Questionnaires as a Methodology for Investigating Awareness of the Translation Relationship between L1 and L2 Sentences

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Abstract: This study tries to propose using questionnaires in L1 and L2 as a method for investigating awareness of the translation relationship between L1 and L2 sentences by EFL learners at the intermediate level. The participants in this study were Jordanian university students majoring in computer science with Arabic as L1 and English as L2. They were given two versions of a questionnaire; one in Arabic and another in English, to elicit their attitudes towards technology. Then, they were interviewed to find out if they were aware of the translation relationship between the two versions of the questionnaire. The results show that the correlation between the students’ responses to most items on L1 and L2 questionnaires was not generally high. The results also show that the students' responses in the interview indicated that few of them were aware of the translation relationship between the two questionnaires. These results support the Linguistic Threshold Hypothesis regarding the relationship between L1 and L2 reading comprehension, and they indicate that questionnaires can be used as a method for investigating the translation relationship between L1 and L2 sentences. The results also indicate that L2 questionnaires can be a particularly challenging genre for L2 learners.

1. Introduction

Research on the relationship between L1 and L2 reading comprehension has been based on two main hypotheses. The first is the Linguistic Threshold Hypothesis (LTH) which states that achieving a certain level of second language linguistic ability is necessary for reading in that language. Evidence for this theory was provided by several empirical studies (Clarke 1979; Cziko 1980; Brown & Haynes 1985; Bernhardt 1986; Koda 1987; Allen; Bernhardt; Berry & Demel 1988). The second is the Linguistic Interdependence Hypothesis (LIH) which states that reading performance in a second language is largely affected by the reading ability in the first language. Evidence for this hypothesis was provided by several empirical studies (Cummins 1979; 1991; Mclaughlin 1987; Lee & Musumeci 1988; Bossers 1991). However, evidence supporting either hypothesis does not always seem to be direct and could sometimes be complex.

The synthesis of research supporting both hypotheses indicates that foreign language learners’ will not be able to use the reading strategies they have developed in their first language unless they
achieve a certain level of proficiency in the foreign language (Alderson 1984; Lee & Schallert 1997; Droop & Verhoeven 2003). This linguistic threshold tends to vary with the learner’s cognitive development, his/her background knowledge and the linguistic demand placed on him/her by a certain task (Cummins 1979).

Research has also shown that reading comprehension in L1 is based in addition to the reader’s linguistic ability on his/her general knowledge of the world or schemata. Several studies on adult native speakers of English showed that reading comprehension is improved by more access to background knowledge about either the content area of a text (Grabe 1991) or the rhetorical structure of the text (Kintsh 1977; Mandler 1978). This type of research which is based on schema theory considers reading as an interactive process between bottom up and top down skills in which various aspects of reading such as word recognition, eye movement, and background knowledge contribute to the reading process (Grabe 1995).

Research on the effect of schemata on second language reading comprehension has dealt basically with ESL and EFL learners. Several studies showed L2 learners seem to understand better texts for which they have well developed background knowledge (Johnson 1981; Carrell 1981a; 1983; 1985) or rhetorical structure (Carrell 1981b). The restricted linguistic ability of L2 learners and their lack of automaticity in reading make it more difficult for them to use contextual cues that L1 readers use; therefore, they attend more to bottom up processes than L1 readers (Williams & Moran 1989; Grabe 1991; Segalowitz; Poulsen & Komoda 1991; Silberstein 1994). Paran (1996) believes that L2 learners should be encouraged to rely on bottom up strategies to become more proficient. Other researchers believe that since much of the disadvantage of L2 readers seems to be related to the lack of well developed automatized skills, they need to make use of background knowledge, context and task to achieve their goal (Segalowitz 1986; Wallace 1992).

Research on L2 reading comprehension has usually been concerned with the sentence level, the paragraph level or texts beyond the paragraph level. However, reading in L2 may sometimes involve tasks which cannot be classified at any of these levels, such as application forms or questionnaires. This study tries to propose using questionnaires in L1 and L2 as a method for evaluating reading comprehension in L2 in order to investigate EFL learners’ awareness of the translation relationship between L1 and L2 sentences. This procedure has not been commonly used for evaluating L2 reading comprehension compared to a variety of other methods which have been frequently used to evaluate the reading process. These methods include comprehension questions (Sim 1979), cloze procedures.
(Bensoussan 1984; Levenston; Nir; & Blum-Kulka 1984; Mauranen 1988), text recall (Conner 1984; Carrell 1985) and translation (Bensoussan 1990). Bensoussan (1990) believes that translation can be an efficient measure of reading in a foreign or second language because only adequately translated items indicate that they are properly understood. The evaluation method that was used in this study was related to the Bensoussan (1990) procedure, yet the students' role was different. While in the Bensoussan study the participants were asked to translate narratives and expository texts, in this study the students were required to respond to the same items given in two questionnaires: one in their L1 and the other in L2. It is expected that the students' responses to the questionnaires in L1 and L2 will indicate their awareness of the translation relationship between the items on the two questionnaires, and consequently their reading comprehension proficiency in L2.

