

Assessing the Level of Performance of Sign Language Interpreters from Impaired Hearing Students' Perspectives at Public and Private Jordanian Universities

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Abstract

This study aimed at assessing the level of performance of sign language interpreters in both public and private Jordanian universities, as well as to recognize the effect of the study variables specifically gender and qualifications for acoustically disabled and interpreter, and the experience of the interpreter on the level of the performance assessment of sign language interpreters and the hearing disabled students in the capital (Amman) and Balqa' Governorates' public and private universities. The sample of the study consisted of (100) students. In order to collect the data, the researcher has built a study instrument which consists of three dimensions: a personal dimension (15), cognitive dimension (13), and professional dimension (13). Validity and reliability of the instrument were calculated, and then the instrument was applied on the study sample.

The results of the study showed that the level of assessment by the hearing disabled students for sign language interpreters who accompany them in public and private universities and institutes was high. The personal dimension came first, followed by the cognitive dimension, and finally the professional dimension. The results showed a lack of statistically significant differences on all dimensions attributed to the gender variable of the acoustically disabled. The study showed the existence of statistically significant differences in favor of females on the personal dimension attributed to the interpreter gender variable. Results also showed that there were no statistically significant differences attributed to the impact of the acoustically disabled qualifications on all dimensions except the professional one in favor of diploma, and there were no statistically significant differences attributed to the impact of the interpreter's qualifications on all dimensions except the professional one in favor of diploma, and no statistically significant differences attributed to the experience variable of the interpreter.

Keywords: language interpreters, the impaired hearing, the level of performance of sign language interpreters

1. Introduction

There are many definitions of audio disability due to varieties of views on the subject of hearing disabilities, the most prominent of these definitions are medical terms where it defines the disabled as the one whose hearing organic is damaged with defective organic which prevents him from using it normally in public life like any other ordinary students, this means that the defect or damage may hit the outer or middle or internal ear, this may not cover all parts of the ear, but part or parts of the ear, while academics prospective defines the Impaired hearing students as individuals who could not rely on the sense of hearing to learn the language, or taking an advantage of the various education programs provided to the hearers, or those who need to teaching methods that compensate them for the sense of hearing, but the impaired hearing is the individual who is suffering from loss of hearing ability may be able to compensate aids audio with high- intensity sound which adds him to learn in the same way like other normal students and listeners after the use of specific audio devices (Yusuf, 2006).

Hearing disability criterion varies upon depending on its classification, in this matter, there are three basic criteria in the classification of hearing disability, as mentioned below:

1) Classification depending on the age in which the disability occurred:

The age in which hearing disability occurred shall be the most important variable in determining the effects resulting from the hearing disabilities, because of its significance in specifying the child's acquisition of

language expertise necessary in field of learning to communicate with others, and it is divided according to this standard to the following factors:

A) (Pre-lingual Deafness):

This type is called congenital, deafness that refers to cases of deafness which occurs from birth or at an earlier stage on the evolution of speech and language in children whereas the experts disagreed about the age at which separates deafness before language and deafness after linguistic as some of them believes that age is 18 months, while others think that it is 3 years is the interval age and this category usually are not able to speak, and they are the so-called deaf, dumb.

B) (Pos-lingual Deafness):

Pos-lingual Deafness refers to cases of deafness that occurs after the child has acquired the skill of speech and language and they are called the deaf only.

2) Classification according to the place of the defective organic:

This classification is based on identifying the defective organic in the auditory system, either outer or middle internal ear which caused audio obstruction, it is divided according to this standard to the following:

A) (Conductive Hearing Loss):

Conductive Hearing Loss produces problems about that affect outer or middle ear, so as to prevent the arrival of the sound wave naturally to the inner ear, it has been caused by a blockage in the external auditory canal; due to the accumulation of wax in the ear, ossifying tissues of the ear, or entering of foreign objects, or holing of the drum in the other ear.

This type of loss can be corrected medically or surgically, or using the amplifiers, and the symptoms of this type of loss of hearing is a pain in the ear, exit discharge, swelling of the outer ear, the feeling of pressure in the ear, and the degree of loss of hearing less than 70 dB.

B) (Sensor neural Hearing Loss):

It is also called the Nerve Deafness, and result because of a damage to the inner ear or the auditory nerve, although the waves at the inner ear, but converting it to electrical discharges inspect the enclosure may not be convenient, or the imbalance in the auditory nerve is not transferred to the brain fully, and the loss of auditory sensory nervous system affects not only the ability to hear sounds, but to understand them as well; as audible beeps exposed to distortion prevents misunderstood, and often suffer the injured from the inability to hear the high sounds, and the patient in this case is classified as one who speaks loudly, and there is a weakness in the discrimination of letters and words. the most common causes of this disorder are aging, infections of the inner ear, exposure to noise, head injuries, acoustic neuronal, taking certain medications, birth defects and sensor neural hearing loss not to usually deal with medically or surgically, but this category may benefit from the earphones, but it is a low degree, the degree of hearing loss greater than 70 dB.

