Use of Films in Dynamic Assessment and the Writing Ability of Iranian Deaf Children

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Abstract
The purpose of this study was to explore whether film-based Dynamic Assessment (DA) could affect English writing of Iranian deaf children. Ten students studying in a school for the deaf took part in the study. The participants’ writing ability was measured prior to the treatment and the errors which were identified. A series of meditating activities were designed and implemented during a three-month treatment. After the treatment, a writing posttest was administered. The results of the paired samples t-test revealed that using film-based DA had a significant impact on the English writing of the participants. The results of the structured interviews showed that almost all students had positive attitudes towards the use of films during the DA procedure.

Keywords: Deaf children, Dynamic Assessment, English writing, Films

INTRODUCTION
The impact of permanent hearing loss on a child can be important and long term. Many students who are deaf or hard-of-hearing typically show language delays that affect their acquisition of reading and writing skills. Writing is a “cognitive process” and requires individuals to comprehend ideas and engage in expressive language (Dorn & Soffos, 2001, p.6). Research has shown that students with hearing disorders have more difficulty with writing skill than hearing students. Deaf children, due to the lack of sufficient exposure, show a delay in the process of language development (Beal-Alvarez, 2012). Also, they appear to have “delays and difficulties in producing written words” (NCSE, 2009, p. 121). For them, writing is crucial since it is another way of communication; it provides them with the ability to share their thoughts and ideas and “to create meaning” (Giddens, 2009, p.20).

Linguistic and cognitive processes involved in the writing skill makes it a highly demanding task for deaf children (Dorn & Soffos, 2001; Mayer & Akamatsu, 1999; Moores, 2002), and thus they should receive further support while engaging in such tasks. For example, Anita, Kreimeyer, and Reed (2005), who examined the writing of 110 deaf or hard-of-hearing students in public schools, found that 46% of the students scored below average in contextual conventions, contextual language, and story construction testing. Kluwin and Kelly (1992) studied the writing

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of 325 deaf and hard-of-hearing children in grades 4 to 10 and concluded that adopting the process approach to teaching writing is more useful than product-based approach. Mayer’s (2007) study showed that the writings of deaf or hard-of-hearing students aged between four and seven were dramatically different from the hearing students since they needed to connect writing to sign language. An analysis of the writings showed that they could not relate knowledge of face-to-face language to its written form (Mayer, 2007).

However, according to Dorn and Soffos (2001), albeit children who are deaf or hard-of-hearing have problems with written language, their language development is similar to that of hearing children. Williams (2004) argued that if the improvement of written language is the same in both hearing and deaf students educational approaches to teaching writing to hearing children may also be applicable for deaf or hard-of-hearing students.

Deaf and hard-of-hearing children who use American Sign Language may not be able to express and understand mainstream American English since the grammatical structures of ASL are different from those of English (Lane, Hoffmeister, & Bahan, 1996). According to McNally, Rose, & Quigley (2007), the components of ASL are different from English, and thus result in different levels of development of language skills in deaf and hard-of-hearing children.

Iranian deaf children share the same problems of American deaf children in learning how to write. Their problem is intensified when it comes to learning English as a foreign language. In order to meet the differing needs of these children, it is necessary for teachers to employ multiple techniques and strategies when teaching the writing of English. One of the strategies which can help Iranian deaf children in this regard is assumed to be Dynamic Assessment (DA). The theoretical foundations of DA lie in Vygotsky’s Zone of Proximal Development (ZPD) which is defined as “the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (1978, p.86). Through the ZPD, as Lantolf and Poehner (2011) argued, learners receive mediation in the process of learning and can have a more appropriate performance with the help of others since the ZPD considers their abilities and supports development. According to Shrestha and Coffin (2012), DA is a “development-oriented process which reveals learners’ current abilities in order to help them overcome any performance problems and realize their potential” (p.5). In DA, the focus is usually on the process of learning. It involves a problem-solving process which enables learners to engage in mental activities necessary for the writing task. DA, as Caffrey, Fuchs, & Fuchs (2008) argued, provides teachers with the opportunity to measure the learning potential of individuals. The DA approach to writing, as Isavi put forward, “enables teachers to evaluate learners’ writing errors and to provide them with necessary support they need for writing accuracy” (p.14).

