoken language up to a satisfying level because hearing loss restricts their linguistic input (Bochner & Albertini, 1988). Nevertheless, sign language development of deaf children parallels the spoken language development of hearing children (Prinz and Prinz, 1985). Bochner and Albertini (1988) indicated that deaf children and hearing children of deaf parents show their first sign earlier than the first word of hearing children of hearing parents. Furthermore, Strong (1988) and Gaines and Halpern-Felsher (1995) found that deaf children prefer a visual-manual mode language, such as ASL, rather than a spoken language if they have a choice. However, there is scant empirical data showing the connection between ASL and English literacy. The findings of this investigation provided some scientific evidence that ASL narratives are connected to English narrative writing in deaf children.

Regarding the first research question, "What is the relationship between ASL narratives and English narrative writing among Deaf students,

aged 8-15 years?", The findings indicated that ASL narratives positively correlated with English narrative writing for the whole group. The correlation coefficient was also significant for the older deaf group and the DSDP group but not significant for the younger deaf group and the DSHP group. The reasons that ASL narrative was not significantly correlated with English narrative writing may result from the younger deaf students are beginning writer. Therefore, all younger deaf students are poor English writer so that their writing cannot reflect their ASL level (see following discussion). Furthermore, the students with high composite ASL always scored significantly higher than the students with medium composite ASL. However, the effect of ASL on English narrative writing disappeared after PIQ was ruled out. Regarding the second research question, Do deaf students with deaf parents outperform deaf students with hearing parents in English narrative writing and ASL narratives?", the answer was affirmative even after age and PIQ were controlled for the whole group and the older group in most cases, but it was not the case for the younger group.

The findings in this study were somewhat different from Strong and Prinz findings (in progress). Their findings indicated that the predictive power of ASL skills on English literacy was stronger in the younger group (r=.663) than in the older group (r=.50). Their findings also revealed that the students in the high ASL group always outperformed those in the low ASL group and/or medium ASL group on the English literacy scores for the younger group as well as the older group even after PIQ was controlled. There are several possible alternative interpretations of the discrepancy between the findings of Strong and Prinz and these findings.

The first possible interpretation is that the level of ASL narrative of the younger deaf students may be so much lower than that of the older deaf students that the findings just reflected the floor effect. But an

additional ANCOVA analysis indicated this was not the case. There were no significant differences between the younger deaf students and the older deaf students on ASL narratives (F=.697, P=.406) even after PHS and PIQ were controlled.

Alternatively, it may be the other way around--that the level of writing skills of younger deaf students was too low to reflect their ASL narrative skills since they just started to learn to write stories. Hence, they might be still learning basic English writing mechanics while the older deaf students were beyond that level so they could transfer the knowledge of ASL narratives to English narrative writings. This interpretation is possible. First, the subtest of English narrative writing--Contextual Style--which focused on writing mechanics, significantly correlated with all subtests of ASL narratives while the other subtests of English narrative writing did not (see Table 3). Second, most stories of the younger deaf students were short. More than 70% of the younger deaf students' stories contained fewer than 100 words while more than 70% of the older deaf students' stories consisted of more than 100 words. Third, about 53% of younger deaf children were in the low composite English group while only 23 % of older deaf children were in the low composite English group. In contrast, about 19 % of the younger group were in the high composite English group while about 41% of the older deaf children were in the high composite English group. It is necessary to follow up the development of English narrative writing of these younger deaf children to examine whether ASL narratives can improve their English narrative writing after younger deaf children overcome the barriers of basic writing skills.

The third interpretation is that cognitive ability plays an important role in English narrative writing in deaf children. This interpretation is possible since the effect of ASL narratives on English narrative writing disap-

peared after PIQ, but not after age and PHS, was controlled. However, it is not easy to separate the effects of ASL narrative and cognitive ability on the development of English narrative writing since story telling is a kind of high level mental activity which goes beyond the domain of language. Vygotsky (1962) indicated that language development leads to cognitive development which in turn contributes to the development of language. A separate qualitative analysis is needed to determine whether or not the knowledge of narratives, which the deaf students showed on signed stories, can be transferred to English narrative writing.