History of the Sign Language

History of sign language is connected to the education of the deaf, where a lot of academics taken as a basis for education of the deaf (Al Rais, 2007). The beginning of the historical documentation to raise the deaf in addition to using the sign language in deaf education to the sixteenth century, when The Spanish monk (DeLeon) started teaching two deaf children from a wealthy family, where he was the first teacher known for the deaf in the world, and it was believed that the sign language he used was part of the way in which he used especially household signals that was used by the children then was followed by another Spaniard is Joan Bonet in 1620, who wrote a book focused on the alphabet of the fingers and how to use them to teach the deaf to speak and pronunciation, note that the alphabet fingers lead, however, and only one (Dabbas, 2007). The French (DeLeepee) first to adopt the use of alphanumeric fingers with reference not to teach speech and language, also is the first to establish a school for the deaf in the world in Paris in late 1760, as adopted has Lybithe sign language used among the deaf in Paris to teach deaf and education, and that their contributions to the delivery of information to the deaf students at ease. In the United States established the Thomas first boarding school for deaf education in America in 1817 and which has been used sign language as a way essential to the education of the deaf, where he integrates American Sign Language and French as reported by Chinese writings at the end of the second century AD, several references to the use of the deaf sign language In the Jewish oral law for example, can a man deaf mute to address people by signs that people address him by signals.

1.1 Problem of the Study and Its Importance

The interest in teaching hearing-impaired individuals in Jordan has been developed and there was a large number of impaired hearing students who complete their higher education in public and private universities, where the Supreme Council for disabled persons appointed interpreter sign language for each college student may apply to the Board relating an interpreter to accompany disabled student acoustically all lectures in the university. Due to the importance of the role played by the interpreter in the communication between the disabled translation of his thoughts and feelings, and the role he played in integrating the hearing-impaired with the community of listeners in the higher education some questions were formulated.

1.2 Questions of the Study

The researcher tried to answer the following questions:

- 1) What is the evaluation level of the performance of the sign language interpreter who accompanies the hearing-impaired in private and public universities from Hearing Impaired perspective?
- 2) Are there any statistically significant differences in the levels of evaluation of the performance of the sign language interpreter from the hearing impaired perspective in public and private universities due to the gender of the hearing-impaired?
- 3) Are there any statistically significant differences in the levels of evaluation of the performance of the sign language interpreter from the hearing impaired students perspectives in public and private universities due to the scientific qualification of the hearing impaired?
- 4) Are there any statistically significant differences in levels of evaluation of the performance of the sign language interpreter from the hearing impaired perspectives in public and private universities due to the gender of the interpreter?
- 5) Are there any statistically significant differences in levels of evaluation of the performance of the sign language interpreter from the impaired hearing perspectives in public and private universities due to scientific qualification of the interpreter?
- 6) Are there any statistically significant differences in levels of evaluation of the performance of the sign language interpreter from the hearing impaired perspectives in public and private universities due to the years of experience of the interpreter?

1.3 Significance of the Study

- 1) Small number of studies related to this field.
- 2) Increasing number of students with hearing disabilities at the public and private universities in Jordan.
- 3) Importance of the role of sign language interpreter in the academic life of the hearing impaired.
- 4) Importance of knowing the satisfaction of hearing about the role of a disabled sign language interpreter, and the extent of his ability to connect ideas to the community of the Impaired hearing students listeners at the university
- 5) Providing interested parties to provide sign language interpreter for the hearing impaired with information about the current level of performance of the interpreter, as well as the proposed recommendations.

1.4 Procedural Definitions

Hearing impaired: is a student who could not communicate with others in Jordanian universities or colleges only through sign language.

Sign language interpreter: The person who accompanying the hearing impaired student enrolled in public or private universities and colleges in Jordan, where the interpreter who delivers the message to the hearing impaired student through the sign language in addition to converting the indicative message of hearing impaired student to sound of the listeners.

1.5 Objectives of the Study

- Identifying the level of job performance for sign language interpreters in Jordanian public and private universities.
- Knowing the effect of gender on the hearing impaired students evaluates the level of job performance of the interpreter.
- Knowing the effect of qualification for the hearing impaired students evaluates the level of job performance of

the interpreter.

- Knowing the effect of the gender of the interpreter in the evaluation of the level of job performance of the interpreters from the perspective of the impaired hearing.
- Knowing the impact of the qualification of the interpreter in the evaluation of the level of job performance for interpreters from hearing impaired perspectives.
- Knowing the effect of years of experience of the interpreter in the level of evaluation of the interpreters from hearing impaired perspectives.

1.6 Limitations of the Study

The study is limited to the students of public and private universities in Balqa and Amman the capital. The study is also limited to students of public and private universities severe hearing impaired students.

The study is limited to university students enrolled in the first semester 2013/2014.