Many types of DA are utilized in educational settings. A type of DA frequently used is the test-teach-retest method (Xiaoxiao & Yan, 2010) which measures a child’s ability to learn after a learning opportunity instead of assessing the previous knowledge. It starts with administering a pretest to measure the child’s current performance, continues with a treatment, and ends with a posttest.

The technological DA (distinct from traditional DA) manipulated in the present study was introduced to facilitate the process of learning writing for deaf children.

SeyedErfani and AghaEbrahimian (2013) found that integration of multimedia in DA not only improves the writing ability of the learners but also facilitates the process of writing assessment. Use of films, as a component of multimedia, helps learners “get excited about the relevancy of what they are learning” (Diaz-Gilbert, 2010, p.4). “Familiar and non-threatening films”, as Diaz-Gilbert put forward, “pave the way to communicate
views, emotions, and important issues” and can “break the monotony of writing and enhance writing and thinking skills” (p.4). As a result of the growing importance of visual and media images, films have a great ability in bringing together “a large variety of modes” in language teaching (Kress, 2010). The present study aimed to examine how teaching English writing through film-based DA could affect the writing ability of Iranian deaf children who use Persian Sign Language (PSL). Thus, the following research questions were proposed:
1. Does using films in DA affect English writing of Iranian deaf students?
2. How does using films in DA affect the Iranian deaf students’ attitude towards learning the English language?

Method
Participants
The participants were 10 high school girls between 14 and 18 years old who were studying in a school for the deaf in Tehran, Iran. They were seventh graders and were selected based on convenience sampling. The classes were held two days a week, and each session took 90 minutes within the duration of three months. The participants used PSL to communicate.

Instrumentation
Two writings were used as the pretest and posttest. The writings were rated by two experienced English teachers. Prior to the beginning of the study, the raters practiced scoring based on the writing rubric adapted from The Gallaudet University Rubric for Assessing Written English (2014). The inter-rater reliability between the two raters was 0.98 for the pretest and 0.90 for the posttest. The mean of the two sets of scores (by the two raters) was considered as the writing score of each participant before and after the treatment.

Also, a set of questions was prepared to address the participants’ attitude toward the treatment. Interview questions included students’ views regarding their hearing loss and successes and challenges in the school environment. During the interview sessions, the interviewer aimed to meet the students’ communication needs and infer how they may be affected by the self-reporting procedure (Rose et al., 2008).

Moreover, an editing checklist adapted from Writing Strategies for Learners who are Deaf (Brokop & Persall, 2009) was used to help the learners in monitoring their writings. The checklist was used as a list of reminders for students while they were editing their writings. The teacher’s notes and comments which were handed to the researchers at the end of each session comprised another data gathering tool which contributed a better understanding about the participants’ writing as well as classroom activities.

The worksheets designed by the researchers comprised another instrument. The purpose was to address the learners’ writing problems. The worksheets involved activities regarding word order, finding appropriate verbs, spelling of the words, and identifying different parts of speech and were expected to have a mediating role in teaching writing. Moreover, to intensify learning, in each session some handouts were given to the students. The handouts included the transcriptions of the new English words and the Persian equivalent of the new vocabularies. Additionally, 10 lesson plans were prepared to help the teacher to lead the class in a step by step procedure.

Materials
Films with subtitles, flash cards, and stories were used to make the learning environment enjoyable. PowerPoints were utilized to link the English lessons and the writing skill taught. The subtitles supported the learners’ comprehension while they were watching the films. New vocabulary was introduced through flash cards. They helped the teacher establish an association between the words and the related concepts. Stories were used to create a positive classroom atmosphere.

Procedure
Pretest
In the pretest phase, the students watched a film and then wrote a composition about it. As
mentioned in the instrumentation section, the writings were scored by two raters. The students’ compositions on the pretest were carefully analyzed and the most frequent errors were stipulated so that the teacher could focus on them during the instruction. The pretest helped the researchers to decide about the content of the instruction such as the grammatical points and the new words which needed to be included in the course syllabus. Subsequently, the researchers designed some worksheets as transfer tests in order to examine whether the participants could use a previously learned task in a novel situation. Table 1 shows the students’ errors in different sessions:

Table 1.

