Teachers Attitudes About SignWriting

SIGNWRITING SYMPOSIUM 2015
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Teachers Attitudes About SignWriting

INTRODUCTION

SignWriting (SW) is a way to read and write sign language. It started and was first developed by Valerie Sutton in 1974. Teachers and parents began using SW all over the world.

• Some researches indicated to attitudes about SignWriting but attitudes was not studied specifically, **that is justify this study**
What is an attitude

It is "a relatively enduring organization of beliefs, feelings, and behavioral tendencies towards socially significant objects, groups, events or symbols" (Hogg, Vaughan, 2005).
Attitude

"..a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (Eagly, Chaiken, 1993).
Structure of Attitudes

- **Affective**: person’s feelings / emotions.
- **Behavioral**: attitude influences our behavior.
- **Cognitive**: person’s belief / knowledge.
Positive attitudes apparent in the following ways:

• Positive thinking.
• Constructive thinking.
• Creative thinking.
• Optimism.
• Motivation and energy to do things
• Accomplish goals.
• An attitude of happiness.
A positive helps in:

• Expecting success.
• Inspiring your feels.
• Passing obstacles.
• Converting failure and problems into success and chances.
• Enhancing abilities.
• Enhancing confidence of self-esteem.
• Sasson ( )
Attitudes about SW in researches

• Rosenberg, (1999). "sign language literacy" may open the door to literacy in an oral language.

• Success for this writing system is likely, as evidenced by its use in the deaf communities of many countries.
Rosenberg (1999) stated: Writing ASL would open many intellectual avenues to Deaf people.

She quoted: "I feel SignWriting will help them improve their skills in both languages" Cynthia Frey of Jordan Vocational High School
• Roald (2000) explained that SW is natural means of conserving and communicating signs when not in eye-to-eye contact with my audience.
Hoffman (2011) declared that positive attitude about SW related to ability of capture **nuance of** language and reflects the way it is signed.
Using SignWriting (paper format) will improve literacy rates among (a) the rural and isolated Deaf, (b) the older generation of Deaf, (c) the semi-literate Deaf (d), and the well connected, urban Deaf. Barreto (2014).
Stumpf (2014).

sign language writing, when incorporated in the education of deaf children, can represent a significant advance in the consolidation of a really bilingual education, as well as in the evolution of sign languages, and also indicates the possibility of new approaches to the teaching of oral language as a second language.
Madeson ( ). they are pleased in performing activities of reading and writing correctly by associating grapheme-phoneme and by comparing the signs they have already known.
Negative attitudes about SW

• **First** regards the small number of Deaf people who will need SW since Deafness is decreasing with the increase of cochlear implants.

• **Second** concern expressed was about the large amount of glyphs available for writing Maltese Sign Language (LSM). The large choice is ‘confusing’ when it comes to deciding on how to write LSM. (Galea, 2013)
Negative attitudes about SW

Frost (2014). Writing by hand takes too long and is impractical
Study problem

• What is the Teachers Attitudes About SignWriting?

• Is there significant differences between Teachers Attitudes About SignWriting according study variables?

• what are most frequented SW software?
The Goal

• In this study we want to investigate teachers attitudes and perspectives about SW.
Important of the study

It gives indicators

• how far SignWriting can go

• It gives indicators about abilities to pass the obstacles faced SignWriting users (Deaf people, parents, teachers, researchers..)
Study methodology and tool

Survey study conducted by applying questionnaire of three parts
1- Cover Letter.
2- Demographic information.
3- (14) Paragraph.

The primary copy consisted of 20 paragraphs it was reviewed by 5 reviewers (one of them was Valerie Sutton)
Validity, Reliability of the survey
Validity:
1- Correlation between paragraphs and total score.
2- Agreement of reviewers

<table>
<thead>
<tr>
<th>P</th>
<th>correlation</th>
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<tr>
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<td>.895**</td>
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<td>13</td>
<td>.429</td>
</tr>
<tr>
<td>14</td>
<td>.664**</td>
</tr>
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</table>

Reliability:
Cronbach's Alpha = .756 15
Participants

The survey distributed online

We got 17 responds
According to the variables of: Country, Sex, Education level, SW skills, SW model, SW experience, and SW software.
The participants was as following
# Participants by Country