2. Review of Related Literature

Many researchers conducted studies to investigate the significance of sign language interpreters and their role in assessing hearing impaired students, the following are some studies

Melnk (1997) conducted a study entitled “ Role of Sign language interpreters in kindergarten”, at the fourth grade at schools, the study aimed to describe the roles of sign language interpreters for kindergarten deaf students through fourth grade in schools in Manitoba, where a questionnaire was distributed to a sample study consisting of (39) interpreters who their job description varies as the study conclude that there is a conflict in performance of interpreters due to the difference in the training they have received, the study indicated also that there should be standards of professional interpreters in the educational environment and it assures the need for conducting more researches in this field.

Cerney (2004) conducted a study entitled “Reciprocity interpretation of American Sign Language (The signal) through an interpreter hears another deaf” , as this method of interpretation requires presence of two interpreters for sign language one hears and the other is deaf, where carrying out together to interpret a letter from English to the American sign language as well as the opposite of American Sign Language into English, and they were filming and recording a team of sign language interpreters during interpretation process for ten minutes, then analyzing the information recorded. The study found that the percentage of recorded information amounted (89%) accuracy between the source of the message and its translation. As a discerned from the analysis that the deaf interpreter took 20% of the time of the translation team in order to produce the translated text, the study recommended that the translation is in accordance with the rules and principles agreed upon.

A study conducted by Marschark et al. (2005) entitled “Access to education beyond high school through sign language translation”, and the goal of this study was to identify the effectiveness of sign language interpreters for the deaf in the classrooms, the sample consisted of 150 people, including (127) student volunteers from the Institute of Technology for the deaf rooster, among these volunteers (22) ordinary students, including (9) males and the rest were females, (105) deaf students, including 60 males and females as well as the rest (23) sign language interpreter. The researcher assigned interpreters during lectures for deaf students at the university level, then all students set for a test to see how to take advantage of the content and understanding it, where the results indicated that there were discrepancies regarding the students preferring of having interpreters, and the results also pointed out that deaf students gain less information than their listening colleague, as they are weak in school readiness, quality of education and interpretation.

Bally (2007) conducted a study entitled “The History of Education of translation in American sign language.” And the study aimed to analyze and authenticate the chronological history of educational interpretation depending on the information and data that have been obtained through interviews conducted with employees in organizations. The study showed the impact of social, political and legislative views of interpreters in education. The study also recommended changes and modifications in the design of systematic training for sign language interpreters.

A Study by Omari (2009) aimed to identify the required competencies for sign language interpreters from the deaf and interpreters perspective in Saudi Arabia, The study sample consisted of (531) deaf and interpreters. The researcher prepared the study instrument which consisted of 45 distributing sections divided into 3 frameworks, the study found that the personal skills competencies are more necessary for sign language interpreters for the signal, followed by professional competence and cognitive skills. The study found statistically significant differences in favor of females in the personal and professional skills, it also indicates that there are statistical

significant differences in favor of males regarding cognitive skill dimensions.

3. Methods and Procedures

3.1 The Study Community and Its Sample

The study population consisted of all hearing impaired students enrolled in Jordanian public and private universities in the governorates of Amman the capital and Balqa during the academic year 2013/2014, estimating (150), based on the statistics of the Higher Council for Disabled Students Affairs including (100) students .

3.2 The Study Instrument

A scale which consisted of three dimensions: the personal dimension which consists of (15) items, and cognitive dimension which consists of (13) items, and the professional dimension which consists of (13) items, it is a four level scale: (It applies to a large extent, it applies moderately, it applies to a small degree, it does not apply)

3.3 Validity of the Instrument

The instrument organization validity significances are gathered through computing extracted correlation coefficients items of the scale with the total score among a pilot study excluded from the study sample and it consisted of (30) hearing impaired students, where the scale items were analyzed and the coefficient of differentiation for each item in the form of a correlation coefficient and between the total score on one hand, and between each item and between linked axis that belongs to it, and between each level of the total score on the other hand. The correlation coefficients between the items of the instrument as a whole ranging between (-0.32 0.80), and with the framework is (0.39-0.81).

3.4 Reliability of the Instrument

The internal reliability was computed for assuring the instrument on a sample from out aspect the exploratory study sample which consists of (30) students from the hearing impaired students by Cronbach's alpha equation, and it was appropriate for the purposes of this study

3.5 Procedures of the Study

The scale of the study was applied in its final shape on the hearing impaired students at the public and private universities by visiting the Supreme Council for the Affairs of students with disabilities by the researcher, where the data for the preparation of hearing impaired students enrolled in universities and interpreters working with them was gained, the researcher also contacted the Deanship of Student Affairs, in some universities, where she clarified the instrument through an interpreter specialist for students in the University of Jordan, and he met the rest of the students in Prince Ali Club for the Deaf, the researcher met deaf students from various universities and colleges in the province of the capital every Thursday at the club, they distribute the instrument and explain its clauses through an interpreter, The application process lasted one month and a half because of the different programs of the students, and the instrument was applied from 01/12/2013 to 15/01/2014.

4. Results of the Study

The First Question: "What is the evaluation level of the performance of sign language interpreter who accompanied the hearing impaired students in public and private universities from the hearing impaired perspective?"