Students’ Errors During the Treatment

<table>
<thead>
<tr>
<th>Session</th>
<th>Error</th>
<th>True sentence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st.</td>
<td>It is rainy.</td>
<td>It moves and flies off into the air.</td>
</tr>
<tr>
<td>1st.</td>
<td>In the shop.</td>
<td>Ali finds a carpet in the shop.</td>
</tr>
<tr>
<td>1st.</td>
<td>It is rainy.</td>
<td>It moves and flies off into the air.</td>
</tr>
<tr>
<td>2nd.</td>
<td>Freezing it.</td>
<td>It is freezing.</td>
</tr>
<tr>
<td>2nd.</td>
<td>Then in the desert.</td>
<td>Then they fly to the desert.</td>
</tr>
<tr>
<td>2nd.</td>
<td>It foggy.</td>
<td>It is foggy.</td>
</tr>
<tr>
<td>3rd.</td>
<td>In the forest rainy.</td>
<td>It is foggy there.</td>
</tr>
<tr>
<td>4th.</td>
<td>It very hot is.</td>
<td>It is very hot.</td>
</tr>
<tr>
<td>4th.</td>
<td>Sara to forest fly.</td>
<td>Sarah flies to a forest.</td>
</tr>
<tr>
<td>5th.</td>
<td>Sara rain like</td>
<td>Sara likes rain.</td>
</tr>
<tr>
<td>5th.</td>
<td>One day Sara one carpet find.</td>
<td>One day Sara finds a carpet.</td>
</tr>
<tr>
<td>7th.</td>
<td>It is stormy the island.</td>
<td>Then they fly to an island. It is stormy.</td>
</tr>
<tr>
<td>8th.</td>
<td>I went to the jungle.</td>
<td>I go to the jungle.</td>
</tr>
<tr>
<td>9th.</td>
<td>Finally they fly back home rug.</td>
<td>Finally they fly back home with rug.</td>
</tr>
<tr>
<td>10th.</td>
<td>Mina like rain</td>
<td>Mina likes rain.</td>
</tr>
</tbody>
</table>

Treatment

Each session started with showing a film with subtitles to the children. Then the children did some grammar and vocabulary exercises related to the film before the writing phase. While the students were engaged in doing the exercises the teacher focused on their errors and kept a record to focus on the more frequent ones in the subsequent sessions. Afterwards, the participants started to write about a topic which was related to the film they had watched. As the next activity, each student was given a number of pictures extracted from the film and was supposed to arrange them in the order they appeared in the film and write answers to some comprehension questions. The film was played again and the students checked their answers.

Some flash cards containing the new vocabulary and their transcriptions were used for eliciting the words used in the film. The children also completed a series of worksheets during the class time which were used to test the learners during the different stages of learning. A detailed explanation of the classroom procedure related to one of the treatment sessions is presented in Table 2.
Table 2.
Steps During One of the Treatment Sessions

<table>
<thead>
<tr>
<th>Steps</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Students watched a film about what’s the weather like in different places.</td>
</tr>
<tr>
<td>2</td>
<td>Students completed the activities which included putting pictures in an appropriate order.</td>
</tr>
<tr>
<td>3</td>
<td>The film was played again. The students checked their answers.</td>
</tr>
<tr>
<td>4</td>
<td>Flash cards related to the weather and transcriptions were used for eliciting the vocabulary of the lesson. They also completed a worksheet on the spelling of the new vocabularies.</td>
</tr>
<tr>
<td>5</td>
<td>The students completed the activities from memory. For example, they wrote proper words under the given pictures or matched the weather with the related places.</td>
</tr>
<tr>
<td>6</td>
<td>The teacher gave the transcription of the film to the students, and they checked their answers. The film was played again. The students drew a picture and wrote about what the weather was like on that day. They also completed a worksheet on word order. In addition, the students worked on part of speech and verb finding worksheets.</td>
</tr>
<tr>
<td>7</td>
<td>The students completed the weather map worksheet.</td>
</tr>
<tr>
<td>8</td>
<td>As the homework, the students chose a country (other than their own) and wrote a weather forecast. Students came back to the class and wrote about the weather in different seasons in groups. Also, they worked on a work sheet on missing words to better understand and appropriately use word order, learn spelling of the words, and parts of speech in their writings.</td>
</tr>
</tbody>
</table>

