The supplementary file includes supplementary tables (S5-S15). The tables include summaries of independent t -tests and (G)LMMs referred to in the Results section.

Table S5. Results of independent t-tests between groups for biographical data, self-reported and objective proficiency measures in
English and Russian. Significant differences (Bonferroni correction applied) are in bold (at $\alpha$-level .017).

|  | High-proficient HS/ Low-proficient HS |  |  | High-proficient HS/ L2 learners |  |  | Low-proficient HS/ L2 learners |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $d f$ | $p$ | $t$ | $d f$ | $p$ | $t$ | $d f$ | $p$ |
| Age (y.o) | -1.50 | 46 | . 426 | -2.11 | 46 | . 120 | -1.31 | 52 | . 609 |
| Age of Arrival to US (y.o) | -1.91 | 37 | . 063 | 4.15 | 21 | <. 001 | 2.62 | 38 | . 042 |
| Age of Reading start in Russian (y.o) | 4.78 | 34 | <. 001 | -10.81 | 34 | <. 001 | -4.69 | 52 | <. 001 |
| Daily Russian language exposure (\%) | 2.53 | 46 | . 045 | 7.18 | 23 | <. 001 | 4.45 | 32 | <. 001 |
| Daily reading exposure in Russian (min) | . 771 | 46 | 1.00 | -. 096 | 46 | 1.00 | -1.04 | 52 | 1.00 |
| Self-reported proficiency measures in Russian (scale 1-5) |  |  |  |  |  |  |  |  |  |
| Comprehension | 3.41 | 46 | . 003 | 7.97 | 46 | <. 001 | 4.34 | 52 | <. 001 |
| Speaking | 3.69 | 45 | . 003 | 7.47 | 46 | <. 001 | 3.29 | 52 | . 006 |
| Reading | 5.13 | 46 | <. 001 | 5.30 | 46 | <. 001 | 1.38 | 45 | . 519 |
| Writing | 4.61 | 46 | <. 001 | 4.13 | 46 | <. 001 | -. 695 | 52 | 1.00 |
| Reading objective assessments (scores) |  |  |  |  |  |  |  |  |  |
| Word ID-Rus | 5.11 | 30 | . 012 | 4.72 | 27 | <. 001 | 1.38 | 42 | . 516 |
| Word ID-Eng | -1.87 | 46 | . 204 | -2.88 | 46 | . 018 | -. 979 | 52 | . 996 |
| ORF-Rus | 7.13 | 46 | <. 001 | 9.68 | 30 | <. 001 | . 858 | 40 | 1.00 |
| ORF-Eng | -. 797 | 46 | 1.00 | -. 141 | 46 | 1.00 | . 890 | 52 | 1.00 |

Table S6. Comparison of basic characteristics of eye movements (i) time duration measures, (ii) probabilities of skipping or fixating the word, (iii) probability of regressions, saccade landing sites and number of fixations per word) in reading in Russian. Significant differences (Bonferroni correction applied) are in bold (at $\alpha$-level .005). T-values represent absolute values.