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<tr>
<th>Valid</th>
<th>Brazil</th>
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<th>23.5</th>
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## Participants By Sex

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<th>Sex</th>
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<td>64.7</td>
<td>64.7</td>
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<td>100.0</td>
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<tr>
<td>Education</td>
<td>Frequency</td>
<td>Percent</td>
<td>Valid Percent</td>
<td>Cumulative Percent</td>
</tr>
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<td>23.5</td>
<td>23.5</td>
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<tr>
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<td>41.2</td>
<td>41.2</td>
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<td>17.6</td>
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<td>5.9</td>
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<td>11.8</td>
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### Participants by SW skills

<table>
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<th>Cumulative Percent</th>
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<td>Total</td>
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<td>100.0</td>
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<tr>
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<td>Low</td>
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<td>11.8</td>
<td>23.5</td>
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<tr>
<td>Just learn about it</td>
<td>2</td>
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<td>11.8</td>
<td>11.8</td>
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**Valid**
# Participants by SW model

<table>
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<th>Writing SW by</th>
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<th>Valid Percent</th>
<th>Cumulative Percent</th>
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<tr>
<td>Hands</td>
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<td>5</td>
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<td>31.3</td>
<td>31.3</td>
</tr>
<tr>
<td>Both (Hands &amp; Software)</td>
<td>11</td>
<td>64.7</td>
<td>68.8</td>
<td>100.0</td>
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<tr>
<td>Total</td>
<td>16</td>
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<td>100.0</td>
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<tr>
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<tr>
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## Participants by Education level

<table>
<thead>
<tr>
<th>Education</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
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<tr>
<td>Valid</td>
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<td>23.5</td>
<td>23.5</td>
<td>23.5</td>
</tr>
<tr>
<td>Master</td>
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<td>41.2</td>
<td>41.2</td>
<td>64.7</td>
</tr>
<tr>
<td>Diploma</td>
<td>3</td>
<td>17.6</td>
<td>17.6</td>
<td>82.4</td>
</tr>
<tr>
<td>Bach</td>
<td>1</td>
<td>5.9</td>
<td>5.9</td>
<td>88.2</td>
</tr>
<tr>
<td>other</td>
<td>2</td>
<td>11.8</td>
<td>11.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Results

• We made analysis of data to get the results as following
• To answer the first question: what is the attitude of the teachers (participants) about SW?
<table>
<thead>
<tr>
<th>Paragraph</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  SW appearance is acceptable.</td>
<td>4.2941</td>
<td>.68599</td>
</tr>
<tr>
<td>2  I use SW in communication.</td>
<td>3.8235</td>
<td>1.33395</td>
</tr>
<tr>
<td>3  I use SW in teaching Deaf students.</td>
<td>3.8824</td>
<td>1.31731</td>
</tr>
<tr>
<td>4  I use SW in my daily life.</td>
<td>3.9412</td>
<td>1.34493</td>
</tr>
<tr>
<td>5  SW helps in increasing spoken language vocabulary.</td>
<td>4.2353</td>
<td>.75245</td>
</tr>
<tr>
<td>6  SW helps in increasing sign language vocabulary.</td>
<td>4.52941</td>
<td>.624264</td>
</tr>
<tr>
<td>7  SW improves reading skills.</td>
<td>4.3529</td>
<td>.86177</td>
</tr>
<tr>
<td>8  SW helps in sign language skills.</td>
<td>4.5882</td>
<td>.61835</td>
</tr>
<tr>
<td>9  SW improves self-image for Deaf people.</td>
<td>4.3529</td>
<td>.70189</td>
</tr>
<tr>
<td>10 SW improves educational achievement for Deaf people.</td>
<td>4.2941</td>
<td>.77174</td>
</tr>
<tr>
<td>11 SW helps in applying (full inclusion) for Deaf students.</td>
<td>4.2941</td>
<td>.77174</td>
</tr>
<tr>
<td>12 SW improves translation levels between spoken and sign languages.</td>
<td>4.3529</td>
<td>.70189</td>
</tr>
<tr>
<td>13 Using SW makes sign language equal to spoken language.</td>
<td>4.1176</td>
<td>1.16632</td>
</tr>
<tr>
<td>14 SW is enjoyable.</td>
<td>4.5882</td>
<td>.61835</td>
</tr>
<tr>
<td>total score of attitudes</td>
<td>59.6471</td>
<td>8.91586</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td></td>
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### Ranking the attitudes