To answer this question means and standard deviations of the level of evaluating the performance of sign language interpreter accompanied hearing impaired students in public and private universities from the hearing impaired, it is determined by selecting a mean as follows: 1-2 low, 2.1-3 fair, and 3.1-4 high.

Table 1. Means and standard deviations for the evaluation of the performance level of sign language interpreter hearing impaired students

The Class	The Framework	Mean	Standard deviation	The Level
1	Personal Aspect	3.54	0.348	High
2	Cognitive Aspect	3.47	0.392	High
3	Professional Aspect	3.47	0.387	High
		3.49	.333	High

Table 1 shows that the personal dimension came first with the highest mean (3.54), followed by the knowledge dimension, while the professional dimension reached a mean of (3.47), and the mean of the total score was (3.49).

Means and standard deviations of the estimates of the study sample paragraphs on each skill separately, as follows?

First: Personal Dimension

Table 2. Mean and standard deviations for the personal dimension items are arranged as follows

Class	Number	Paragraphs	Mean	Standard Deviation	The level
1	1	Looks decent	3.74	0.485	High
2	8	Having commitment	3.66	0.555	High
3	2	Limbs intact	3.65	0.592	High
4	5	Having the Secretariat in the delivery of information during the translation	3.59	0.668	High
4	6	Having the ability to adapt to new situations	3.59	0.605	High
6	3	Having fast memory	3.58	0.638	High
6	14	Having the ability to focus during interpretation	3.58	0.535	High
8	10	Having interests in the interpretation profession	3.56	0.671	High
9	7	having fast common sense	3.54	0.610	High
10	9	Ready to accept constructive criticism	3.52	0.611	High
11	13	Having the ability to interpret in all positions	3.45	0.783	High
12	4	Having honesty in interpretation	3.40	0.667	High
13	12	Having confidence in himself and his abilities	3.33	0.739	High
14	11	Having the ability to manage time	3.31	0.761	High
		Having a decent appearance	3.53	0.365	High

Table 2 shows that means between (3.31-3.74), as shown item (1), which states, “showing decent appearance” in the first class with total mean of (3.74) as included in the item (11), which states the following, “ Having the ability time management “ with a total mean (3.31) of the personal dimension as a whole is (3.53).

Second: The Cognitive Dimension

Table 3. Means and standard deviations for the cognitive dimension items

Class	Number	Paragraphs	Mean	Standard Deviation	Level
1	4	Interpreting from spoken language into sign language and vice versa	3.62	0.663	High
2	9	Understands Deaf gestures	3.59	0.668	High
3	1	Friendly culture and audio-wide disability	3.55	0.609	High
4	2	Full knowledge of sign language	3.52	0.577	High
4	3	Holding a bachelor’s degree as a minimum	3.52	0.703	High
6	11	Having a sufficient experience in dealing with the deaf	3.50	0.577	High
7	8	Having the ability to overcome the problems faced during the interpretation	3.47	0.658	High

8	7	Full knowledge of sign language rules and its basis	3.43	.700	High
9	5	Having rapid interpretation	3.42	0.606	High
9	12	Developing himself constantly in sign language	3.42	0.768	High
11	13	Exchange experiences and knowledge with other interpreters	3.40	0.765	High
12	6	Providing accurate interpretation for the deaf	3.34	0.781	High
13	10	Reviewing recent researches in audio disability	3.32	0.737	High
		Cognitive Aspect	3.48	0.367	High
		Having the ability to interpret from spoken language into sign language and vice versa	3.62	0.663	High

Table 3 shows that means are ranging between (3.32-3.62), as indicated in item (4), which states as follows” interpreting from spoken language into sign language and vice versa,” came first with total mean of (3.62), while item (10) states as follows “Reviewing recent researches in audio disability” ranging with total mean of (3.32). The mean of the cognitive aspect as a whole is (3.48).

Table 4. Means and standard deviations for the professional dimension items are arranged in descending order according to means

Class	Number	Paragraphs	Mean	Standard Deviation	Level
1	13	Has a positive relationship with the Hearing Impaired	3.65	0.520	High
2	12	Provide feedback for the impaired hearing	3.60	0.569	High
3	6	Having a focus on the subject of interpretation	3.54	0.610	High
3	11	Providing the necessary assistance for the disabled when needed	3.54	0.610	High
5	10	A flexible movements during interpretation	3.53	.674	High
6	1	Punctuality in time and attendance	3.51	0.703	High
7	7	Having the ability to deliver all the information	3.44	0.608	High
8	2	Having harmonically movements during interpretation	3.42	0.638	High
9	9	Having the ability to use other methods of communication (body language, the eyes gestures)	3.41	0.621	High
10	5	Having the ability to interpret in different positions	3.40	0.725	High
10	8	Observance of secrets and non-disclosure in the scope of work	3.40	0.765	High
12	4	Taking into account the social differences among the Hearing impaired students	3.33	.682	High
13	3	Taking into account the cultural differences among the Hearing impaired students	3.30	0.718	High
		Professional aspect	3.46	0.391	High

Table 4 shows that means are ranging between (3.30-3.65), as it includes in item (13), which states, “Having a positive relationship with the hearing impaired “came first with a total mean of (3.65), while item (3) states “taking into account the cultural differences among the hearing impaired students,” came last with a mean of (3.30), where the total mean of the vocational dimension as a whole is (3.46).

