

In the Name of God, the Great, the Merciful

Report on SignWriting Experiment

Praise be to God, Lord of the worlds, and peace and prayers upon his noble Prophet, his family and his noble companions:

With the agreement of the Department for Hearing Impediments at the Secretary General for Special Education in Riyadh, an experiment in SignWriting was undertaken at the Amal Institute for the Deaf in Buraidah and the Amal classes at the Al-Fatah Primary School and Al-Harameen Middle School in Buraidah, as follows:

1. Preparation for the experiment

Preparation for the experiment took place via a training workshop for those desiring to take part. Here, the number of participants (36 teachers) was extended as a precaution in order to ensure a specific number of teachers were trained, in the case that some excused themselves for one reason or another midway through the course and did not completing the training, a circumstance which would impact negatively on the results. This is in fact what later occurred. Teachers excused themselves from participation in the experiment for various reasons personal to each of them; only a few committed themselves. The training workshop took place in the period beginning 12.10.1422 and comprised two weeks of study followed by two weeks of practical training in SignWriting. The curriculum was as follows:

1. Basic symbols in SignWriting:
 1. The four basic palm symbols
 2. Different finger expressions
 3. The orientation of symbols
 4. Contact points
 5. The mechanics of movement
 6. Movement of the torso and shoulders
 7. The orientation of expressive movement
 8. Facial expression
2. Discussion on writing with regard to the following topics:
 1. Writing the names of study materials
 2. Writing the names of some Saudi cities
 3. Writing the sign numbers
 4. Writing the finger sign alphabet
 5. Writing the names of the days in sign language
 6. Writing a lesson on Hadith (the sincere religion) in sign language
 7. Writing a lesson in Islamic jurisprudence (the division of water)
 8. Writing various mathematical problems
3. 36 teachers participated in the training session, as follows:
 - Dean of Residence - Syrian
 - 14 Egyptian teachers
 - **21 Saudi teachers**

2. Carrying out the experiment

1. The colleagues participating in the experiment were informed that SignWriting is a helpful pedagogical method, whereby a lesson is explained as usual, then the information is written in sign language afterwards using suitable wall boards (teaching resources) in such a way as to not oblige the student to use SignWriting in any respect, but to invite him to choose to write sign language, with appropriate support provided for participating students.
2. The idea was to carry out the experiment in three classes only, but following prolonged discussion with the director of the institute and the teachers, it was agreed that all the teachers would participate in all of the subjects. However, the teachers who completed the experiment with us were the following:

No.	Teacher	Class	Subject
1	Muhammad Abu Sha'eera	4,6	Islamic studies
2	Ali Al-'Ayran	Preparatory	Mathematics
3	Samir Hafez	Preparatory	Recitation
4	Za'ar Al-Jamili	Middle	

Note: a number of colleagues assisted in preparing materials for the experiment.

They continued in the experiment up until the end in the subjects indicated.

3. The students were taught how to read SignWriting, and taught some of the bases for writing SignWriting, but the focus was on reading rather than writing, as limited time was available.

Table showing the names of the teachers who participated in the experiment at the beginning:

No.	Teacher	Subject	Class	Notes
1	Muhammad Abu Sha'eera	Qur'an	6,4	Supervised the experiment, providing training to colleagues and following the performance of the teachers in carrying out the experiment; supervising the preparation of suitable materials
		Islamic theology	6,4	
		Islamic jurisprudence	6,4	
		Hadith	6	
2	Iman Abbas Fuad	Geography	6	
3	Ahmad Mahmoud	Grammar	6	
4	Muhammad Abdul Muhsin	Mathematics	4	
5	Muhammad Abdul Muhsin	Mathematics	5	
6	Za'ar Al-Jamili		M1	
7	Ibrahim Al-'Amri	Mathematics		
8	Samir Hafez	Recitation	Preparatory	
9		Mathematics	Preparatory	
10	Adel Bakeer	Mathematics	6	

