

Appendix 1. Analysis of lexical features

| Lexical Features Groups | Indices                             | Main Effect |                |                   |                | Interaction            |                |
|-------------------------|-------------------------------------|-------------|----------------|-------------------|----------------|------------------------|----------------|
|                         |                                     | Attempt     |                | Proficiency Group |                | Attempt-by-Proficiency |                |
|                         |                                     | F(2, 1118)  | <i>p</i> value | F(2, 559)         | <i>p</i> value | F(4, 1118)             | <i>p</i> value |
| Word Information        | MRC_Familiarity_CW                  | 7.32        | < .001         | 63.28             | < .001         | 0.14                   | .966           |
|                         | MRC_Concreteness_CW                 | 0.43        | .653           | 5.09              | .006           | 0.50                   | .738           |
|                         | MRC_Imageability_CW                 | 0.26        | .774           | 6.56              | .002           | 1.13                   | .342           |
|                         | MRC_Familiarity_FW                  | 0.17        | .846           | 16.21             | < .001         | 0.33                   | .864           |
|                         | MRC_Concreteness_FW                 | 2.80        | .061           | 55.25             | < .001         | 1.06                   | .374           |
|                         | MRC_Imageability_FW                 | 3.14        | .043           | 63.34             | < .001         | 1.95                   | .100           |
|                         | MRC_Meaningfulness_FW               | 3.08        | .047           | 71.71             | < .001         | 2.12                   | .076           |
| Frequency               | BNC_Written_Freq_CW_Log             | 4.73        | .009           | 36.54             | < .001         | 0.71                   | .588           |
|                         | BNC_Spoken_Freq_CW_Log              | 7.08        | < .001         | 75.16             | < .001         | 0.30                   | .877           |
|                         | BNC_Written_Freq_FW_Log             | 1.15        | .318           | 30.58             | < .001         | 1.23                   | .296           |
|                         | BNC_Spoken_Freq_FW_Log              | 0.37        | .692           | 12.68             | < .001         | 0.64                   | .632           |
|                         | BNC_Spoken_Bigram_Normed_Freq_Log   | 0.37        | .689           | 15.08             | < .001         | 1.38                   | .240           |
|                         | BNC_Written_Bigram_Freq_Normed_Log  | 0.07        | .931           | 4.12              | .017           | 0.68                   | .608           |
|                         | BNC_Spoken_Trigram_Normed_Freq_Log  | 0.15        | .863           | 3.72              | .025           | 0.47                   | .757           |
|                         | BNC_Written_Trigram_Freq_Normed_Log | 2.25        | .106           | 26.36             | < .001         | 0.35                   | .842           |
|                         | BNC_Spoken_Bigram_Proportion        | 0.44        | .643           | 4.42              | .012           | 0.43                   | .790           |
|                         | BNC_Written_Bigram_Proportion       | 0.07        | .934           | 4.98              | .007           | 0.53                   | .714           |

| Lexical Features Groups | Indices                        | Main Effect |                |                   |                | Interaction            |                |
|-------------------------|--------------------------------|-------------|----------------|-------------------|----------------|------------------------|----------------|
|                         |                                | Attempt     |                | Proficiency Group |                | Attempt-by-Proficiency |                |
|                         |                                | F(2, 1118)  | <i>p</i> value | F(2, 559)         | <i>p</i> value | F(4, 1118)             | <i>p</i> value |
| Frequency - continued   | BNC_Spoken_Trigram_Proportion  | 0.38        | .687           | 1.86              | .156           | 0.47                   | .760           |
|                         | BNC_Written_Trigram_Proportion | 0.01        | .996           | 10.86             | < .001         | 0.35                   | .841           |
| Range                   | BNC_Written_Range_CW           | 4.67        | .009           | 35.05             | < .001         | 1.21                   | .305           |
|                         | BNC_Spoken_Range_CW            | 7.25        | < .001         | 71.95             | < .001         | 0.51                   | .729           |
|                         | BNC_Written_Range_FW           | 0.01        | .996           | 19.88             | < .001         | 1.14                   | .335           |
|                         | BNC_Spoken_Range_FW            | 0.34        | .711           | 17.55             | < .001         | 1.08                   | .367           |
| Diversity               | MATTR                          | 6.05        | .002           | 67.57             | < .001         | 0.98                   | .417           |
|                         | MTLD                           | 8.11        | < .001         | 48.05             | < .001         | 0.66                   | .620           |