The Second question: Are there any statistically significant differences in the levels of evaluation of the performance of a sign language interpreter from the hearing impaired students in public and private universities attributable to the Hearing impaired students’ gender?

To answer this question means and standard deviations were computed for the levels of evaluation of the performance of a sign language interpreter from the Hearing Impaired Students perspective in public and private

universities based on Hearing impaired Students' gender, where the statistical differences means test "T" test was used as illustrated in the table below.

Table 5. Means, standard deviations and "T" test for effectiveness of a sign language interpreter from the hearing impaired Students perspectives in public and private universities based on hearing impaired Students' gender

	Hearing Impaired Students Gender	Number	Mean	Standard Deviation	"T" Value	Degrees of Freedom	Statistical Significance
Personal Aspect	Male	63	3.52	0.362	-0.445	98	0.657
	Female	37	3.56	0.326			
Cognitive Aspect	Male	63	3.44	0.332	-0.905	98	0.368
	Female	37	3.52	0.480			
Professional Aspect	Male	63	3.44	0.389	-0.838	98	0.404
	Female	37	3.51	0.387			
Total Score	Male	63	3.47	0.319	-0.827	98	.410
	Female	37	3.53	.357			

Table 5 indicates a lack of statistical significant differences equals to ($\alpha = 0.05$) due to the effectiveness of hearing impaired students' gender

The Third Question: Are there any statistically significant differences in the levels of evaluation of the performance of a sign language interpreter from the hearing impaired students' perspectives in public and private universities attributable to interpreter gender?

To answer this question means and standard deviations were computed for the levels of evaluation of the performance of a sign language interpreter from the Hearing impaired Students perspectives in public and private universities based on interpreter's gender, where the statistical differences means test "T" test was used as illustrated in the table below.

Table 6. Means, standard deviations and "T" test for effectiveness of a sign language interpreter from the hearing impaired Students perspectives in public and private universities based on interpreter's gender

	Interpreter Gender	Number	Mean	Standard Deviation	"T" Value	Degrees of Freedom	Statistical Significance
Personal Aspect	Male	53	3.47	0.373	-1.983	98	.050
	Female	47	3.61	.304			
Cognitive Aspect	Male	53	3.47	0.349	0.145	98	0.885
	Female	47	3.46	0.440			
Professional Aspect	Male	53	3.47	0.356	.170	98	0.865
	Female	47	3.46	0.424			
Total Score	Male	53	3.47	0.330	-0.593	98	0.555
	Female	47	3.51	.338			

Table 6 indicates lack of statistical significant differences ($\alpha = 0.05$) due to the effectiveness of interpreter gender in all aspects except for the personal one, the differences were in favor of females.

The Fourth Question: Are there any statistically significant differences in the levels of evaluation of performance of a sign language interpreter from the hearing impaired Students perspectives in public and private universities attributable to their academic qualification?

To answer this question means and standard deviations were computed for the levels of evaluation of the performance of a sign language interpreter from the Hearing Impaired Students' perspective in public and private

universities based on their academic qualification, where the statistical differences means test “T” test was used as illustrated in the table below.

Table 7. Means, standard deviations and “T” test for effectiveness of a sign language interpreter from the hearing impaired Students’ perspective in public and private universities based on their academic qualification

	Hearing Impaired Students’ Academic Qualification	Number	Mean	Standard Deviation
Personal Aspect	Diploma	16	3.51	0.469
	Bachelor	75	3.57	0.316
	Graduate	9	3.29	0.281
	Total	100	3.54	0.348
Cognitive Aspect	Diploma	16	3.59	.308
	Bachelor	75	3.46	0.421
	Graduate	9	3.37	.220
	Total	100	3.47	0.392
Professional Aspect	Diploma	16	3.63	0.216
	Bachelor	75	3.46	0.416
	Graduate	9	3.21	0.217
	Total	100	3.47	0.387
Total Score	Diploma	16	3.57	.300
	Bachelor	75	3.50	.350
	Graduate	9	3.29	0.085

Table 7 shows apparent variation in the means and standard deviations for the levels of evaluation of the performance of a sign language interpreter from the Hearing Impaired Students’ perspectives in public and private universities due to different classes of scientific qualification variable for hearing impaired, for clarifying statistical differences analysis of variance (ANOVA) between means were used according to the Table 8.