2. The Study

2.1 Participants
The participants in this study were thirty-six Arabic speaking second year university students majoring in computer science at the University of Applied Sciences in Jordan. They were twenty-seven males and nine females who have studied English as a foreign language at school for a minimum of eight years with an average of five to six hours weekly. They also have studied English as a foreign language at the university for two semesters with an average of three hours weekly. It is assumed that these students have passed the linguistic threshold in English as a foreign language because all of them have passed the English language test which is a component of the High School General Examination (Tawjehee). However, this assumption might not always be valid because this exam is more of an achievement test rather than a proficiency test, and those who pass it may not necessarily pass the linguistic threshold in English as a foreign language.

2.2 Data collection
The data on which this study was based consisted of two parts. The first part consisted of the participants' responses to two questionnaires; one in Arabic and the other in English. The second consisted of their responses to an interview on the translation relationship between the items in the two questionnaires. The two questionnaires were on the students' attitudes towards technology, and they consisted of the same items given in the same order; but one was in Arabic, and the other was in English. The items were checked by computer science professors who confirmed that they did not involve extraneous knowledge. They were also checked by English language professors who confirmed that
the grammatical structure and the vocabulary used were appropriate for second year university students who are not majoring in English.

Each questionnaire consisted of twenty-nine items, each expressed in one sentence. The first four items dealt with background information like age, gender, subject of study and whether the student was left or right handed. The fifth item required the student to indicate whether he/she likes to learn new things by himself/herself, by instructions or by supervision. The following twenty-two items were about the student’s feelings towards technology. For each of these items, the student had to indicate his/her response on a five point scale with “True” as the first point and “False” as the fifth. Six of these items dealt with the student’s activities and hobbies; and whether they involve doing things in a certain order; or they have to do with tools, equipment and machines; and how they work. Eleven items had to do with the student’s attitudes towards learning how to use computers, and if he/she thinks that using computers will improve his/her work. The last seven items dealt the student’s early attitudes and experiences with technology at home. Basically, they had to do with the attitudes of the student’s parents towards equipment, and if they allowed him/her to use it. At the end of the questionnaires there was an open-ended question for comments.

The items on the questionnaires were constructed to be about attitudes towards technology and computers because the students were majoring in computer science, and this topic is related to their field of study. As mentioned earlier, research has shown that background knowledge or schemata plays an important role in facilitating the reading comprehension process (Grabe 1991).

The administration of the questionnaires was conducted by the researcher in the presence of the subject professor. The students were told that they were taking part in a study on the attitudes towards technology, and they were going to respond to two questionnaires; one in Arabic and the other in English. However, they were not told that these questionnaires were actually a translation of one another. They were also told that they can ask about the meaning of any unfamiliar word. The Arabic version of the questionnaire was administered first; and the students were instructed that once they have finished responding to it, they can immediately take the English one and complete it.

The researcher conducted short interviews with the students immediately after they responded to the two questionnaires. Each student was asked if he/she noticed any similarity between the items on the Arabic questionnaire and the English one, and the response was recorded on his/her questionnaires.
2.3 Data analysis
The data was analyzed quantitatively using SPSS statistical program. Only the responses to 27 items on the two versions of the questionnaire were considered in the analysis. The two items which were not considered in the analysis were about age and gender. These items were multiple choice questions which all the students answered identically in the two languages. Also the section which had to do with comments at the end of the questionnaires was not considered in the analysis because no student provided any comment in either language. The students' responses to the twenty-seven items on each version of the questionnaire were analyzed separately; then, they were compared and correlated.

2.4 Results and discussion
The analysis of the students’ responses to the Arabic and the English questionnaires shows differences in their answers to the same items in the two languages. The correlation between their responses to the two questionnaires was significantly high for only seven items, as illustrated in Table 1[Appendix I below].