The fourth possible interpretation is based on the fact that the scoring systems of English narrative writing and ASL narratives are not parallel. The scoring system of ASL narratives consists of three parts: Grammatical and Semantic Features, Story Grammar Features, and Global Features, while there are no corresponding categories in the scoring system of English narrative writing. Actually, the scoring form for English narrative writing focuses mostly on a low level of writing, such as vocabulary, spelling, and editing skills, while the scoring of ASL centers on more global features. It is necessary to analyze the macrostructure of narratives, such as goal- action-outcome, to examine how these macrostructures are developed in ASL narratives and English narrative writing. The correlation between ASL narratives and English narrative writing may be improved if the two scoring systems are revised. Additional research is required to further determine the best interpretation of these findings and to better understand the relationship between ASL narratives and English narrative writing.

In this study, only the relationship between signed and written stories was analyzed. In future studies, it is suggested that exploring the relationship between signed and spoken stories and the relationship between spoken and written stories would further our understanding of language and

literacy development in deaf children. Since this study was conducted in a residential school that is in the process of adopting a billingual approach educating deaf students, the use of ASL is highly encouraged and valued at this school site (Strong, 1995). For the students who are placed in mainstream programs, they may not have equal opportunities to learn and use ASL, especially for the deaf students with hearing parents. The comparison of deaf students' narration between different school sites will contribute to the understanding of the effects of school settings on language and literacy development in deaf students. It is also promising to examine the development of specific grammatical, semantic, and discourse features, such as temporality, grounding, event sequence, and story grammar, in both ASL and English to compare how two languages influence language acquisition and development in deaf children.

There are several implications for educators based on the findings in this study. First, deaf educators should focus on basic writing skills as well as story grammar and structure when they teach narrative writing to the younger deaf students. One way to improve their basic writing skills is to compare the differences between ASL and English syntax (Akamatsu & Armour, 1987) since many signing students acquire and use pidgin English during the course of language development (Bochner & Albertini, 1988). In contrast, older deaf students should concentrate more on the microstructures of narrative writing, such as cohesive devices and elaboration. Second, since DSDP always outperformed DSHP in both ASL narratives and English narrative writing and the students with higher ASL narratives always scored higher on English narrative writing, it may be beneficial for DSHP to learn ASL as early as possible. Finally, school teachers may use English narrative writing as multi-dimensional assessment instrument. As Yoshinaga-Itano and Downey (1992) indicated, narrative writing can evaluate students' knowledge of syntax, semantics, and pragmatics all together.

References

Akamatsu, C. T., & Armour, V. A. (1987). Developing written literacy in deaf children through analyzing sign language. *American Annals of the Deaf, 132*, 46-51.

Balow, I., & Brill, R. (1975). An evaluation of reading and academic achievement levels of 16 graduating classes of the California School for the Deaf, Riverside. *Volta Review, 77*, 255-266.

Bochner, J. H., & Albertini, J. A. (1988). Language varieties in the deaf population and their acquisition by children and adults. In M. Strong, *Language learning and deafness*, Cambridge: Cambridge University Press.

Christensen, K. (1988). I see what you mean: Nonverbal communication strategies of young deaf children. *American Annals of the Deaf, 133*, 270-275.

Day, P. (1986). Deaf children expressions of communicative intentions. Journal of *communication Disorders, 46*, 130-137.

Gaines, R., & Halpern-Felsher, B. (1995). Language preference and communication development of a hearing and deaf twin pair. *American Annals of the Deaf, 140* :47-55.

Gaines, R., Mandler, J., & Bryant, P. (1981). Immediate and delayed story recall by hearing and deaf children. *Journal of Speech and Hearing Research, 24*, 463-469.