|  |  | Monolingual <br> adults/ |  |  | Monolingual <br> adults/ |  |  | High-prof HS/ <br> Low-prof HS |  |  | High-prof HS/ <br> Children |  |  | Low-prof HS/ <br> Children |  |  | High-prof HS/ <br> L2 learners |  |  | Low-prof HS/ <br> L2 learners |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | High-prof HS |  |  | Low-prof HS |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | $t$ | $d f$ | $p$ | $t$ | $d f$ | $p$ | $t$ | $d f$ | $p$ | $t$ | $d f$ | $p$ | $t$ | $d f$ | $p$ | $t$ | $d f$ | $p$ | $t$ | $d f$ | $p$ |
| i (ms) | FF | 3.8 | 20 | <. 001 | 5.7 | 26 | <. 001 | 2.3 | 46. | . 277 | 2.6 | 57 | . 106 | 0.3 | 63 | 1.00 | 0.0 | 46 | 1.00 | 2.6 | 52. | . 113 |
|  | SF | 4.7 | 21 | <. 001 | 3.7 | 26 | . 011 | 1.1 | 37 | 1.00 | 2.6 | 57 | . 133 | 0.4 | 34 | 1.00 | 0.3 | 46 | 1.00 | 0.9 | 35 | 1.00 |
|  | GD | 6.4 | 21 | <. 001 | 11.6 | 26 | <. 001 | 6.7 | 40 | <. 001 | 3.0 | 57 | . 046 | 3.7 | 63 | . 005 | 4.1 | 43 | . 002 | 2.7 | 52 | . 101 |
|  | TT | 7.8 | 21 | <. 001 | 14.6 | 26 | <. 001 | 8.8 | 40 | <. 001 | 3.1 | 57 | . 030 | 5.7 | 63 | <. 001 | 5.8 | 37 | <. 001 | 1.6 | 52 | 1.00 |
| ii (\%) | P0 | 8.9 | 56 | <. 001 | 16.2 | 79 | <. 001 | 6.4 | 46 | <. 001 | 0.4 | 54 | 1.00 | 4.7 | 53 | <. 001 | 5.4 | 46 | <. 001 | 0.8 | 52 | 1.00 |
|  | P1 | 4.9 | 26 | <. 001 | 11.9 | 31 | <. 001 | 4.2 | 46 | . 001 | 1.3 | 57 | 1.00 | 3.0 | 63 | . 036 | 1.2 | 46 | 1.00 | 5.4 | 52 | <. 001 |
|  | P2+ | 10.9 | 24 | <. 001 | 27.7 | 32 | <. 001 | 7.6 | 46 | <. 001 | 0.8 | 57 | 1.00 | 7.1 | 62 | <. 001 | 1.6 | 46 | 1.00 | 5.1 | 43 | <. 001 |
| iii (\%) | RO | 3.0 | 27 | . 080 | 2.8 | 32 | . 080 | 0.2 | 46 | 1.00 | 0.7 | 57 | 1.00 | 0.3 | 38 | 1.00 | 3.6 | 43. | . 008 | 3.2 | 52 | . 026 |
|  | RG | 3.93 | 26 | <. 001 | 3.3 | 32 | <. 001 | 0.1 | 46 | 1.00 | 4.2 | 57 | . 001 | 3.1 | 34 | . 034 | 0.8 | 46 | 1.00 | 0.9 | 52 | 1.00 |
| \#Fixations |  | 10.2 | 23 | <. 001 | 13.0 | 27 | <. 001 | 7.6 | 35 | <. 001 | 0.3 | 57 | 1.00 | 7.5 | 36 | <. 001 | 5.4 | 34 | <. 001 | 1.3 | 52 | 1.00 |
| Landing(\%) |  | 4.1 | 30 | . 003 | 4.1 | 41 | . 002 | 0.2 | 46 | 1.00 | 1.8 | 57 | . 830 | 1.6 | 63 | 1.00 | 1.0 | 46 | 1.00 | 1.3 | 52 | 1.00 |

Table S7. Summary of LMMs for the duration measures for high-proficient HSs. The cells with estimates in which there is a significant effect (Bonferroni correction applied) are in bold (at $\alpha$-level .005).