<table>
<thead>
<tr>
<th></th>
<th>Score 1</th>
<th>Score 2</th>
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<tr>
<td>Excellent</td>
<td>70</td>
<td>61</td>
</tr>
<tr>
<td>V.good</td>
<td>&lt;61</td>
<td>52</td>
</tr>
<tr>
<td>Good</td>
<td>&lt;52</td>
<td>43</td>
</tr>
<tr>
<td>Normal</td>
<td>&lt;43</td>
<td>34</td>
</tr>
<tr>
<td>Weak</td>
<td>&lt;34</td>
<td>25</td>
</tr>
<tr>
<td>Bad</td>
<td>&lt;25</td>
<td>16</td>
</tr>
</tbody>
</table>

#### Total score of attitudes

- Mean of total score = **59.6**
- Std. Deviation = **8.91**
• To answer the 2\textsuperscript{nd} question:
• Is there significant differences between Teachers Attitudes About SignWriting according study variables?
• We calculated means and Std. Deviation according study variables and we tested the significant of means differences as following:
<table>
<thead>
<tr>
<th>Country</th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>60.2500</td>
<td>4</td>
<td>6.55108</td>
</tr>
<tr>
<td>Colombia</td>
<td>55.0000</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>49.0000</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>58.3333</td>
<td>3</td>
<td>10.69268</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>68.0000</td>
<td>2</td>
<td>1.41421</td>
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<tr>
<td>Tunisia</td>
<td>70.0000</td>
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</tr>
<tr>
<td>United State</td>
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<td>59.9375</td>
<td>16</td>
<td>9.12483</td>
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</table>
### ANOVA

**total score of attitudes**

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
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</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>394.771</td>
<td>6</td>
<td>65.795</td>
<td>.693</td>
<td>.662</td>
</tr>
<tr>
<td>Within Groups</td>
<td>854.167</td>
<td>9</td>
<td>94.907</td>
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<tr>
<td>Total</td>
<td>1248.938</td>
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</table>
Differences according of sex

<table>
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<tr>
<th>Sex</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
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<tbody>
<tr>
<td>total score of</td>
<td>male</td>
<td>11</td>
<td>64.3636</td>
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<tr>
<td>attitudes</td>
<td>female</td>
<td>6</td>
<td>51.0000</td>
<td>6.41872</td>
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<table>
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<tr>
<th>t-test for Equality of Means</th>
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<tr>
<td>t</td>
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<tr>
<td>-------------------</td>
</tr>
<tr>
<td>total score of</td>
</tr>
<tr>
<td>attitudes</td>
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</tbody>
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Means according to **Education level**

<table>
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<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
</tr>
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<td>Ph.D</td>
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<td>9.29157</td>
</tr>
<tr>
<td>Master</td>
<td>57.0000</td>
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<td>10.80123</td>
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<tr>
<td>Diploma</td>
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<td>2.64575</td>
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<tr>
<td>Bach</td>
<td>56.0000</td>
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<tr>
<td>other</td>
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<td><strong>Total</strong></td>
<td>59.6471</td>
<td>17</td>
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### ANOVA according to Education level

<table>
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<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
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<td>Between Groups</td>
<td>294.382</td>
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<td>.492</td>
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<td>81.458</td>
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Means according SW skills

<table>
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<th>Mean</th>
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<th>Std. Deviation</th>
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# ANOVA according SW skills

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<th>ANOVA</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SW Skills</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Sum of Squares</strong></td>
<td>df</td>
</tr>
<tr>
<td>Between Groups</td>
<td>15.471</td>
</tr>
<tr>
<td>Within Groups</td>
<td>3.000</td>
</tr>
<tr>
<td>Total</td>
<td>18.471</td>
</tr>
</tbody>
</table>
Means according SW model

<table>
<thead>
<tr>
<th>Writing SW by</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>total score of attitudes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>both</td>
<td>11</td>
<td>62.7273</td>
<td>7.81141</td>
<td>2.35523</td>
</tr>
<tr>
<td>Software</td>
<td>5</td>
<td>56.8000</td>
<td>5.71839</td>
<td>2.55734</td>
</tr>
</tbody>
</table>
T test SW model

<table>
<thead>
<tr>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>Std. Error Difference</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
</table>

- Equal variances assumed
To answer the 3d question: what are most frequented SW software?