The researchers also considered the following points during the treatment sessions in order to solve the students’ learning problems:

- The content of the lessons was selected in accordance with the students’ needs. Modifications were made to simplify the stories. Language performance in deaf children is not directly related to chronological age; thus, the researchers decided to start with simple stories.
- Since the students stated that they usually had problems in comprehending the teacher’s directions, both PSL and English were used. Hard- of -hearing students were grouped with students who were deaf.
- The students took positive, constant, and continuing feedback during the writing tasks.
- Group brainstorming regarding the theme of the films was followed by writing different ideas on the whiteboard.
- A graphic organizer was used to help the students organize their compositions.
- Focus-on-form instruction was utilized in order to highlight specific language forms during the writing tasks and to stress the importance of form as a prerequisite to using the correct form in writing.
- Translation included reciting what was conveyed in one language into the other language.
- In order to accentuate the effect of visual aids, memory activities and drilling activities were used.

It is worth mentioning that the participants wrote about an experience related to the topic of the day as their homework.

Posttest
After the treatment, the participants wrote a composition the topic of which was similar to the writing pretest (a memorable day in my life). The writings were scored by the two raters. The inter-rater reliability showed a high consistency between the two scorings ($r = 0.90$). The scores were compared with those of the pretest to determine the changes in the students’ writing skill. Also, in order to have a deep understanding of how students felt during the treatment, all students
were interviewed.

Results
Table 3 provides the descriptive statistics related to the writing pretest. As the table shows, the skewness analysis (obtained by dividing the statistic of skewness by the standard error) revealed that the assumption of normality was observed in the distribution of the scores (0.92 falling within the range of ± 1.96).

Table 3. Descriptive Statistics of the Pretest

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error of Mean</th>
<th>Skewness</th>
<th>Std. Error of Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>pretest</td>
<td>10</td>
<td>6.7</td>
<td>3.56</td>
<td>1.12</td>
<td>-0.63</td>
<td>0.68</td>
</tr>
</tbody>
</table>

Posttest
The descriptive statistics of the posttest are presented in Table 4. The skewness ratio of the posttest (2.0 falling beyond the range of ±1.96) showed that the distribution of the scores was not normal. However, since t-test is a robust test (Glass, Peckham, & Sanders, 1972; Lunney, 1970; Mandeville, 1972; as cited in Best & Kahn, 2006), it can be used even when the “assumption of normality is violated” (Best & Khan, 2006, p. 355). As Table 4 shows, the mean of the writing posttest was higher than the mean of the pretest. Subsequently, a paired samples t-test between the mean scores of the pretest and posttest was run to check the effectiveness of using films during DA on the writing of Iranian deaf children. As Table 5 shows, there was a statistically significant difference between the writing pretest and posttest.

Table 4. Descriptive Statistics & Reliability Estimates of the Posttest

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error of Mean</th>
<th>Skewness</th>
<th>Std. Error of Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>posttest</td>
<td>10</td>
<td>12.8</td>
<td>2.23</td>
<td>0.70</td>
<td>1.39</td>
<td>0.68</td>
</tr>
</tbody>
</table>

Table 5. Paired Samples t-Test, Pretest & Posttest

<table>
<thead>
<tr>
<th>Paired Differences</th>
<th>Mean Std. Deviation</th>
<th>Std. Error Mean</th>
<th>95% Confidence Interval of the Difference</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>posttest -6.100</td>
<td>1.955</td>
<td>0.618</td>
<td>-7.498</td>
<td>-4.701</td>
<td>9</td>
</tr>
</tbody>
</table>

Interview Results
In order to explore the participants’ views regarding the treatment, structured interview sessions were conducted. The interviews were conducted at the school by the help of two teachers to reduce the risk of misunderstanding which was inevitable due to the researchers’ insufficient knowledge of PSL. The teachers were highly cooperative and helped the researchers all through the interviews. They were particularly helpful in persuading the reluctant students to cooperate. It is worthy to mention that interviewing each student took about 40 minutes.