4. The wallboard teaching resources were completed as follows:

No.	Resource	Notes
1	The meanings of the opening verse of the Qur'an	General use
2	Types of unbelief	For class 6
3	When ablution is recommended	For class 6
4	When ablution is required	For class 6
5	Definition of prayer	For class 4
6	Definition of the first profession of faith	For class 4
7	The Hadith of the rights of neighbours	For class 6
8	Numbers	General use
9	Letters of the alphabet	General use
10	A short story (the Busy Rooster)	General use
11	The four arithmetic operations	General use
12	Map of the countries from the Co-operation Council	For class 6
13	Definition of alms	For class 4
14	Multiplication tables	General use
15	Cards with words, pictures and signs	Preparatory
16	Second person personal pronouns	6
17	A Hadith encouraging industriousness	6
18	Definition of fasting	4

4. Feedback from teachers who participated in the training and the experiment:

Most of the teachers (see the accompanying questionnaire, in particular paragraphs 6,7,8,9 and 10) agreed on the effectiveness of SignWriting for explaining and consolidating information, and that it is very useful for students. They had differing opinions as regards the extent of its utility and the age at which it would be suitable to begin teaching students, noting that the preparatory students showed a strong response to the subject, with the two Preparatory teachers (Samir Hafez and Ali Al-'Ayrān) continuing with the experiment until its end and achieving encouraging results.

In the feedback questionnaire - undertaken directly after the training and before the beginning of the experiment - when the opinions of the teachers who completed the experiment were sought, and even those of persons who were involved without directly participating - opinions were unanimous as to the importance of the method and its necessity for deaf students.

Feedback from deaf students:

Feedback was taken from deaf students during their daily lessons. They were questioned from time to time about the method. Surprisingly, the deaf students (who had completed training in SignWriting) were unanimous on the following important points:

- The ease of writing SignWriting
- The importance for them of writing sign language
- The usefulness of SignWriting for understanding and revising material

Even the students who were not trained in SignWriting but who had come to have a general idea of it showed a strong curiosity in its regard and a desire to learn SignWriting; they appealed for SignWriting classes.

3. Evaluation of the experiment

The experiment was evaluated as follows:

1. Oral examination of students regarding the meaning of words in SignWriting, and linking them to words
2. Written examination in sign language and a comparison of results with a similar examination in the Arabic language
3. Opinions of teachers gathered through a questionnaire prepared by the instructor Yousef Abelmutejji
4. Opinions of students gathered on the method

Examinations taken by the students

Oral examinations were taken by the students of class 4 in Islamic jurisprudence and Islamic theology to measure the extent of the students' comprehension of written expressions in sign language and compare it with understanding of the same expression written down in Arabic. As an example, the students were given the following sentences in theology:

Prayer: Words and actions beginning with praise and ending with peace

Alms: Money which the rich have a duty to give to the poor

Fasting: Not eating or drinking from the rising to the setting of the sun

After training the students to read these sentences both in Arabic and in sign language, their responses were similar. The seven students in the class could understand and read these three sentences. However, one full week later when the students were questioned on the same sentences, two students could read the sentences in Arabic whereas five students could read them in sign language.

In class 6, students were taught in Jurisprudence (regarding when ablution is necessary and when it is recommended), and on the Hadith of the rights of neighbours. In the lesson on the Qur'an, the students were taught the opening verse, and in Theology they were taught the different types of unbelief. In Geography, they were taught signs for the names of states and in Mathematics they were taught the signs for numbers and the basic arithmetic operations (adding, subtraction, division and multiplication).

The oral examination was given to the students in class 6 in Jurisprudence, Hadith, and Theology. In the Hadith class, the students were asked to read the Hadith of the rights of neighbours in Arabic and in sign language. The student's answers to the oral questions were excellent, due to the aid of SignWriting to their memory.

