Research Paper

Sentential Analysis of Syntactic Errors in L2 Writings of Iranian Deaf and Hearing-Impaired (DHI) Students

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Abstract
This study aimed to investigate the syntactic errors that the Iranian deaf and hearing-impaired (DHI) make in their L2 writings. To this purpose, 60 male and female Iranian DHI students with different social status were selected, through convenience sampling procedure, as participants from among the students of a deaf community in Bandar Abbas, Iran. Their general writing performance was assessed through a proficiency test (pre-test) before they received a six-week writing instruction, in which they were provided with model written utterances and common syntactic points such as sentence order, word order, **s**ubject/verb agreement, etc. At the end of the treatment, they were given two topics and asked to write short paragraphs (post-test). Then, different syntactic errors were spotted, analyzed and categorized based on Keshavarz's linguistic taxonomy of errors. The obtained results indicated that the writing quality of the participants improved from pre-test to post-test. It was also found that majority of the participants committed more syntactic omission errors than syntactic addition errors and syntactic substitution errors. It

was further found that syntactic errors in written language were not affected by the gender and social class of the participants. The findings of this study provide empirical evidence for teaching syntactic order to deaf and hearing-impaired students in order to enhance their L2 writing performance.

Introduction

Researchers have long highlighted the need to apply evidence-based approaches to writing instruction for students who are DHI. Existing interventions often fail to account for the unique language and literacy necessities of Iranian DHI students. The ability to write is an evolved talent, which includes many factors. Students with hearing impairment face multiple challenges in language and literacy skills (Kilpatrick, 2015). Like all students, DHI students need explicit instruction on the conventions of written language, the impact of word choice, genre-specific language patterns, and phrase structures (e.g., De Oliveira & Schleppegrell 2015). Writing is the best stage of communication and is a necessary talent to broaden and foster (Giddens, 2009). DHI individuals consider writing skills as an essential component in job-associated conversation and community participation.

The previous studies manifested that most DHI students fail to master the complicated writing method (Cheng & Rose, 2008). Worldwide investigations have shown that many DHI individuals entered the school without the acquisition of language fully. The learning of sign language may affect the generation of written language with simple grammatical structures, limited vocabulary, and challenges to verbal accent and agreement (Rodrigues, et al., 2012). The problems those students revel in with analyzing make them a limited experience to models of desirable writing (Antia, et al., 2005). A few progress inside the manufacturing of syntactical shape with increasing age pronounced this development is deliberate than this showed through their peers with normal hearing (Heefner & Shaw, 1996).

Error Analysis manifests the kind of learner's errors and obtains information on common difficulties in language learning. The identification of strengths and weaknesses may occur when an error analysis carried out. It can be necessary for the teaching-learning process as a guideline. In the twenty-first century, people require being able to read and comprehend the written word. Each community has deaf members, either because of illness or genetic inheritance .It is interesting to find out how deaf students become literate if they are born missing a sensory ability for developing literacy.

More specifically, A few authors have begun to work on the syntax of Iranian DHI L2 writing. Keeping in view the vital role of writing for students with hearing impairment characteristics of DHI student's writing, consistently using fewer phrases, incomplete sentences and primary syntactic, it seemed desirable to analyze syntax errors in the written language of DHI students. Furthermore, there is no research work conducted on the syntax errors committed by Iranian DHI students. This research study has an invaluable treasure for student and teachers.

The process of learning English for regular students and deaf students is not the same. For deaf students, it is quite difficult for them to learn English because students with hearing impairments show significant delays in phoneme production, vocabulary, and syntax (Cawthon, 2001). Deaf students cannot fully process the information in form of sounds, while regular

students can process them; this may affect their reading ability because of the lack of vocabulary from the sounds they cannot process. Oyewumi (2008) mentioned that Deaf and hearing-impaired students tend to be visual learners and this is difficult in an environment where much essential information is delivered exclusively by word of mouth.

The teaching of writing to the deaf is constantly being transformed through the increased interest and several studies had done on the subject. Reubell (2011) observed that the deaf use an alternative pathway, specific to reading, not used by people who hear. It will be noted that reading to deaf learners (an approach that has its base in the bi-lingual approaches) has been observed to be instrumental in the teaching of reading and writing to the deaf. Based on the challenges faced by deaf students, it becomes a challenge for a teacher to teach English for deaf students.