The figures in Table 1 show that the correlation between the students’ responses to only seven items in the two versions of the questionnaire was significantly high. It was 0.646 to 0.669 for 4 items, and 0.706, 0.849 and 0.916 for one item each. The highest correlation, 0.916, was for the students' responses for the item on the subject they study, which was expected. Another high correlation, 0.849, was for their responses to the item that had to do with working with machines like cars and stereos. This could be due to the fact that this item provided examples which might have helped the students understand it. In fact, this is the only item on the questionnaire that included examples.

On the other hand, the correlation between the student's responses in English and Arabic was significantly low for eleven items, as can be seen in Table 2 [Appendix I below]. The figures in Table 2 show that the correlation between the students’ responses to eleven items in the two versions of the questionnaire was significantly low. It was 0.344 to 0.396 for seven items, and 0.425 to 0.481 for four items. The correlation for these four items could be considered as being around the border line rather than low. It is noticeable that the correlation was unexpectedly low, 0.349, for the responses to the item that has to do with using the right or the left hand. This could be due to misunderstanding the item as having to do with the direction of writing which is left in English and right in Arabic.

The results also show that the correlation between the students’ responses to remaining items on the two versions of the questionnaire was not significant as can be seen in Table 3 [Appendix I below]. The
figures in Table 3 show that the correlation between the students’ responses to 9 items on the two versions of the questionnaire was low and varied between 0.121 and 0.193.

To sum up, the results indicate that the responses of the participants in the two languages were highly correlated for only seven items, which is around only 25.9% of the total number of the items considered in the analysis. On the other hand, it was significantly low for eleven items, which is around 40.7% of the items considered in the analysis. This indicates that the students were not aware of the translation relationship between the items in L1 and L2. This means that they have a reading comprehension problem when dealing with L2 questionnaires. This finding supports the Linguistic Threshold Hypothesis (LTH) which states that achieving a certain level of second language linguistic ability is necessary for reading in that language.

One explanation for the results could be that these students might not have passed the linguistic threshold in English as a foreign language although have already passed the English language test, which is a part of the High School General Examination. This could be due to the fact that the high school English exam in Jordan, as mentioned earlier, is generally an achievement rather than a proficiency test. It is recommended that this examination be revised to become more of a proficiency test.

Another explanation could be that the students were not provided with adequate practice in reading comprehension of questionnaires in English as a foreign language. In fact, most reading comprehension lessons in EFL textbooks used in Jordanian public schools curricula concentrate on reading passages, and give little attention to other genres, especially, questionnaires. It is recommended that curriculum developers and material writers include reading comprehension exercises that cover a range of different genres including questionnaires.

The analysis of the students’ responses to the interview question indicated that although they were aware that the items on the two questionnaires were somehow similar, only 20% of them were aware that these questionnaires were actually a translation of one another. These results show that the students’ awareness of the translation relationship between L1 and L2 sentences and consequently, their reading comprehension in L2 was below expectation. This lack of awareness of the translation relationship between the two versions of the questionnaire could again be due to the little attention given to translation practice. In fact, translation exercises are rarely included in reading comprehension lessons in EFL textbooks used in Jordanian public schools curricula. Although using translation in a foreign language lesson has been a controversial issue; it can be considered an
efficient measure of students' comprehension of what they read in that language (Bensoussan 1990). It is recommended that EFL curriculum developers and material writers include translation exercises in the reading comprehension lessons in EFL textbooks. It is also proposed that awareness of translation between L1 and L2 sentences be used as an evaluating method of L2 reading comprehension.

3. Conclusion

The results of the study provide additional evidence supporting the Linguistic Threshold Hypothesis for the relationship between L1 and L2 reading comprehension. These results also show that questionnaires can be used as a methodology for investigating the awareness of the translations relationship between L1 and L2 sentences. In addition, they show that this awareness can be used a method for investigating and evaluating L2 reading comprehension. Furthermore, they indicate that L2 reading comprehension is affected by the type of genre the learners have to deal with, and that L2 questionnaires seem to be a challenging genre for L2 learners Therefore, it is recommended that L2 curriculum developers and material writers include various kinds of genres and translation exercises in reading comprehension lessons. It is also proposed that awareness of translation between L1 and L2 items be considered as one of the evaluation methods of L2 reading comprehension.