We asked the participants what are the most SW software (participant can chose more than one choice)

The results indicated that the most software used is SignPuddle Online 15 of 17

And no participant used SignWriter Studio
### Software frequency

<table>
<thead>
<tr>
<th>Software</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>SignPuddle Online</td>
<td>15</td>
</tr>
<tr>
<td>SignWriter Studio</td>
<td>0</td>
</tr>
<tr>
<td>Delegs Editor from Germany</td>
<td>6</td>
</tr>
<tr>
<td>SWEdit from Brazil</td>
<td>5</td>
</tr>
<tr>
<td>SignMaker 2015</td>
<td>3</td>
</tr>
<tr>
<td>SignWriter DOS</td>
<td>2</td>
</tr>
<tr>
<td>Other software</td>
<td>3</td>
</tr>
</tbody>
</table>
Discussion

- According to 1st question (What is the Teachers Attitudes About SignWriting?) : Attitudes about SW in general is positive

Means of responds on paragraphs :(P2)I use SW in communication. M= 3.82-(P14) SW is enjoyable .M= 4.5882 of 5

Mean of total score = 59.64

that shows positive high attitudes about sw.

This result give an impression that SW future will be fare good, it agree with the positive attitudes in (Galea, 2013, Abu shaira, 2002, 2007, Hoffman, 2011).
## Structure of attitude about SW

<table>
<thead>
<tr>
<th>Affective: person’s feelings / emotions</th>
<th>Behavioral: attitude influences our behave</th>
<th>Cognitive: person’s belief / knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-SW appearance is acceptable</td>
<td>2- I use SW in my daily life</td>
<td>5. SW helps in increasing spoken</td>
</tr>
<tr>
<td>14-SW is enjoyable</td>
<td>3- I use SW in teaching Deaf students</td>
<td>language vocabulary</td>
</tr>
<tr>
<td></td>
<td>4- I use SW in communication</td>
<td>6. SW helps in increasing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>sign language vocabulary</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7. SW improves reading skills</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8. SW helps in sign language skills</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9. SW improves self-image for Deaf</td>
</tr>
<tr>
<td></td>
<td></td>
<td>people</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10. SW improves educational</td>
</tr>
<tr>
<td></td>
<td></td>
<td>achievement for Deaf people</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11. SW helps in applying (full</td>
</tr>
<tr>
<td></td>
<td></td>
<td>inclusion) for Deaf students</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12. SW improves translation levels</td>
</tr>
<tr>
<td></td>
<td></td>
<td>between spoken and sign languages</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13. Using SW makes sign language</td>
</tr>
<tr>
<td></td>
<td></td>
<td>equal to spoken language</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Discussion

• According to 2\textsuperscript{nd} question: Is there significant differences between Teachers Attitudes according study variables?

There are no significant differences between Teachers Attitudes according to variables (: Country, Education level, SW skills, SW model, and SW experience.).
Discussion

• These results can be explained in the light of easier learning of SW.

Greater benefit of SW in daily life and communication, and education. That is agree with all researches conducted on SW (Flood, 2002; Abushair, 2007; Galea, 2013).
Discussion

but there are significant differences between Teachers Attitudes according to sex favor of male. that is maybe refers to higher level of anxiety in learning writing among female than its level among male. Muhaisen, Al-Haq (2012).
For SW software it was obvious that SignPuddle is the most used software to write sign language that maybe refers to grate support from Valerie Sutton and Steve Slevinski, and the ability to access online that is facilitating its use.
Recommendations

• We need more investigation of community and decision maker attitudes.
• We need more investigation about real rejection reasons of SW in some areas in the world.
References

• Eagly and Chaiken (1993), in a highly influential textbook, defined attitudes as
• Galea, Maria. (2014). SignWriting (SW) of Maltese Sign Language (LSM) and its development into an orthography: Linguistic considerations. A dissertation submitted in fulfilment of the requirements for the degree of Doctor of Philosophy in Linguistics, Institute of Linguistics, University of Malta, Malta 2014
• Muhaisen, Mahda, Al-Haqq, Al-Abed. (2012). DIRECTORATE OF EDUCATION. International Journal of Humanities and Social Science Vol. 2 No. 6 [Special Issue – March 2012]