The teacher requires having special considerations to adjust to students' disabilities or their behaviors (Mpofu, et al., 2013). Before starting the class, something that a teacher can do is to attract the attention of deaf students with a cue, such as a tap on the shoulder or by waving. A teacher needs to speak clearly and naturally without exaggerating the lip or hand movements to keep the focus of deaf students. Siyavoshi (2017) worked on the role of the non-dominant hand in ZEI discourse structure. It used data from Zaban Eshareh Irani, Iranian Sign Language, to investigate the linguistic strategies for the expression of modality in this language. Manual and facial markers of modality were recognized and analyzed based on their form and the semantic domain.

According to Kilpatrick (2015), the syntactic development of DHI student's writing has a tendency to reliably demonstrate a presentation of thoughts. Rashtchi and Laleh (2015) mentioned film-based Dynamic Assessment (DA) could affect English writing of Iranian deaf children. When examining the writing of DHI students, researchers discovered that they used fewer phrases, more incomplete sentences, and major syntactic structures, fewer subordinate clauses, less noun phrase modifiers, and omitted feature phrases (Wolbers, Dostal & Bowers, 2012). Errors committed by learners especially in Grammar have been focused from many years by many researchers. Regarding errors in writing, Seyabi & Tuzlukova (2014) concluded that students face problems in writing English. Mastering writing in a foreign language is for a DHI student definitely the main and sometimes the only way of expression in the target language and that is why it is so vital to create for the students the opportunities to be successful in this area.

Incomplete grammatical knowledge reduces the content's correctness. As 'Grammar' is the sound, structure and meaning system of language (Subasini and Kokilavani, 2013) plays a very vital role in writing. According to Nonkukhetkhong (2013), in the process of second language acquisition, making of errors are common, especially grammatical errors as it is regarded as a part of learning a second language or a foreign language. According Yahya (2012) errors classified into eleven categories and most common errors are like: articles, possessives, prepositions, pronouns, singular/plural, subject-verb agreement, verbs, infinitive to, word choice and spelling.

In comparison, more subjects had problems with tenses, articles, prepositions, the singular/plural and making the right choice of words in written sentences. Also found the reasons of these errors. The errors were made due to the mother tongue interference, overgeneralization of language rules as in singular plural, lexical avoidance, medium of transfer and so forth. In different studies, hearing-impaired students were found to accomplish poorly in writing skills (Geers, 2003; Schirmer & Mcgouhg, 2005) and their writing scores were found to be lower than their friends with normal hearing abilities (Antia et al., 2005; Spencer, Baker & Tomblin, 2003).

Error Analysis is useful in discovering the errors that are systematically made by the learners, and if such description and classification is made in linguistic terms, as Corder (1973) stated, one can create a picture of those features of language which are causing learning problems for learners. Effective writing involves learning, comprehension, application and synthesis of new knowledge (Defazio, et al., 2010) which bring the quality in writing. Although some of the sentences were not grammatically correct it does not mean that they did not convey information. It is important to emphasize those making mistakes is a natural part of language learning process and take place to anyone. From the result it can be concluded that the DHI students make so many errors in their English writing. They make errors in spelling, punctuation marks; capitalize the words, sentence framing, tense etc.

From the above review of researches, it can be concluded that students have problems in English Grammar, not only in Iran but also in all over the world mainly for those students who learn English as a second language or third language. Mother tongue many a times effects on learning English. As it is the duty of teachers to teach students effectively, so the teachers can make their lessons effective and attractive by using various techniques like games, poems, songs etc. It leads to the following research questions:

RQ1. What types of syntactic errors do Iranian DHI students make in their L2 writings?

RQ2. Which categories of errors are committed most frequently by Iranian DHI students?