|  | Log FFD |  |  | Log SFD |  |  | Log GD |  |  | Log TT |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Est | $S E$ | $p$ | Est | $S E$ | $p$ | Est | SE | $p$ | Est | SE | $p$ |
| Fixed Effects (Intercept) | 5.569 | . 06 | <. 001 | 5.633 | . 048 | <. 001 | 6.089 | . 062 | <. 001 | 6.778 | . 073 | <. 001 |
| Log frequency | -. 051 | . 01 | <. 001 | -. 042 | . 008 | <. 001 | -. 092 | . 008 | <. 001 | -. 156 | . 009 | <. 001 |
| Length scaled | . 106 | . 01 | <. 001 | . 029 | . 011 | . 050 | . 253 | . 010 | <. 001 | . 254 | . 012 | <. 001 |
| $n+1 \log$ frequency | . 011 | . 01 | 1.00 | -. 009 | . 007 | 1.00 | -. 013 | . 007 | . 630 | -. 040 | . 008 | <. 001 |
| $n+1$ length | . 020 | . 01 | 1.00 | -. 024 | . 010 | . 120 | -. 032 | . 010 | <. 001 | -. 057 | . 011 | <. 001 |
| $n-1 \log$ frequency | -. 013 | . 01 | 1.00 | -. 008 | . 007 | 1.00 | -. 019 | . 007 | . 054 | -. 047 | . 008 | <. 001 |
| $n-1$ length | . 000 | . 01 | 1.00 | . 023 | . 010 | . 180 | -. 003 | . 010 | 1.00 | -. 056 | . 011 | <. 001 |
| Saccade amplitude | -. 007 | . 00 | . 291 | . 003 | . 002 | 1.00 | -. 000 | . 002 | 1.00 | . 008 | . 002 | <. 001 |
| Sentence position | . 021 | . 04 | 1.00 | . 089 | . 029 | . 018 | . 042 | . 029 | 1.00 | -. 206 | . 032 | <. 001 |
| Landing | . 049 | . 03 | 1.00 | . 085 | . 017 | <. 001 | -. 011 | . 017 | 1.00 | -. 130 | . 017 | <. 001 |
| Random Effects $\sigma^{2}$ | . 218 |  |  | . 161 |  |  | . 253 |  |  | . 248 |  |  |
| $\tau_{00, \text { word }}$ | . 005 |  |  | . 007 |  |  | . 013 |  |  | . 024 |  |  |
| $\tau_{00, \text { sentence }}$ | . 001 |  |  | . 001 |  |  | . 002 |  |  | . 015 |  |  |
| $\tau_{00, \text { participants }}$ | . 048 |  |  | . 028 |  |  | . 061 |  |  | . 083 |  |  |
| $\mathrm{N}_{\text {word }}$ | 716 |  |  | 750 |  |  | 763 |  |  | 763 |  |  |
| $\mathrm{N}_{\text {item }}$ | 144 |  |  | 144 |  |  | 144 |  |  | 144 |  |  |
| $\mathrm{N}_{\text {participants }}$ | 21 |  |  | 21 |  |  | 21 |  |  | 21 |  |  |
| Observations | 3518 |  |  | 5011 |  |  | 9119 |  |  | 9119 |  |  |
| $\mathrm{R}^{2} / \Omega_{0}{ }^{2}$ | $\text { . } 051 \text { / / }$ |  |  | . 035 / 213 |  |  | . 248 / . 422 |  |  | . $327 / .551$ |  |  |

Table S8. Summary of (G)LMMs for the probability measures for high-proficient HSs. The cells with estimates in which there is a significant effect (Bonferroni correction applied) are in bold (at $\alpha$-level .005).