References


Appendix I: Tables 1-3

*Table 1: Significant high correlation between the students’ responses to items in Arabic and English*

<table>
<thead>
<tr>
<th>No.</th>
<th>Question in English</th>
<th>Question in Arabic</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Subject you study.</td>
<td>?almaaddah allati</td>
<td>0.916**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>tadrusaha.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>I enjoy finding out</td>
<td>?astamtif bima</td>
<td>0.706**</td>
</tr>
<tr>
<td></td>
<td>how things work.</td>
<td>rifat tariqat</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>amal il?ashya?.</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>I like to work with</td>
<td>?uhib ?an ?a?mal</td>
<td>0.849**</td>
</tr>
<tr>
<td></td>
<td>machines e.g. cars,</td>
<td>bil ?aalaat</td>
<td></td>
</tr>
<tr>
<td></td>
<td>sewing, stereos.</td>
<td>mithil issyyarat</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>wamakinaat ilkiyatah</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>wastiiryuhaat.</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>I like to repair</td>
<td>Uhib ta?liih il?</td>
<td>0.659**</td>
</tr>
<tr>
<td></td>
<td>machines.</td>
<td>?aalat.</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>I am afraid of</td>
<td>?akaf ?an ?a?tab</td>
<td>0.646**</td>
</tr>
<tr>
<td></td>
<td>damaging the</td>
<td>jihaz ilkumbyuter</td>
<td></td>
</tr>
<tr>
<td></td>
<td>computer if I use</td>
<td>?itha istakdamtuh.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>it.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>I am afraid of</td>
<td>?akaf ?an ?abdu</td>
<td>0.667**</td>
</tr>
<tr>
<td></td>
<td>looking silly if I</td>
<td>sakiifan ?itha</td>
<td></td>
</tr>
<tr>
<td></td>
<td>make a mistake while</td>
<td>irtakabtu galtah</td>
<td></td>
</tr>
<tr>
<td></td>
<td>using the computer.</td>
<td>ma ?athna? istikdam</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ilkumbuter.</td>
<td></td>
</tr>
</tbody>
</table>
I am afraid of looking silly if I am seen by others not knowing how to use the computer.

Table 2: Significant low correlation between the students’ responses to items in Arabic and English.

<table>
<thead>
<tr>
<th>No.</th>
<th>Question in English</th>
<th>Question in Arabic</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Are you left or right handed?</td>
<td>hal tastakdim yadika ilyumnaa 'am ilyusraa?</td>
<td>0.349*</td>
</tr>
<tr>
<td>5</td>
<td>Please indicate how you prefer to learn new things.</td>
<td>?arraja? il?isharah il?laa kayfiyat il?ta?ak il?wilawiyyah lidirasat il?ashya?</td>
<td>0.393**</td>
</tr>
<tr>
<td>7</td>
<td>I enjoy hobbies or activities which involve doing things in a specific order.</td>
<td>?astamti bilhiwayat il?aqqad jiddan binwisba li?i?lafhamuh</td>
<td>0.382*</td>
</tr>
<tr>
<td>8</td>
<td>I enjoy hobbies or activities which involve following instruction.</td>
<td>?astamti bilhiwayat il?aqqad jiddan binwisba li?i?lafhamuh</td>
<td>0.425**</td>
</tr>
<tr>
<td>10</td>
<td>I am taking this subject primarily because I hope it will improve my working performance.</td>
<td>?adrus hathihi ilmaddah fi ilmaqaam il?awwal li?annani tatamanna 'an tu?assin min ?ada?i il?amali.</td>
<td>0.396**</td>
</tr>
<tr>
<td>13</td>
<td>I think computers are too complicated for me to understand.</td>
<td>Bi?taqadii ?anna ilkumbuter mu?aqqad jiddan binnisba li li?afhamuh</td>
<td>0.344*</td>
</tr>
<tr>
<td>14</td>
<td>I want to be good at whatever I do.</td>
<td>?u?rid 'an ?akuun jayyidan bi?i?ayyi ?amal ?aquum bih.</td>
<td>0.441**</td>
</tr>
<tr>
<td>17</td>
<td>I prefer working with computer rather than humans.</td>
<td>ufaddil atta?amul ma? ilkumbuter badal min atta?amul ma? innas.</td>
<td>0.481**</td>
</tr>
<tr>
<td>21</td>
<td>Computers are fun to use.</td>
<td>?istiikdaam ilkumbuter ?amr musali.</td>
<td>0.389**</td>
</tr>
<tr>
<td>23</td>
<td>I used to help my family repair equipment.</td>
<td>?u?du 'ala musaa?adat ?usrati fii ta'sliih ilmu?addat.</td>
<td>0.377*</td>
</tr>
</tbody>
</table>
Table 3: Non-significant correlation between students’ responses to questions in Arabic and English