Appendix 2. Analysis of cohesion features

| Cohesion<br>Feature<br>Groups | Indices                                 | Main Effect   |                   |                      |                   | Interaction                |                   |
|-------------------------------|---|---------------|-------------------|----------------------|-------------------|----------------------------|-------------------|
|                               |   | Attempt       |                   | Proficiency<br>Group |                   | Attempt-by-<br>Proficiency |                   |
|                               |   | F(2,<br>1118) | <i>p</i><br>value | F(2,<br>559)         | <i>p</i><br>value | F(4,<br>1118)              | <i>p</i><br>value |
| Givenness                     | Pronoun_Density                         | 0.25          | .777              | 2.57                 | .077              | 0.81                       | .521              |
|                               | Pronoun_Noun_Ratio                      | 0.01          | .990              | 1.93                 | .146              | 0.43                       | .786              |
|                               | Repeated_Content_Lemmas                 | 7.39          | < <b>.001</b>     | 12.73                | < <b>.001</b>     | 1.99                       | .094              |
|                               | Repeated_Content_and<br>_Pronoun_Lemmas | 5.45          | <b>.004</b>       | 9.86                 | < <b>.001</b>     | 1.75                       | .138              |
| Connectives                   | Basic_Connectives                       | 0.62          | .541              | 24.01                | < <b>.001</b>     | 0.25                       | .911              |
|                               | Conjunctions                            | 0.55          | .579              | 5.66                 | <b>.004</b>       | 1.55                       | .186              |
|                               | Disjunctions                            | 0.98          | .376              | 15.76                | < <b>.001</b>     | 1.47                       | .208              |
|                               | Lexical_Subordinators                   | 0.10          | .905              | 3.73                 | .025              | 1.82                       | .123              |
|                               | Coordinating_Conjuncts                  | 0.28          | .759              | 15.46                | < <b>.001</b>     | 1.55                       | .187              |
|                               | Addition                                | 2.08          | .125              | 1.00                 | .369              | 0.58                       | .680              |
|                               | Sentence_Linking                        | 1.35          | .260              | 8.90                 | < <b>.001</b>     | 0.54                       | .706              |
|                               | Order                                   | 1.10          | .333              | 2.16                 | .116              | 0.97                       | .421              |
|                               | Reason_and_Purpose                      | 1.59          | .204              | 3.36                 | .035              | 1.12                       | .348              |
|                               | All_Causal                              | 0.20          | .816              | 38.51                | < <b>.001</b>     | 1.27                       | .279              |
|                               | Positive_Causal                         | 1.06          | .348              | 15.02                | < <b>.001</b>     | 0.86                       | .485              |
|                               | Opposition                              | 1.63          | .197              | 3.71                 | .025              | 0.46                       | .766              |
|                               | Determiners                             | 2.56          | .078              | 14.45                | < <b>.001</b>     | 0.81                       | .518              |
|                               | All_Demonstratives                      | 1.38          | .253              | 0.22                 | .802              | 0.62                       | .647              |
|                               | Attended_Demonstratives                 | 0.37          | .688              | 2.40                 | .092              | 0.65                       | .625              |
| Unattended_Demonstratives     | 1.77                                    | .170          | 0.25              | .780                 | 0.48              | .751                       |                   |
| All_Additive                  | 0.70                                    | .496          | 1.21              | .298                 | 0.45              | .771                       |                   |