Method

Participants

The samples of the study were Iranian DHI learners and the convenience sampling was used. The participants of this study were selected from among the deaf community in Bandar Abbas. They were 42 female and 18 male students studying in deaf community in Bandarabbas. They ranged from 18 to 40 in terms of age. They were placed in two groups after taking placement test. Also, the Oxford Placement Test was conducted at the beginning of the treatment to double-check the placement. Consequently, participants were randomly assigned to two experimental and control groups. The demographic information illustrates the distribution of respondent's categories in relation to gender and age as described in Table 1and 2:

Table 1
Demographic Background of the Participants (Gender)

Sex	N	Percentage
Female	42	**70.0**
Male	18	**30.0**
Total	**60**	**100.0**

Table 2
Demographic Background of the Participants (Age)

Age	N	Percentage
18-25	27	**45.0**

26-30	16	26.6
31-35	10	16.6
36-40	7	11.8
Total	**60**	**100.0**

The results manifested that the highest number in the age group is related to 18 and 25 years and the lowest number belong to the age group of 36 to 40 years. In terms of gender, the highest option was for women with (70%) and the lowest option was for men (30%).

Materials

For the purposes of this study, the participants received writing instruction, in which they were provided with daily more frequent, written model utterances for beginners and elementary levels. These utterances actually comprised the materials of this study. In this study, the linguistic taxonomy of errors prepared by Keshavarz (2013) was applied. The error taxonomy and description of each error is manifested in the following tables. Then, the proportion of different types of errors to all the errors was manually calculated. After identifying and categorizing the errors, their frequency and percentage were calculated in order to determine which categories of errors were committed most frequently among students.

The percentage of each category was calculated by using the following formula: Frequency of errors in each category × 100%. Error Analysis is carried out to consider the kind of learner's errors and to obtain information on common difficulties in language learning. To answer the research questions, the data of the study were collected through using a writing test as a pretest. All learners in the two groups were asked to write a short text with the given vocabularies. In the last session of the treatment, a topic was given as a posttest to all learners in the two groups to write a short paragraph about it to check their possible errors and improvement. The validity of the pretest and posttest was confirmed by experienced university professors who expressed their views and provided their suggestions. Their suggestions were taken into consideration.

Procedures

To achieve the purposes of the study, the writing classes held three days a week, and each session took 60 minutes within three months. Twelve topics chose by the researcher who is working in the field, and after improving writing, the participants were asked to write short paragraphs about the given topics and words. All the participants enjoyed the coverage of the same educational situation. The present study benefited from a quantitative research method to investigate their syntactic errors. First, a proficiency test used to assess the participants' homogeneity. Also, the researcher elicited information about the participants' age, gender, race, and hearing status. Furthermore, to answer the posed research questions, the researcher looked within the participants' writing samples to identify changes in their L2 produced texts in terms of vocabulary length as one of many possible measures for growth in writing fluency. To put it in a nutshell, to date various methods have been developed to investigate the writing development of the deaf in L2. In this study, however, the teacher provided them with some concepts related to daily issues and asked them to write some short paragraphs.

Results

After the calculation was done, the highest percentage of each category was revealed. In what follows, the types of errors provided.

1. Wrong Verb Tense

Errors of wrong tense or wrong verb are made when a learner attempt to use the wrong verb tense in a sentence. The results of this study manifested that the participants were not aware of applying the correct tense to the verb in the sentences. The number of errors that occurred with expressions of the past, present and future was 56 and (93%) in percentage and it is distributed as follows in table 3, 4:

Table 3
An overview of the incorrect forms- wrong verb tense

Error	Yes	NO	Total
Number of Errors	56	4	**60**
Percent of Errors	**93.3**	**6.7**	**100.0**

Table 4
An overview of the error identification and correction

Error Classification	Error Identification	Error Correction
-Wrong verb tense	- She spoke quickly	**- She speaks quickly**
Type of error: Using past simple instead of present simple		

2. Wrong word order

Dryer (2005) points out that there are six logically possible ways of arranging words into statements according to their basic grammatical functions of Subject, Object, and Verb (SVO, SOV, VSO, VOS, OVS, OSV). The syntactic arrangement of words in a sentence, clause, or phrase is called word order. Most of the errors found, or in other words, almost half of the errors (58.3%) occurred with wrong word order. and it is distributed as follows in table 5, 6:

Table 5
An overview of the incorrect forms- wrong word order

Error	Yes	NO	Total
Number of Errors	35	25	**60**
Percent of Errors	**58.3**	**41.7**	**100.0**

Table 6
An overview of the error identification and correction

Error Classification	Error Identification	Error Correction
-Wrong verb tense	-I my girl smart have	**-I have a smart girl**
Type of error: Morphosyntactic, SCV instead of SVC		

3. Subject/verb Agreement

Basically, subjects and verbs in a sentence, clause, or phrase must agree with one another in number (singularity or plurality). Therefore, if a subject (a person or a thing) is singular, its verb (the word which represents that action) has to be singular as well; and if the subject is plural, its verb must also be plural. The number of errors that occurred with *Subject/verb Agreement* was 57 and (95%) in percentage and it is distributed as follows in table 7, 8.