Griffith, P. L., Ripich, D. N., Dastoli, S. L. (1990). Narrative abilities in hearing-impaired children: Propositions and cohesion. *American Annals of the Deaf, 135*, 12-21.

Griffith, P., & Ripich, D. (1988). Story structure recall in hearing-impaired, learning disabled and nondisabled children. *American Annals of the*

Deaf, 133, 43-50.

Hoffmeister, R. J. (1982). Acquisition of signed languages by deaf children. In H. Hoemann and R. B. Wilbur (Eds.), *Interpersonal communication and deafness. Vol. 5.* Proceedings of Conference on Sociology of Deafness. Washington, DC: Gallaudet College.

Hunt, K. (1970). A syntactic maturity in school children and adults. *monographs of the Society of Research in Child Development, 35*, No. 134.

Kemper, S. (1984). The development of narrative skills: Explanations and entertainments. In S. Kuczaj (De.), *Discourse development: Progress in cognitive development research* (pp. 99-124). New York: Springer-Verlag.

Klecan-Aker, J., & Blondeau, R. (1990). An examination of the written stories of hearing-impaired school-age children. *The Volta Review, 92*, 275-282.

Kretschmer, R. R. & Kretschmer, L. W. (1978). *Language development and intervention with the hearing impaired.* Baltimore, MD: University Park Press.

Mandler, J. (1984). Stories and scrips and scenes: *Aspect of schema theory.* Hillsdale, NJ: Erlbaum.

Marschark, M. (1994). Discourse rules in the language productions of deaf and hearing children. *Journal of Experimental Child Psychology, 57*, 89-107.

Marschark, M., Mouradian, V., Halas, M. (1994). Discourse rules in the language productions of deaf and hearing children. *Journal of Experimental Child Psychology, 57*, 89-107.

Meadow, K. (1968). Early manual communication in relation to the deaf child's intellectual, social, and communicative functioning. *American Annals of the Deaf, 113*, 29-41.

Meadow, K. (1980). *Deafness and child development.* Berkeley: University of

California Press.

Merritt, D., & Liles, B. (1989). Narrative analysis: Clinical applications of story generation and story retelling. *Journal of Speech and Hearing Disorders, 54*, 429-438.

Mogford, K. (1993).Oral language acquisition in the prelinguistically deaf. In D. Bishop and K. Mogford (Eds.), *Language development in exceptional circumstances.* Hillsdale: Lawrence Erlbaum Associates.

Naglieri, J. A. (1985). *Matrix Analogies Test-Short Form (MAT).* San Antonio, TX: The Psychological Corporation.

Paul, P., & Jackson, D. *(1993). Toward a psychology of deafness: Theoretical and empirical perspectives.* Boston, MA: Allyn & Bacon.

Paul, P. V., & Quigley, S. P.(1994). *Language and deafness.* San Diego, CA.: Singular Publishing Group.

Prinz, P. M. (1981). Recent perspectives on the development of sign language in deaf children. *Journal of the National Student Speech-Language-Hearing Association, 9(1)*, 50-65.

Prinz, P. M., & Prinz, E. A. (1985). If only you could hear what I see: Discourse development in sign language. *Discourse Processes, 8*, 1-19.

Prinz, P.M., & Strong, M. (in press). A path to literacy through ASL and English for young deaf children. In J. Gilbert and C. Johnson (Eds.), *Children's language, Vol. 9.* Hillsdale, NJ: Lawrence Erlbaum and Associates.

Quigley, S., & Paul, P. (1986). A perspective on academic achievement. In D. Luterman (Ed.), *Deafness in perspective* (pp. 55-86). San Diego, CA: College-Hill Press.

Quigley, S. P., & Paul, P. V. (1984). *Language and deafness.* San Diego, CA: College Hill Press.

Quigley, S., & Kretschmer, R. (1982). *The education of deaf children: Issues*

, *theory, and practice.* Austin, TX: Pro-Ed.