The first question was “How do you feel about writing in English? Are you satisfied with your writing?” All students asserted that they got frustrated when they were asked to write something in English. Generally, they
emphasized that they did not like writing. One of the students said, “Although writing is a way to exchange information with the hearing world, I still don’t feel like writing in English”.

The second question was “What mostly frustrates you while writing? Describe a situation which you had a problem with writing”. All learners felt that learning English vocabulary was a struggling activity. A particular challenge was that they felt they did not have sufficient vocabulary repertoire. Also, they thought that they could not clearly understand the meaning of the new words. All students reported that they had difficulty with grammar and spelling. One of the students expressed “I know the meaning of the word when I see it on the board, but still have problem when I want to spell it on my own”.

The students’ answer to the third question “How do you think this course helped you organize your ideas?” revealed that spelling was challenging for them. Eight students indicated that they had difficulty in organizing their ideas. They found the graphic organizer helpful for organizing their compositions. All students thought films, subtitles, transcriptions, flash cards, annotations, highlighting, and stories in the classroom directed their thoughts while writing. One of the students expressed “I can now structure my sentences better”. Another mentioned, “Graphic organizers make writing fun and easy”.

The students’ responses to the fourth question “How do you think this course helped you improve your vocabulary?” showed that lack of enough vocabulary knowledge impeded their communication. They asserted that although they had much to say about a topic, they could not find the suitable words. All students mentioned that they found regular and systematic vocabulary instruction beneficial. Three students agreed that using flashcards was useful for learning new vocabulary. One of the students mentioned, “Vocabulary learning through watching movies is very enjoyable”.

Through the fifth question the students were asked “Do you think this course helped you improve your spelling?” All students expressed that they had challenges with spelling. One of the students asserted that “using flash cards helped me remember the spelling of words”. Another mentioned that “subtitles helped me with the spelling of the words”. Five students believed that “using flashcards, watching films, using transcriptions of the film, and error checklist” helped them improve their spelling.

The sixth question asked about the participants’ grammar knowledge “To what extent do you think this course helped you improve your grammar?” Seven learners mentioned that their formal exposure to grammar instruction began with this course. One of the students explained that she had no formal grammar instruction in the past. Three students mentioned that they “did not know where to put the subject, verb, and objects of the sentences before the course”. All students agreed that mediating activities, in this case, worksheets which contained word order activities helped them identify different words. Two mentioned that “finding the verbs in sentences and using them in fill in the blanks” exercises made writing easier for them.

In answer to the question “What is your opinion about watching films before writing?” one of the students expressed, “Now that I watch films I feel I write better compositions compared to the time that I didn’t watch films”. Another student added, “the kind of teaching by watching films and reading stories help me get excited about what I am learning, it’s enjoyable”. All stated that they liked to watch a film before writing on a subject. A student declared that “watching films in class is a whole new experience”. All students agreed that adding subtitles to the films was very beneficial.

The next question asked “Do you think your writing skill has improved after taking this class?” All students stated that they thought that the course helped them improve their writing skill. The researcher found that children were better able to demonstrate their knowledge
through dynamic assessment than during a static test. Similarly, the students acknowledged that teach-test-retest method had a positive effect on their writing performance, as could be inferred from one of the students’ feeling, “this course is very beneficial because it helps me find my errors and correct them. I feel more confident in writing compositions”. Another student mentioned that "my writing skill has dramatically improved. I am now aware of the mistakes I made in the past”. A student asserted: “This kind of exam does not create panic”.

In answer to the “Last word?” all students mentioned that they got frustrated when people did not understand what they were trying to say. Only one of the students thought about getting a job in the future. All students agreed that the deaf or hard-of-hearing individuals do not have a high chance in getting the job they want. None wanted to continue their education beyond high school.