Table 7
An overview of the incorrect forms- Subject/verb Agreement

Error	Yes	NO	Total
Number of Errors	57	3	**60**
Percent of Errors	**95.0**	**3.0**	**100.0**

Table 8
An overview of the error identification and correction

Error Classification	Error Identification	Error Correction
-Wrong verb tense	-They travels different countries	**They travel to different countries**
Type of error: Morphosyntactic		

4. Spelling

Spelling is the process or act of writing words by means of using the conventionally accepted letters for their formation. Number of errors that occurred with spelling was 23 and (38%) in percentage and it is distributed as follows in table 9, 10:

Table 9
An overview of the incorrect forms- Spelling

Error	Yes	NO	Total
Number of Errors	23	37	**60**
Percent of Errors	**38.3**	**61.7**	**100.0**

Table 10
An overview of the error identification and correction

Error Classification	Error Identification	Error Correction
-Wrong word order	-My freind has a good memory	**My friend has a good memory**
Type of error: orthographic, letters with similar sounds are mistaken		

5. Capitalization

Capitalization refers to writing a word with its first letter as a capital letter   or upper-case letter, and the remaining letters of the word in small letters or lower-case letters. Number of errors that occurred with capitalization was 34 and (56.6%) in percentage and it is distributed as follows in table 11, 12:

Table 11

An overview of the incorrect forms-Capitalization

Error	Yes	NO	Total
Number of Errors	34	26	**60**
Percent of Errors	**56.6**	**43.9**	**100.0**

Table 12

An overview of the error identification andcorrection

Error Classification	Error Identification	Error Correction
-Wrong word order	-I like to live in brazil	**- I like to live in Brazil**
Type of error: spelling, orthographic		

6. Preposition

Prepositions are words that show the relationship between a noun, or a pronoun, and the rest of the words in a sentence. Prepositions also link nouns, pronouns and phrases to other words in a sentence. The word or phrase that the preposition introduces is called the object of the preposition. A preposition usually determines the spatial, temporal, or logical relationship between the object to other words in a sentence. A great majority of the participants in this study demonstrated confusion for the right usage of prepositions as shown in the examples below. Number of errors that occurred with proposition was 60 and (100%) in percentage and it is distributed as follows in table 11, 12:

Table 13

An overview of the incorrect forms-Capitalization

Error	Yes	NO	Total
Number of Errors	60	0	**60**
Percent of Errors	**100**	**0**	**100.0**

Table 14

An overview of the error identification andcorrection

Error Classification	Error Identification	Error Correction
-Wrong word order	one of my dreams is travel Italy	**one of my dreams is to travel to Italy**
Type of error: using different propositions in not correct position		

7. Articles

An article is a word that is used with a noun to determine the type of reference which is being made by the noun. There are two types of article in English: the /a/an. The, called the definite article, is used to refer to a specific or a particular noun; a/an, or the indefinite article, is used to modify non-particular or non-specific nouns. Number of errors that occurred with Articles was 28 and (46.6%) in percentage and it is distributed as follows in table 15, 16:

Table 15

An overview of the incorrect forms- Articles

Error	Yes	NO	Total
Number of Errors	28	32	**60**
Percent of Errors	**46.6**	**53.4**	**100.0**

Table 16

An overview of the error identification and correction

Error Classification	Error Identification	Error Correction
Wrong word order	Money is basic necessity life	**Money is the basic necessities..**
Type of error: not using a/an /the when it is necessary to use		

8. Omission of verbs

A very rare type of error was not using verbs in sentences. Number of errors that occurred with omission of verbs was 53 and (88.3%) in percentage and it is distributed as follows in table 17, 18:

Table 17

An overview of the incorrect forms- Omission of verbs

Error	Yes	NO	Total
Number of Errors	53	7	**60**
Percent of Errors	**88.3**	**11.7**	**100.0**