|  | P0 |  |  | P1 |  |  | P2+ |  |  | RO |  |  | RG |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Est | SE | $p$ | Est | $S E$ | $p$ | Est | $S E$ | $p$ | Est | SE | $p$ | Est | $S E$ | $p$ |
| Fixed Effects (Intercept) | -3.431 | . 318 | <. 001 | -. 212 | . 177 | 1.00 | -. 003 | . 194 | 1.00 | -. 497 | . 177 | . 045 | -. 457 | . 192 | . 153 |
| Log frequency | . 232 | . 076 | . 018 | . 096 | . 033 | . 027 | -. 276 | . 031 | <. 001 | -. 160 | . 034 | <. 001 | -. 215 | . 038 | <. 001 |
| Length scaled | -1.090 | . 124 | <. 001 | -. 817 | . 044 | <. 001 | 1.041 | . 044 | <. 001 | -. 174 | . 045 | <.001 | -. 232 | . 050 | <. 001 |
| $n+1$ frequency | -. 001 | . 060 | 1.00 | . 031 | . 029 | 1.00 | -. 020 | . 030 | 1.00 | -. 021 | . 032 | 1.00 | -. 119 | . 034 | <. 001 |
| $n+1$ length | -. 034 | . 085 | 1.00 | . 066 | . 041 | . 972 | -. 074 | . 042 | . 693 | -. 018 | . 045 | 1.00 | -. 094 | . 048 | . 450 |
| $n-1$ frequency | . 088 | . 060 | 1.00 | . 007 | . 029 | 1.00 | -. 014 | . 030 | 1.00 | -. 128 | . 032 | <. 001 | -. 028 | . 034 | 1.00 |
| $n-1$ length | -. 094 | . 086 | 1.00 | . 072 | . 042 | . 792 | -. 038 | . 043 | 1.00 | -. 315 | . 047 | <.001 | -. 058 | . 049 | 1.00 |
| Saccade amplitude | -. 025 | . 015 | 1.00 | . 017 | . 009 | . 477 | . 001 | . 010 | 1.00 | . 054 | . 009 | <. 001 | -. 029 | . 010 | . 036 |
| Sentence position | -1.228 | . 242 | <. 001 | . 195 | . 124 | 1.00 | . 125 | . 127 | 1.00 | -. 459 | . 132 | <. 001 | -. 414 | . 140 | . 027 |
| Landing | . 134 | . 106 | 1.00 | . 604 | . 076 | <. 001 | -1.156 | . 097 | <. 001 | -. 840 | . 084 | <. 001 | . 161 | . 080 | . 405 |
| Random Effects |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\tau_{00, \text { word }}$ | . 572 |  |  | . 186 |  |  | . 074 |  |  | . 137 |  |  | . 258 |  |  |
| $\tau_{00, \text { sentence }}$ | . 177 |  |  | . 000 |  |  | . 005 |  |  | . 088 |  |  | . 069 |  |  |
| $\tau_{00, \text { participants }}$ | . 406 |  |  | . 335 |  |  | . 456 |  |  | . 254 |  |  | . 314 |  |  |
| $\mathrm{N}_{\text {word }}$ | 76 |  |  | 763 |  |  | 763 |  |  | 763 |  |  | 763 |  |  |
| $\mathrm{N}_{\text {item }}$ | 144 |  |  | 144 |  |  | 144 |  |  | 144 |  |  | 144 |  |  |
| $\mathrm{N}_{\text {participants }}$ | 21 |  |  | 21 |  |  | 21 |  |  | 21 |  |  | 21 |  |  |
| Observations | 9119 |  |  | 9119 |  |  | 9119 |  |  | 9119 |  |  | 9119 |  |  |
| $\mathrm{R}^{2} / \Omega_{0}{ }^{2}$ | . 277 / . 465 |  |  | .189/.300 |  |  | $\text { . } 345 \text { / / }$ |  |  | 168. / 047. |  |  | . $021 / .181$ |  |  |

Table S9. Summary of LMMs for the duration measures for low-proficient HSs. The cells with estimates in which there is a significant effect (Bonferroni correction applied) are in bold (at $\alpha$-level .005).