Table 8. Analysis of variance (ANOVA) of effectiveness for academic qualification for Hearing Impaired Students on the levels of performance evaluation of a sign language interpreter from the hearing impaired students’ perspectives in public and private universities

	The Sources	Number of Squares	of Degrees of Freedom	of Means Squares	of (T) Value	Statistical Significance
Personal Aspect	Among groups	0.670	2	0.335	2.873	0.061
	Within groups;	11.305	97	0.117		
	Total	11.974	99			
Cognitive Aspect	Among groups	0.326	2	0.163	1.060	.350
	Within groups;	14.899	97	0.154		
	Total	15.225	99			
Professional Aspect	Among groups	0.978	2	0.489	3.418	0.037
	Within	13.877	97	0.143		

	groups;					
	Total	14.855	99			
	Among groups	0.477	2	0.239	2.206	0.116
Total Score	Within groups;	10.486	97	0.108		
	The Total	10.963	99			

Table 8 shows lack of statistical significant differences at level of ($\alpha= 0.05$) due to effectiveness of the academic qualification for Hearing Impaired Students in all aspects except for the professional one, where double statistical significant differences between means were used in oral and dimensional comparisons as shown in the Table 9 below.

Table 9. Dimensional comparison by oral method effectiveness of the academic qualification for hearing impaired students on the professional aspect

		Mean	Diploma	Bachelor	Graduate
	Diploma	3.63			
Professional Aspect	Bachelor	3.46	0.16		
	Graduate	3.21	0.41*	0.25	

* Function at the level of significance ($\alpha= 0.05$).

Table 9 shows that there is a statistical significant difference ($\alpha = 0.05$) between the Diploma and the Graduate, where the differences were in favor of a diploma, in the professional aspect.

Fifth question: Are there any statistically significant differences in the levels of evaluation of the performance of a sign language interpreter from the hearing impaired students' perspectives in public and private universities attributable to interpreter's academic qualification? To answer this question means and standard deviations were computed for evaluation of performance levels of a sign language interpreter from the hearing impaired students' perspectives in public and private universities for interpreter academic qualification as illustrated in the following table.

Table 10. Means and standard deviations for evaluation of the performance levels of a sign language interpreter from the hearing impaired students' perspectives in public and private universities for interpreter academic qualification

	Academic Qualification for Interpreter	Number	Mean	Standard Deviation
Personal Aspect	Diploma	33	3.56	0.444
	Bachelor	59	3.51	0.306
	Graduate	8	3.61	0.138
	Total	100	3.54	0.348
Cognitive Aspect	Diploma	33	3.50	0.443
	Bachelor	59	3.42	0.376
	Graduate	8	3.69	0.154
	Total	100	3.47	0.392
Professional Aspect	Diploma	33	3.59	0.298
	Bachelor	59	3.37	0.426
	Graduate	8	3.65	.170

Total Score	Total	100	3.47	0.387
	Diploma	33	3.55	0.356
	Bachelor	59	3.44	0.332
	Graduate	8	3.65	0.073
	Total	100	3.49	0.333

Table 10 shows apparent variation in means and standard deviations for the levels of evaluation of the performance of a sign language interpreter from the hearing impaired students' perspectives in public and private universities due to different categories of academic qualification variable of an interpreter for clarifying statistical differences analysis of variance (ANOVA) between means were used according to Table 11.

Table 11. Analysis of variance (ANOVA) of effectiveness of academic qualification of the interpreter to evaluate the performance levels of a sign language interpretation from the hearing impaired students' perspectives in public and private universities

	The Sources	Number of Squares	of Degrees of Freedom	of Means Squares	of (T) Value	Statistical Significance
Personal Aspect	Among groups	0.087	2	0.044	.357	0.701
	Within groups;	11.887	97	0.123		
	Total	11.974	99			
Cognitive Aspect	Among groups	0.556	2	0.278	1.839	0.164
	Within groups;	14.669	97	0.151		
	Total	15.225	99			
Professional Aspect	Among groups	1.299	2	0.650	4.648	.012
	Within groups;	13.556	97	.140		
	Total	14.855	99			
Total Score	Among groups	0.479	2	0.240	2.216	0.115
	Within groups	10.484	97	0.108		
	Total	10.963	99			

Table 11 indicates lack of statistical significant differences at level of ($\alpha = 0.05$) due to the effectiveness of the academic qualification of the interpreter in all aspects except for the professional aspect where double statistical significant differences between means were used in oral and dimensional comparisons as shown in Table 12.

Table 12. Dimensional oral method comparisons for effectiveness of the interpreter academic qualification on the professional aspect

	Mean	Diploma	Bachelor	Graduate
	Diploma	3.59		
Professional Aspect	Bachelor	3.37	0.22 *	
	Graduate	3.65	.06	0.25 0.28

* Function at the level of significance ($\alpha = 0.05$).

Table 12 indicates a statistical significant difference at the level of ($\alpha = 0.05$) between the diploma and the bachelor with the differences in favor of a diploma in the professional aspect.

The sixth question: Are there any statistically significant differences in the levels of evaluation of the performance of a sign language interpreter from the hearing impaired students' perspectives in public and private universities due to the years of experience of the interpreter?