<table>
<thead>
<tr>
<th>No.</th>
<th>Question in English</th>
<th>Question in Arabic</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>I enjoy hobbies or activities which involve working with tools or equipment.</td>
<td>?astamṭīr bilhiwayat ?aw innashāṭat illati tata?alaq bistikdaam il?aalaat ?aw ilmu?addat.</td>
<td>0.187</td>
</tr>
<tr>
<td>15</td>
<td>I prefer to use computers myself rather than someone uses the computer for me.</td>
<td>ufaddīl ?an ?astakdim ilkumbuter binafsī badalan ?an yastakdimuḥu shaksan ?aakar li.</td>
<td>0.122</td>
</tr>
<tr>
<td>20</td>
<td>The impersonal nature of computers bothers me.</td>
<td>tuz?i?uñi āṭabīt?a ilg ayr shaksiyyah ilkumbuter.</td>
<td>0.115</td>
</tr>
<tr>
<td>24</td>
<td>I was allowed to use dangerous equipment.</td>
<td>kaan mās?u?li istikdaam ilmu?addaat illātirah.</td>
<td>0.193</td>
</tr>
<tr>
<td>25</td>
<td>My family made sure that broken equipment was repaired promptly.</td>
<td>kaana ?usratii tata?akkad min ?anna ilmu?addaat ilmāksurah yatim tasliḥahaa fi ilhāl.</td>
<td>0.117</td>
</tr>
<tr>
<td>26</td>
<td>I was at least mildly hurt by Machine.</td>
<td>juriḥt ?ala il?aqal biṣūrah tafīfah biwasiṭat ?aalah.</td>
<td>0.149</td>
</tr>
<tr>
<td>25</td>
<td>I was encouraged to explore how machines worked.</td>
<td>shujjiṭt ?ala āktishaf ṭariqat āmal il?aalaat.</td>
<td>0.191</td>
</tr>
<tr>
<td>26</td>
<td>My parents repaired equipment themselves.</td>
<td>Kaana waalidayy yuṣliḥah ilmu?addat bi?anfusihama.</td>
<td>0.114</td>
</tr>
<tr>
<td>27</td>
<td>I was frightened by some kind of equipment.</td>
<td>kunt ?akaaf min ba?d ?anwāf ilmu?addat.</td>
<td>0.121</td>
</tr>
</tbody>
</table>

Appendix 2: List of Symbols
1. ?  Glottal stop
2. d  Laryngeal voiced stop
3. g  Velar voiced fricative
4. h  Pharyngeal voiceless fricative
5. k  Velar voiceless fricative
6. s  Laryngealized voiceless alveolar fricative
7. õ  Laryngeal voiceless alveolar stop
8. ŋ  Pharyngeal voice fricative

Appendix 3: Technology Attitudes Questionnaire
1. Your age?   ( ) 15-20 ( ) 21-25 ( ) 26-30 ( ) 31-35
2. Your gender? ( ) Male       ( ) Female
3. Subject you study now?___________________________
4. Are you left or right handed? ( ) Right   ( ) Left   ( ) Both
5. Please indicate how you prefer to learn new things (Tick one of the
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following boxes):
   ( ) Being shown and then experimenting by myself
   ( ) Being shown and then trying whilst supervised
   ( ) Working it out by myself

When answering the following questions please circle the answer that most appropriate reflects your feelings on the 5-point scale provided.

6. I enjoy finding out how things work.
   True 1 ------ 2 ------ 3 ------ 4 ------ 5 False

7. I enjoy hobbies or activities which involve doing things in a specific order.
   True 1 ------ 2 ------ 3 ------ 4 ------ 5 False

8. I enjoy hobbies or activities which involve following instructions/recipes.
   True 1 ------ 2 ------ 3 ------ 4 ------ 5 False

9. I enjoy hobbies or activities which involve working with tools or equipment
   True 1 ------ 2 ------ 3 ------ 4 ------ 5 False

10. I am taking this subject primarily because I hope it will improve my working performance.
    True 1 ------ 2 ------ 3 ------ 4 ------ 5 False

11. I like to work with machines e.g. cars, sewing machines, stereos.
    True 1 ------ 2 ------ 3 ------ 4 ------ 5 False

12. I like to repair machines.
    True 1 ------ 2 ------ 3 ------ 4 ------ 5 False

13. I think computers are too complicated for me to understand.
    True 1 ------ 2 ------ 3 ------ 4 ------ 5 False

14. I want to be good at whatever I do.
    True 1 ------ 2 ------ 3 ------ 4 ------ 5 False

15. I prefer to use computers myself rather than someone uses the computer for me.
    True 1 ------ 2 ------ 3 ------ 4 ------ 5 False