Table 18
An overview of the error identification and correction

Error Classification	Error Identification	Error Correction
-Wrong word order	- when we stay in Tehran we in a hotel	- When we were in Tehran we stay in hotel
Type of error: Morphosyntactic		

9. Wrong Plural Morpheme

Some nouns do not take a plural morpheme, or some might have irregular forms, while learners might have the assumption that a plural marker is required. Number of errors that occurred with Wrong Plural Morpheme was 45 and (75%) in percentage and it is distributed as follows in table 19, 20:

Table 19
An overview of the incorrect forms- Wrong Plural Morpheme

Error	Yes	NO	Total
Number of Errors	45	15	60
Percent of Errors	**75**	**25**	**100.0**

Table 20
An overview of the error identification and correction

Error Classification	Error Identification	Error Correction
-Wrong word order	- we stay in hotel for 5 day	**- We stay in hotel for 5 days**
Type of error: adding or omitting the plural morpheme		

10.Typical Persian Construction

These structures are seen when the learner still thinks in Persian and goes word for word, when it comes to writing English. Number of errors that occurred with Typical Persian Construction was 23 and (38.3%) in percentage and it is distributed as follows in table 21, 22:

Table 21
An overview of the incorrect forms- Typical Persian Construction

Error	Yes	NO	Total
Number of Errors	23	37	**60**
Percent of Errors	**38.3**	**61.7**	**100.0**

Table 22
An overview of the error identification and correction

Error Classification	Error Identification	Error Correction
-Wrong word order	- I and my friend go park	**- My friend and I go to park**

Type of error: Morphosyntactic

Discussion

Students who are deaf with or without extraordinary requirements, goes to the procedures of writing with diverse strengths and challenges. Additionally, there are several possible explanations for this result. Individual diversity in psychological, neurological, physical potential, development, skill, and experience should be considered as the most important factors that affected on their L2 learning. DHI students lack full access to spoken English and typically struggle with English grammar, it has been suggested that writing instruction primarily focus on discourse level skills. It seemed that students did not have a fixed amount of grammatical writing errors but also had a chance to consider if their sentences were natural or not. One way to highlight the influences of them other tongues on students 'learning of English is to collect errors and ask the students to analyze and to correct them (Ridha, 2012).

Generally, DHI have more errors in grammar, tenses and word endings. Writing sentences with correct structure depends on having an understanding of how our language fits together. DHI people show that they may have gaps in their understanding of how language works. Basically, these people will need repetition of correct usage of different sentence structures and, thus, they can obtain a clear understanding of how words fit together to make sentences correctly. Overly, they need to have encouragement. So, they gain confidence in written expression. Consequently, errors in contrastive analysis are the comparison of native and target language in order to make predictions and explanations about errors in the field of applied linguists.

The hearing impaired have also some special problems in composition writing because they are not fluent in reading, have limited vocabulary, cannot read extensively to help them remember spelling of words and at times tend to use sign language structures in composition writing. Relevance and choice of vocabulary is equally essential. It is important to select a wide range of appropriate vocabulary that allows a student to communicate his ideas by using appropriate expressions and spelling words correctly is imperative to write a good composition.

Conclusion

The purpose of this study was to analyze grammatical errors in writing samples by DHI students. The children who were DHI wrote samples containing less lexical diversity. This finding indicates that they were using a limited range of vocabulary than the ordinary people. DHI students tended to use the same vocabulary repeatedly in their spontaneous writing samples. The other objective of this study was to complete an error analysis on the spontaneous writing samples. Overall, there were different types of syntax errors produced within the group. These categories included errors with: verbs, articles, nouns, prepositions, pronouns, and conjunctions, singular versus plural, adverbs, word order, incomplete sentences, adjectives.

It can be concluded that the researchers and instructors have centered on improving the writing skills of DHI students more than several decades. However, in spite of the years of education, mostly stay unable to provide clear and error free texts. Tense errors were the most common type of verb errors for DHI students. The most common type of tense error was substituting the present for the past tense and also the agreement errors were found repeatedly among them. They made different types of substitution errors than the hearing people. Addition errors were the least common type of verb error in DHI students. The second most common syntax error was with the usage of articles. However, all participants made omission, addition,

and substitution errors on articles. In summary, DHI students in this study who were deaf produced shorter sentences and had less lexical diversity than other people, they showed similar patterns in syntax errors.

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