Then the written examination was given to the students (example attached) and the results were analysed as follows:

The questions were divided into three groups. The first questions tested understanding and absorption of the Arabic language, the second understanding and absorption of sign language, and the third understanding and absorption of both the Arabic language and sign language. The results are presented in the following table:

Question number	Question type	Paragraph	Number of correct answers/11	Percentage
Question 1: Draw a line between the word and its sign	Using Arabic and sign language	1	11	
		2	11	
		3	10	
		4	10	
		5	10	
		6	10	
		7	10	
		8	10	
		9	10	
		Total correct answers	92/99	93%
Question 2: State whether true or false	Using reading and understanding of sign language only	1	11	
		2	10	
		3	10	
		4	7	
		5	11	
		6	11	
		7	11	
		8	9	
		Total correct answers	80/88	91%
		Question 3: Solve the following mathematical problems	Using reading and understanding of sign language only	1
2	9			
3	8			
4	10			
5	8			
Total correct answers	46/55			83%
Question 4: Write the names of the countries in sign language	Using both Arabic and sign language	1	8	
		2	6	
		3	8	
		4	8	
		5	6	
		6	2	
		7	8	
		Total correct answers	46/77	60%

Question 5: When is ablution recommended?	Understanding and absorption of sign language only	1	8	
		2	9	
		3	8	
		Total correct answers	25/33	76%
Question 6: Types of unbelief	Understanding and absorption of sign language only	1	9	
		2	10	
		Total correct answers	19/22	86%
Question 7: Write the meanings of the following words in sign language and in Arabic	Understanding and absorption of Arabic and sign language	1	5	
		2	7	
		3	5	
		4	5	
		Total correct answers	22/44	50%
Question 8: State whether true or false	Understanding and absorption of Arabic only	1	8	
		2	9	
		3	6	
		4	10	
		5	11	
		6	9	
		7	7	
		8	8	
		Total correct answers	69/88	78%
Question 9: When is ablution recommended?	Understanding and absorption of Arabic only	1	5	
		2	3	
		3	2	
		Total correct answers	10/33	30%
Question 10: Types of unbelief	Understanding and absorption of Arabic only	1	6	
		2	7	
		Total correct answers	13/22	59%

Of the questions which related only to Arabic language (8, 9 and 10), the total of correct answers was 92/143, or 64%.

Of the questions which related only to sign language (2, 5, 6 and 7) the total of correct answers was 146/187, or 78%.

Of the questions which related both to sign language and Arabic (1, 3 and 4) the total of correct answers was 184/231 or 80%.

From these results, a clear difference can be seen with the use of SignWriting.

At the Middle stage and in the Amal classes in the Al-Harameen Middle School, less work was undertaken with the students than at the other levels for reasons specific to the teachers.

The students were trained in three subjects only in reading and writing, namely:

The days of the week

The names of study materials

The names of Saudi cities

Their answers were extremely good. The students quickly became proficient in reading and writing on these subjects, indicating the possibility of teaching students to write sign language in a shorter time at this age level than at other age levels. In the written examination, eight students out of fifteen achieved a grade of 13/15 or higher (excellent).

In the preparatory class

Here was the biggest surprise. At the beginning, we were afraid to try the experiment with the preparatory students, due to their young age and the recentness of their encounter with sign language in general. In addition, there were concerns regarding the amount of time to be spent in teaching these young students.

The students were taught to read and write the words in the reading curriculum, and the numbers in the mathematics curriculum. All of the students became proficient in reading and writing these words.

Table showing the words and numbers taught to the preparatory class

No.	Word	Number
1	Rope	1
2	Lettuce	2
3	Sun	3
4	Oil	4
5	Shelf	5
6	Camel	6
7	Gas	7
8	Pen	8
9	Book	9
10	Spring	10

The preparatory teachers Samir Hafez and Ali Al-'Ayran were outstanding in teaching the young students and the results of their work were surprising. If we can teach students the basics of SignWriting at an early age, then we can achieve great progress in teaching deaf students linguistic concepts and skills.