16. I am afraid of damaging the computer if I use it.
    True 1 ------ 2 ------ 3 ------ 4 ------ 5 False

17. I prefer working with computers rather than humans.
    True 1 ------ 2 ------ 3 ------ 4 ------ 5 False

18. I am afraid of looking silly if I make a mistake whilst using the computer.
    True 1 ------ 2 ------ 3 ------ 4 ------ 5 False

19. I am afraid of looking silly if I am seen by others not to know how to use the computer.
    True 1 ------ 2 ------ 3 ------ 4 ------ 5 False

20. The impersonal nature of computers bothers me.
    True 1 ------ 2 ------ 3 ------ 4 ------ 5 False

21. Computers are fun to use.
    True 1 ------ 2 ------ 3 ------ 4 ------ 5 False

22. I think computers can help me to work better.
    True 1 ------ 2 ------ 3 ------ 4 ------ 5 False

Early Attitudes and Experiences
Please indicate by circling the response which most accurately reflects what your feeling were towards the following, whilst you were growing up:

23. I used to help my family repair equipment.
    True 1 ------ 2 ------ 3 ------ 4 ------ 5 False
24. I was allowed to use dangerous equipment.
True 1 ------ 2 ------ 3 ------ 4 ------ 5 False
25. My family made sure that broken equipment was repaired promptly.
True 1 ------ 2 ------ 3 ------ 4 ------ 5 False
26. I was at least mildly hurt by a machine.
True 1 ------ 2 ------ 3 ------ 4 ------ 5 False
27. I was encouraged to explore how machines worked.
True 1 ------ 2 ------ 3 ------ 4 ------ 5 False
28. My parents repaired equipment themselves.
True 1 ------ 2 ------ 3 ------ 4 ------ 5 False
29. I was frightened by some kind of equipment.
True 1 ------ 2 ------ 3 ------ 4 ------ 5 False

Comments:

Appendix 4: istibian al?itijahaat nahwa itiknolojia
1. ?umrak ( ) 15-20 ( ) 21-25 ( ) 26-30 ( ) 31-35
2. jinsak ( ) thakar ( ) 3. ?almaaddah allati tadrusaha. ------------------------------------------
4. hal tastak dim yadika ilyumnaa ( ) ?alyumnaa ( ) ?alyusraa?
( ) Kilahumaa
( ) ?ardiha wa min thamma ?aqum biktibariha binafi.
( ) ?ardiha wa min thamma ?u?awil ?athnaa? il?shraaf
( ) unjizha binafi
6. ?astamti bima rifat tariqat amal il?ashya?: na
am 1- 2- 3- 4- 5 laa
mu?ayyan.: na?am 1- 2- 3- 4- 5 laa
8. ?astamti bilhiwayat aw innashaat illati tataalaq bittiba? ta?liimat
wawasfat mu?ayyana.: na?am 1- 2- 3- 4- 5 laa
9. ?astamti bilhiwayat aw innashaat illati tataalaq bistikdaam il?aalaat aw
ilmu?addat. : na?am 1- 2- 3- 4- 5 laa
tuhassin min ?ada?i il?amali.: na?am 1- 2- 3- 4- 5 laa
wastiiryuhaa. : na?am 1- 2- 3- 4- 5 laa
na?am 1- 2- 3- 4- 5 laa
na?am 1- 2- 3- 4- 5 laa
na?am 1- 2- 3- 4- 5 laa
15. ufaddil ?an ?astakdim ilkumbyuter binafi badalan ?an yastakdimimu shaksan
?akkar li.: na?am 1- 2- 3- 4- 5 laa
na?am 1- 2- 3- 4- 5 laa
na?am 1- 2- 3- 4- 5 laa
20. tuz?un? a?ataf?a ilgayr shaksiiyyah ilkumbuter. na?am 1 - 2 - 3 - 4 - 5 laa
21. ?istikdaam ilkumbuter ?amr musali. na?am 1 - 2 - 3 - 4 - 5 laa Ittijahat wkibrat mubakkirah

27. shujji? ?ala iktishaf tariqat ?amal il?alaat. na?am 1 - 2 - 3 - 4 - 5 laa
28. Kaana waalidayy yuslihan ilmu?addat bi?anfusihima. na?am 1 - 2 - 3 - 4 - 5 laa