To answer this question means and standard deviations for the evaluation of the performance levels of a sign language interpreter from the hearing impaired students' perspectives in public and private universities by years of experience of the interpreter as shown in the table below.

Table 13. Means and standard deviations for evaluation of the performance levels of a sign language interpreter from the hearing impaired students' perspectives in public and private universities by years of experience of the interpreter

	Interpreter Years of Experience	Number	Mean	Standard Deviation
Personal Aspect	Two years or less	13	3.47	0.480
	More than two years to 5 years	48	3.57	0.301
	More than 5 years	39	3.52	.357
	Total	100	3.54	0.348
Cognitive Aspect	Two years or less	13	3.43	0.182
	More than two years to 5 years	48	3.54	0.379
	More than 5 years	39	3.39	0.446
	Total	100	3.47	0.392
Professional Aspect	Two years or less	13	3.55	.177
	More than two years to 5 years	48	3.45	0.388
	More than 5 years	39	3.46	0.438
	Total	100	3.47	0.387
Total Score	Two years or less	13	3.48	0.233
	More than two years to 5 years	48	3.52	0.312
	More than 5 years	39	3.46	0.385
	Total	100	3.49	0.333

Table 13 shows apparent variation in the means and standard deviations for the levels of evaluation of performance of a sign language interpreter from the hearing impaired students' perspectives in public and private universities due to different classes of years of experience of the interpreter variable, for clarifying statistical differences analysis of variance (ANOVA) between means were used according to the Table 14.

Table 14. Analysis of variance (ANOVA) effectiveness of years of experience of the interpreter to evaluate the performance levels of a sign language interpreter from the hearing impaired students' perspectives in public and private universities

	The Sources	Number of Squares	Degrees of Freedom	Means of Squares	(T) Value	Statistical Significance
Personal Aspect	Among groups	0.118	2	0.059	0.482	0.619
	Within groups;	11.857	97	0.122		
	Total	11.974	99			
Cognitive Aspect	Among groups	0.517	2	0.258	1.705	0.187
	Within groups;	14.708	97	0.152		
	Total	15.225	99			
Professional Aspect	Among groups	0.104	2	0.052	0.342	0.711
	Within groups;	14.751	97	0.152		
	Total	14.855	99			
Total Score	Among groups	0.096	2	0.048	0.430	0.652
	Within groups	10,866	97	0.112		
	Total	10.963	99			

Table 14 indicates lack of statistical significant differences at level of ($\alpha = 0.05$) due to years of experience of the interpreter in all aspects as well as in the total score.

4.1 Discussion of the Findings

The First Question: "What is the evaluation level of the performance of sign language interpreter who accompanied the hearing impaired students in public and private universities from the hearing impaired perspective?"

The high level assessment of hearing impaired interpreters at the university level, the personal aspect came first, while the cognitive and professional aspects came after as these conclusions were in consistent with the study results by Alomeri (2009) in, which aimed to identify the required competencies for sign language interpreters as the personal skills were in the first position from the perspective of the deaf and sign language interpreters in Kingdom of Saudi Arabia, as included in item (13) which states as follows: "Having a friendly positive relationship with the impaired hearing students "came first place in the personal aspect, as a sign language in Jordanian universities accompanying impaired hearing students to lectures at various colleges as well as at the university facilities were the interpreters sometimes spend long time with them at the university as they concentrate on emphasis of the personal aspect to the interpreter with all their properties based on the success of the process for integrating the hearing impaired students at the university, this conclusion contradicts with a study conducted by (Melnk, 1999) which concluded a need for a professional standards for the interpreter profession.

Second question: Are there any statistically significant differences in the levels of evaluation of the performance of a sign language interpreter from the hearing impaired students in public and private universities attributable to the Hearing impaired students ' gender?

The answer for this question indicates a lack of statistical significant differences due to the gender variable on all dimensions, where this result is in consistent with the study conducted by (Boll, 2007), entitled "History of

interpretation education by American Sign Language where the study concluded presence of positive trends in general direction of sign language interpreters, where the hearing impaired students who enrolled in the university education stage have the same needs, as a sign language interpreter is trained to meet those needs for both genders, therefore, there is no statistical significant differences attributed to gender in addition that each hearing impaired student is accompanied by an interpreter from the same gender.

The Third Question: Are there any statistically significant differences in the levels of evaluation of the performance of a sign language interpreter from the hearing impaired students' perspectives in public and private universities attributable to interpreter gender?

Results indicated presence of statistical significant differences in favor of females on the personal aspect, this result is consistent with the result of Al Omari (2009) study, which confirms that there is statistical significant differences in favor of females on the personal aspect where this result is considered a logical one as females are more committed and have interest in the personal aspect than males, besides they are more successful in establishing personal relationships with hearing impaired students than males as they are more tolerant to the superiority of the female to male interpreters in this dimension.

The Fourth Question: Are there any statistically significant differences in the levels of evaluation of performance of a sign language interpreter from the hearing impaired Students perspectives in public and private universities attributable to their academic qualification?