5. Feedback from those responsible for teaching the deaf in the Al-Qaseem region

1) The opinion of the assistant to the Director of Education for Educational Affairs (formerly head of the Amal Institute):

From my colleagues' experiment in SignWriting, I see that in principle, within a short stretch of time, results were achieved above and beyond what was expected. This implies that the experiment should be extended to other, different environments. This is a scholarly experiment which it is to be expected will achieve specific educational objectives for this group of students when it is undertaken by such committed participants as our colleagues here, under the leadership of Muhammad Abu Sha'eera.

Suleiman Ash-Shayi'

2) Opinion of the director of the Amal Institute for the Deaf

SignWriting is a modern method for teaching deaf students. As I followed the progress of this experiment, I noticed the speed with which the students responded to questions and their engagement with this method, in spite of the short time in which the experiment was run. I hope that the experiment will be supported, and become a way for communicating concepts to this important group.

'Omar Al-Amr

3) The opinion of the supervisor for hearing impediments

In the Name of God, and peace and prayers be upon the prophet of God and his family and companions:

From my point of view, as someone concerned with hearing impediments, I view the idea of SignWriting as a new, wonderful and important method for teaching deaf students. After seeing the work carried out by Muhammad Abu Sha'eera, it is evident to me that the method is acceptable to a majority of students and teachers, and I consider it to be a useful means of helping deaf students to understand lessons. The evidence for this is the assimilation of the method by a majority of students. However, the training for the teachers needs to be intensified, and it quickly needs to be generalised throughout the Amal programme in order to

extend its usefulness. Finally, I would like to thank those involved in carrying out the experiment.

Ahmad Al-Musallam

4. Opinion of the supervisor of the Amal classes at Al-Fatah school
SignWriting was the subject of this experiment. It is a specific method for communicating information to the student in the way closest possible to his understanding, through the sign he uses in everyday life. Through direct contact with this experiment, the extent of the capacity of deaf students to respond to questions with this method of writing and communicating information became evident, as well as the speed of the students in retrieving information and retaining it.

Abdel Aziz Al-Nahed

6. Opinion of the supervisor of the Amal classes at Al-Harameen school
Teaching deaf students using this method is in my opinion successful, given the speed at which they were able to manage information and their ease of breaking down its symbols. Using the normal methods, deaf students used to be unable to understand most of the words of the texts they were shown, but now we notice a big difference. This method should be supported and generalised.

Za'ar Al-Jamili

5. Recommendations

Following this experiment, I hope that the Secretary General will begin to gradually include SignWriting in the curriculum for deaf students in the forthcoming period at certain levels of education, as the method is neither difficult nor costly, when one considers its general effectiveness and usefulness.

6. This is the limit of my efforts; I pass the flame on to those responsible for special education in the Kingdom of Saudi Arabia and my hope is in the Great God that their hearts will be open to accept and apply this idea. I say to them that this new method

will reach us sooner or later, so let us seize the opportunity to become the first to bring this method into our country, since God willing it will bring us remembrance and recompense.

7. Suggestions for the modalities of generalizing the method

The proposition - which is in your hands - is to create a special centre with the aim of generalising the method through the following steps:

1. Training teachers in SignWriting and training older deaf students who are outside of formal education; symbolic drawings can be made to help in covering any gaps.
2. Translating the curriculum into SignWriting and providing this to students and teachers
3. Holding an introductory seminar (or seminars) on the method
4. Training a group of female teachers who teach deaf female students in order to transfer the method to them
5. Communicating with centres and associations for the deaf locally, in the Gulf, and in the Arab world, in order to spread the method
6. Communicate with the American centre which is the leader in the subject, getting to know its way of working and adopting any suitable practices

Notes:

Attached:

1. A number of photographs
2. A questionnaire prepared on the training workshop
3. An example of the test for class 6
4. An example of the test for class 4
5. An example of the test for Middle 1

Completed, by the permission of God, on Sunday 15.2.1423 AH, 27.4.2002 AD

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