Strong, M. (1988). A bilingual approach to the education of young deaf children: ASL and English. In M. Strong (Ed.), *Language learning and deafness* (pp. 113-129). New York: Cambridge University Press.

Strong, M. (1995). A review of bilingual/bicultural programs for deaf children in North America. *American Annals of the Deaf, 140,* 84-94.

Strong, M., & Prinz, P. M. (in progress): *A study of the relationship between ASL and English Literacy among deaf children and adolescents at a residential school.*

Systat (1992). *SYSTAT for Windows: Statistics, Version 5 Edition.* Evanston, IL: SYSTAT, Inc.

Vygotsky, L. S. (1962). *Thought and language.* Cambridge, Mass: MIT Press.

Wallach, G. P. (1984). Development of narrative language abilities. In G. Wallach & K. Butler (Eds.), *Language learning disabilities in school-age children* (pp. 103-107). Baltimore, MD: Williams & Wikims.

Wallach, G., & Miller, L. (1988). *Language intervention and academic success.* San Diego: College-Hill.

Weiss, A. L., & Johnson, C. J. (1993). Relationships between narrative and syntactic competencies in school-aged, hearing-impaired children. *Applied Psycholinguistics, 14,* 35-59.

Wilbur, R. (1979). American sign language and sign systems. Baltimore, MD : University Park Press.

Yoshinaga-Itano, C., & Downey, D. M. (1992). When a story is not a story: A Process analysis of the written language of hearing-impaired children . The Volta Review, 95, 131-158.

Yoshinaga-Itano, C., & Snyder, L. (1985). Form and meaning in the written language of hearing-impaired children. *The Volta Review, 87,* 75-90.

Appendix I

Carl the Dog ASL Discourse Score Sheet (draft)

Code_____
Rater_____
Date_____

GRAMMATICAL AND SEMANTIC FEATURES(GF)				Total
Embedding	0	1	2	
Chaining	0	1	2	
Indexing	0	1	2	
Quotations (character-gaze,perspective agreement)	0	1	2	
Vocabulary,Appropriate terms	0	1	2	
Time experssion	0	1	2	
Steressings	0	1	2	
Compiex sentences(compound\conditional sentences)	0	1	2	
STORY GRAMMAR(SG)				
SG-Time and place	0	1	2	
Topic introduction	0	1	2	
Logical event sequencing	0	1	2	
Locatoin named ?	0	1	2	
Accurate setting of scene/objects	0	1	2	
Direct consequence	0	1	2	
SG-Character	0	1	2	
Names characters	0	1	2	
Portrayal of characters(chararcters' personalitites)	0	1	2	
SG-Role Shifting, Refetence, and Relationship	0	1	2	
Role shifting between characters	0	1	2	
Role explainde ?	0	1	2	
Relationships deseribde ?	0	1	2	
SG-How's	0	1	2	
Method describde ?(elaboratoin of actions)	0	1	2	
Definite ending	0	1	2	
GLOBAL				
Fingerspelling	0	1	2	
Fluency	0	1	2	
Story duration	0	1	2	
Sensibility	0	1	2	
Attempts humor	0	1	2	
			GRANDTOAL	**11**

Corrected Story: Carl the Dog **Appendix II** Date:

	ITEM:(form A) **DISCOURSE FEATURES**	Contextual Vocab. Words with 7 of more letters	Contextual Style	Score	pt
	1.Paragraph		1.period at end of sentence	1	1
	2.names objects pictured		2.period after initials		1
	3.Use appropriate terms		3.period after initials		2
	4.Names characters		4.comma between day/year		1
	5.Dream sequence ?		5.comma between city/state		1
	6.Definite ending ?		6.comma to separtate direct address		2
	7.Moral/philosophic		7.comma to separate parts of series		2
	8.Title ?		8.comma to separate direct address		2
	9.Dialogue/monolog.		9.comma after intro. words		2
	10.Attempts humor		10.comma after intro clauses		3
	11.Character personality	Raw Score:	11.comma before compound sentence		3
	12.Sets story time ?		12.comma before & after modifiers		3
	13.Events-sequence ?	Syntactic Maturity ungrammatical	13.Question marks		1
	14.Prior events ?		14.Colon to separate hour/minutes		2
	15.After events ?		15.apostrophe in comtractions		2
	16.Rrle explained ?		16.apostrophe for possession		2
	17.location named ?*		17.apostrophe plurals/ umbers/letter		3
	18.Child named ?*		18.Quotation marks		2
	19.house described ?*		19.Exclaimation I		3
	20.how dog helps ?*		20.Hypen for compound words, etc		2
	21.story duration *		21.first word in a sentence	1	1
	22.Relationships expl.		22.word "I"		1
	23.resourcefullness inentioned *	Number of words:	23.names of persons		2
	24.mtehod described *	Number stricken:	24.street name		1
	25.Ref. to tesmwork	Raw Score:	25.name of city/state name		1
	26.Role of the baby/mother *	Contextual Spelling Misspelled words	26.School/ special place name		1
	27.baby described *		27.month/day name		1
	28.Dog described *		28.Appreviations		1
	29.material described *		29.fitst & important words in titles, bks,statements.		2
	30.mother named *		30.titles:person name		2
			31.organization name		2
			32.Sacred names		2
	Raw Score		33.proper names		2
			34.proper adjectives		3
		#written words: 29			
		#misspelled:			
			Raw Score:	2	
		Raw Score: 79			

Corrected Story: Carl the Dog :Student Number:32E Date:

	ITEM:(form A)	Contextual Vocab. Words with 7 of more letters	Contextual Style	Score	pt
	1.Paragraph		1.period at end of sentence	1	1
	2.names objects pictured	bedrwn	2.period after initials		1
	3.Use appropriate terms		3.period after initials		2
	4.Names characters		4.comma between day/year		1
	5.Dream sequence ?		5.comma between city/state		1
	6.Definite ending ?		6.comma to separtate direct address		2
	7.Moral/philosophic		7.comma to separate parts of series		2
	8.Title ?		8.comma to separate direct address		2
	9.Dialogue/monolog.		9.comma after intro. words		2
	10.Attempts humor		10.comma after intro clauses		3
	11.Character personality	Raw Score: 1	11.comma before compound sentence		3
	12.Sets story time ?		12.comma before & after modifiers		3
	13.Events-sequence ?	Syntactic Maturity ungrammatical	13.Question marks		1
	14.Prior events ?		14.Colon to separate hour/minutes		2
	15.After events ?	all	15.apostrophe in comtractions		2
	16.Rrle explained ?		16.apostrophe for possession		2
	17.Iocation named ?*		17.apostrophe plurals/ umbers/letter		3
	18.Child named ?*		18.Quotation marks		2
	19.house described ?*		19.Exclaimation I	3	3
	20.how dog helps ?*		20.Hypen for compound words, etc		2
	21.story duration *		21.first word in a sentence		1
	22.Relationships expl.		22.word "I"		1
	23.resourcefullness inentioned *	Number of words:	23.names of persons		2
	24.mtehod described *	Number stricken:	24.street name		1
	25.Ref. to tesmwork	Raw Score: -4	25.name of city/state name		1
	26.Role of the baby/mother *	Contextual Spelling MIsspeRlled words	26.School/ special place name		1
	27.baby described *		27.month/day name		1
	28.Dog described *		28.Appreviations		1
	29.material described *	0	29.fitst & important words in titles, bks,statements.		2
	30.mother named *		30.titles:person name		2
			31.organization name		2
			32.Sacred names		2
	Raw Score: 0		33.proper names		2
			34.proper adjectives		3
		#written words: 48			
		#misspelled: 0			
			Raw Score:	3	
		Raw Score: 48			