| Cohesion<br>Feature<br>Groups | Indices                                 | Main Effect   |                   |                      |                   | Interaction                |                   |
|-------------------------------|---|---------------|-------------------|----------------------|-------------------|----------------------------|-------------------|
|                               |   | Attempt       |                   | Proficiency<br>Group |                   | Attempt-by-<br>Proficiency |                   |
|                               |   | F(2,<br>1118) | <i>p</i><br>value | F(2,<br>559)         | <i>p</i><br>value | F(4,<br>1118)              | <i>p</i><br>value |
| Connectives -<br>continued    | All_Logical                             | 0.06          | .941              | 10.44                | < . <b>001</b>    | 1.30                       | .269              |
|                               | Positive_Logical                        | 0.81          | .445              | 4.73                 | .009              | 1.21                       | .306              |
|                               | Negative_Logical                        | 1.98          | .139              | 3.39                 | .034              | 0.51                       | .731              |
|                               | All_Temporal                            | 0.93          | .395              | 12.23                | < . <b>001</b>    | 1.02                       | .396              |
|                               | Positive_Intentional                    | 0.11          | .898              | 14.91                | < . <b>001</b>    | 1.25                       | .290              |
|                               | All_Positive                            | 0.45          | .636              | 7.12                 | < . <b>001</b>    | 0.60                       | .659              |
|                               | All_Negative                            | 0.34          | .713              | 5.59                 | <b>.004</b>       | 0.34                       | .849              |
|                               | All_Connective                          | 0.42          | .654              | 0.89                 | .413              | 0.27                       | .900              |
| Semantic<br>Overlap           | Syn_Overlap_Sent_Noun                   | 0.69          | .500              | 4.49                 | .011              | 0.48                       | .749              |
|                               | Syn_Overlap_Sent_Verb                   | 3.11          | .045              | 13.06                | < . <b>001</b>    | 2.03                       | .088              |
| Lexical<br>Overlap            | Adjacent_Overlap_All<br>_Sent_Div_Seg   | 2.45          | .087              | 0.71                 | .493              | 1.14                       | .335              |
|                               | Adjacent_Overlap_Binary<br>_All_Sent    | 3.57          | .029              | 33.15                | < . <b>001</b>    | 1.95                       | .100              |
|                               | Adjacent_Overlap_2<br>_All_Sent_Div_Seg | 2.09          | .125              | 3.19                 | .042              | 0.09                       | .986              |
|                               | Adjacent_Overlap_Binary<br>_2_All_Sent  | 2.23          | .108              | 45.00                | < . <b>001</b>    | 1.56                       | .183              |

Appendix 3. Analysis of syntactic features

| Syntactic<br>Feature<br>Groups             | Components              | Main Effect   |                   |                      |                   | Interaction                |                   |
|--|-------------------------|---------------|-------------------|----------------------|-------------------|----------------------------|-------------------|
|  |                         | Attempt       |                   | Proficiency<br>Group |                   | Attempt-by-<br>Proficiency |                   |
|  |                         | F(2,<br>1118) | <i>p</i><br>value | F(2,<br>559)         | <i>p</i><br>value | F(4,<br>1118)              | <i>p</i><br>value |
| Noun Phrase<br>Complexity                  | NP_Elaboration          | 5.61          | <b>.005</b>       | 73.85                | < <b>.001</b>     | 2.01                       | .090              |
|  | Nouns_as_Modifiers      | 2.55          | .078              | 10.98                | < <b>.001</b>     | 2.38                       | .050              |
|  | Determiners             | 3.32          | .037              | 34.57                | < <b>.001</b>     | 2.01                       | .091              |
|  | Possessives             | 3.26          | .039              | 5.12                 | .006              | 0.51                       | .726              |
| Usage-Based<br>Syntactic<br>Sophistication | Verb_VAC_Frequency      | 0.02          | .977              | 6.46                 | <b>.002</b>       | 1.04                       | .388              |
|  | VAC_Frequency           | 1.67          | .189              | 10.75                | < <b>.001</b>     | 1.33                       | .257              |
|  | Association_Strength    | 0.79          | .454              | 3.24                 | .040              | 0.65                       | .630              |
|  | Diversity_and_Frequency | 2.33          | .098              | 21.67                | < <b>.001</b>     | 1.97                       | .096              |
|  | Frequency               | 2.10          | .123              | 23.05                | < <b>.001</b>     | 2.68                       | .030              |