**Discussion**

The analysis of the data gathered from the participants’ writing samples revealed that use of films in DA could affect the writing ability of the Iranian deaf children. The use of films in DA is in line with Vygotsky’s sociocultural theory of mind that asserts acquisition takes place as a result of interaction. DA is a developmental process rather than an isolated activity which fosters collaboration between learners and teachers in order to disclose students’ underlying difficulties in language performance. In the present study, the cooperation between learners and their teacher via the films and the use of DA strategies provided necessary exposure to the English language and as a result enhanced learners’ writing ability. The pretest (error identification), treatment, and posttest procedure enabled the teacher to evaluate the writings, identify errors, provide the necessary support, and help the participants improve their writing. Similar to Hasson and Botting’s (2010) study, the present study adopted DA to gain insight regarding the potentials of deaf children as well as the challenges they had to deal with while engaged in writing tasks. The procedural nature of DA made it an applicable approach to teaching writing to the deaf participants (Elliott, Stinson, McKee, Everhart, and Francis, 2001; as cited in Xiaoxiao& Yan, 2010). Also, the findings support Isavi (2012) who showed that DA was effective in improving Iranian EFL learners’ writing ability.

In line with Erkaya (2005), this study signified that the use of short stories in the classroom could boost learners’ motivation and could have a significant role in the development of students’ writing performance. In line with Diaz-Gilbert (2010), it was shown that films could be effective in improving deaf children’s writing skill. Use of subtitles and PSL (where necessary), adopted from Marschark and Spencer (2003), could foster the writing ability of the participants. However, it should be noted that the films used for the deaf need to be appropriate for their proficiency level and be related to their interests in order to engage them in the process of learning.

The findings of the current study are also in line with SeyedErfani and AghaEbrahimiyan (2013) who showed that “contents, coloring and types of the materials, multimedia enhanced materials (use of sound, pictures, animation, movies, etc.), as well as direct feedback could help teachers improve their student’s writing ability” (p.7). The continuous feedback the participants in this study received, due to the implementation of DA, accounted for the writing improvement and was in line with Azabdaftari, Birjandi, and Panahi’s (2013) findings that DA could provide sufficient feedback in writing classes. The non-threatening environment of DA, as Azabdaftari et al. showed, could help learners’ use their potential for learning writing and gain more from the treatment they received.

Focus-on-form instruction is another factor which might explain students’ writing development during the treatment. According to Brokop and Persall (2009), focus-on-form draws learners’ attention to “specific language forms within a natural communication context (reading or writing)” and helps them pay attention to the form as a “prerequisite to processing and incorporating the
correct form into writing” (p. 23). Explicit grammar instruction has also been shown to improve learners’ ability to communicate in English. This is applicable to both hearing and the deaf ESL learners who try to communicate in written English (Berent et al., 2005).

The analysis of the participants’ responses to the structured interviews revealed that they had problems with organizing their ideas. Thus, it could be useful to design tasks and activities which can help deaf students in this regard. The results showed that graphic organizers can contribute to the improvement of the writing skill.

**Conclusion**

The one-group, pretest-posttest design was used in this study and the effect of the treatment was judged by the difference between the pretest and posttest scores. This was because the number of the deaf students being roughly at the same age in any one school for the deaf in Tehran was very limited. The problem could be partially solved by selecting a control group from another school for the deaf (and it was done); however, some of the parents had objections regarding teaching the English writing to their children, and thus the researchers had to stop the practice. Although the lack of a control group could question the rigor of this study, the investigation attempts to suggest a technique through which teaching writing to the deaf children can be facilitated since the difficulty of writing appears to be related not only to the students but also to the teaching methods. DA, while focusing on the writing process, combines teaching and assessment which seems to be more appropriate than traditional methods. The increase in the participants’ writing scores after the treatment showed the appropriateness of the film-based DA and could justify its practicality for the deaf. The pretest-treatment-posttest cycle through films can be assumed applicable for teaching writing to deaf children.

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