The result indicates lack of statistical significant differences due to effectiveness of the academic qualification for impaired hearing students in all aspects except for the professional aspect attributable to diploma, where this conclusion is in consistent with the study of (Melnk, 1997) entitled "Role of sign language interpreters in kindergartens, until the fourth grade in the educational centers", the study also confirmed a need for a professional standards for the interpretation profession, where sign language compared with the spoken Arabic language is weak with its concepts which require implementing only indicative sign vocabulary to keep up with the progress, as the diploma students are more in need of a professional interpreter in the professional aspect, and because the student diploma, compared with graduate and undergraduate ones have less experience as required in the study after high school, therefore, there is a need for excellent interpreter in the professional field.

Fifth question: Are there any statistically significant differences in the levels of evaluation of the performance of a sign language interpreter from the hearing impaired students' perspectives in public and private universities attributable to interpreter's academic qualification?

The results indicates lack of statistical significant differences due to the effectiveness of the interpreter academic qualification in all aspects except for the professional aspect differences attributable to the diploma where this finding is consistent with the result with the study conducted by (Marschark et al., 2005) entitled "Access to education beyond high school through sign language interpretation" as the goal of this study is to identify the effectiveness of sign language interpreters for the deaf in the classroom, the study concluded that there were discrepancies regarding the importance of the students prefer the interpretation, and pointed out that deaf students gain less information from their fellow listeners, as they are weak in their school homework, the quality of education and the quality of interpretation as well.

The sixth question: Are there any statistically significant differences in the levels of evaluation of the performance of a sign language interpreter from the hearing impaired students' perspectives in public and private universities due to the years of experience of the interpreter?

The results show lack of statistical significant differences due to the years of experience of the interpreter in all aspects and in the total score. These conclusions are in consistent with the study conducted by (Cerney, 2004) entitled "Reciprocity Interpretation of American Sign Language (signal) through a hearing interpreter with another deaf", where this interpretation method requires two interpreters for the signal language one of them is deaf while the other one is listener. The study concluded that the interpretation process took 20% of the time, the study recommended a need for the interpretation has to be in accordance with certain rules and criteria as interpretation experience plays a minor role in the evaluation process, where the idea of providing each impaired hearing student with sign language interpreter as this idea is somewhat modern in which the interpreter are exposed to modern concepts to be interpreted for hearing impaired student, but what is important compliance with the rules and standards of the interpretation.

4.2 Recommendations

- A need for conducting further studies regarding the deaf skills in using sign languages.
- It is required to conduct further studies on the adequacy of the sign language interpreters from the prospective

of the deaf themselves.

- It is recommended to hold training for listeners about sign language, in order to integrate the deaf in the world of listeners.
- Doing the best efforts for preparing a unified signal language dictionary.
- Conducting training for the deaf about the use of scientific sign language.

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Appendix

The Study Instrument

Series	Paragraphs	Applicable Significantly	Applicable Moderately	Applicable with Low Degree	Not Applicable
First:	Personal Aspect				
1	Decent Appearance				
2	Healthy Limbs				
3	Having fast memory				
4	Having honesty in Interpretation				
5	Maintaining confidentiality delivery of information during the Interpretation				
6	Having the ability to adapt to new situations				
7	Having rapid common sense				
8	Having commitment and Punctuality				
9	Accepting constructive criticism				

10	Having interest in Interpretation Profession				
11	Having the ability to utilize time properly				
12	Having self- confidence in his capabilities				
13	Having the ability to interpret under pressure				
14	Having the ability to concentrate during the Interpretation				
15	Unashamed during Interpretation				
Second: Cognitive Aspect					
1	Having a wide range of disability culture and audio				
2	Having full knowledge in sign language				
3	holding a bachelor's degree as a minimum qualification				
4	Ability from spoken language into sign language and vice versa				
5	Ability to interpret rapidly				
6	Having accurate interpretation				
7	Having full knowledge of rules of sign language and its basis				
8	Ability to overcome the problems encountered during the interpretation				
9	Understanding Deaf gestures				
10	Reviewing recent research disability				
11	Having sufficient experience in dealing with the deaf				
12	Developing himself constantly in sign language				
13	Exchange experiences and knowledge with other interpreters in sign language				
Series	Paragraphs	Applicable Significantly	Applicable Moderately	Applicable with Low	Not Applicable

				Degree	
Third:	Professional Aspect				
1	Commitment in time and attendance				
2	Having harmonically movements during interpretation				
3	Taking into account the cultural differences between the impaired hearing				
4	Taking into account the social distinctions between the impaired hearing students				
5	Having the ability to interpret in different positions				
6	Having the ability to focus on the subject of interpretation				
7	Having the ability to deliver all the information				
8	Maintaining confidentiality and non-disclosure in scope of work				
9	Having the ability to use other methods of communication (body language, the eyes gestures)				
10	A flexible movements during interpretation				
11	Providing the necessary assistance for the disabled with impaired hearing when needed				
12	Providing feedback for the impaired hearing				
13	Having a positive relationship with the impaired hearing				

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