|  | Log FFD |  |  | Log SFD |  |  | Log GD |  |  | Log TT |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Est | $S E$ | $p$ | Est | SE | $p$ | Est | SE | $p$ | Est | SE | $p$ |
| Fixed Effects (Intercept) | 5.823 | . 084 | <. 001 | 5.696 | . 096 | <. 001 | 6.593 | . 102 | <. 001 | 7.621 | . 105 | <. 001 |
| Log frequency | -. 069 | . 015 | <. 001 | -. 065 | . 019 | <. 001 | -. 156 | . 021 | <. 001 | -. 241 | . 023 | <. 001 |
| Length scaled | . 056 | . 019 | . 099 | . 000 | . 029 | 1.00 | . 332 | . 029 | <. 001 | . 308 | . 032 | <. 001 |
| $n+1$ frequency | -. 034 | . 013 | . 144 | . 012 | . 017 | 1.00 | . 012 | . 018 | 1.00 | -. 034 | . 020 | 1.00 |
| $n+1$ length | -. 062 | . 019 | . 018 | . 018 | . 024 | 1.00 | . 012 | . 025 | 1.00 | -. 015 | . 026 | 1.00 |
| $n-1$ frequency | . 002 | . 013 | 1.00 | -. 001 | . 017 | 1.00 | -. 006 | . 018 | 1.00 | -. 006 | . 019 | 1.00 |
| $n-1$ length | . 024 | . 019 | 1.00 | . 081 | . 026 | . 009 | . 055 | . 027 | . 324 | -. 038 | . 027 | 1.00 |
| Saccade amplitude | -. 012 | . 006 | . 297 | -. 018 | . 003 | <. 001 | -. 030 | . 003 | <. 001 | . 005 | . 002 | . 639 |
| Sentence position | . 257 | . 074 | <. 001 | . 218 | . 091 | . 117 | . 272 | . 101 | . 045 | -. 342 | . 102 | . 009 |
| Landing | -. 055 | . 054 | 1.00 | . 136 | . 035 | <. 001 | . 117 | . 037 | . 009 | -. 106 | . 027 | <. 001 |
| Random Effects $\sigma^{2}$ | . 331 |  |  | . 311 |  |  | . 520 |  |  | . 272 |  |  |
| $\tau_{00, \text { word }}$ | . 000 |  |  | . 010 |  |  | . 041 |  |  | . 060 |  |  |
| $\tau_{00, \text { sentence }}$ | . 000 |  |  | . 000 |  |  | . 000 |  |  | . 01 |  |  |
| $\tau_{00, \text { participants }}$ | . 081 |  |  | . 090 |  |  | . 090 |  |  | . 079 |  |  |
| $\mathrm{N}_{\text {word }}$ | 143 |  |  | 145 |  |  | 145 |  |  | 145 |  |  |
| $\mathrm{N}_{\text {item }}$ | 30 |  |  | 30 |  |  | 30 |  |  | 30 |  |  |
| $\mathrm{N}_{\text {participant }}$ | 27 |  |  | 27 |  |  | 27 |  |  | 27 |  |  |
| Observations | 2449 |  |  | 1522 |  |  | 3971 |  |  | 3971 |  |  |
| $\mathrm{R}^{2} / \Omega_{0}{ }^{2}$ | $\text { 243. } 244 .$ |  |  | $.351 / .348$ |  |  | $\text { . } 403 .$ |  |  | $\text { . } 618 \text { / / }$ |  |  |

Table S10. Summary of (G)LMMs for the probability measures for low-proficient HSs. The cells with estimates in which there is a significant effect (Bonferroni correction applied) are in bold (at $\alpha$-level .005).

|  | P1 |  |  | P2+ |  |  | RO |  |  | RG |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Est | SE | $p$ | Est | SE | $p$ | Est | SE | $p$ | Est | SE | $p$ |
| Fixed Effects |  |  |  |  |  |  |  |  |  |  |  |  |
| (Intercept) | -. 766 | . 253 | . 018 | . 655 | . 240 | . 063 | . 294 | . 346 | . 1.00 | -. 785 | . 355 | . 234 |
| Log frequency | . 262 | . 055 | <. 001 | -. 252 | . 054 | <. 001 | -. 198 | . 050 | <. 001 | -. 193 | . 059 | . 009 |
| Length scaled | -. 883 | . 079 | <. 001 | . 754 | . 077 | <. 001 | -. 108 | . 073 | 1.00 | -. 173 | . 084 | . 360 |
| $n+1$ frequency | -. 078 | . 049 | 1.00 | . 075 | . 048 | 1.00 | -. 088 | . 046 | . 513 | -. 163 | . 053 | . 018 |
| $n+1$ length | -. 098 | . 071 | 1.00 | . 120 | . 070 | . 765 | -. 097 | . 069 | 1.00 | -. 189 | . 077 | . 126 |
| $n-1$ frequency | -. 043 | . 050 | 1.00 | . 057 | . 049 | 1.00 | -. 171 | . 048 | <. 001 | . 080 | . 053 | 1.00 |
| $n-1$ length | -. 177 | . 072 | . 126 | . 192 | . 071 | . 063 | -. 399 | . 071 | <. 001 | . 003 | . 0878 | 1.00 |
| Saccade amplitude | . 046 | . 013 | <. 001 | -. 040 | . 012 | . 009 | . 068 | . 014 | <. 001 | -. 039 | . 018 | . 324 |
| Sentence position | -. 329 | . 280 | 1.00 | . 282 | . 273 | 1.00 | -1.911 | . 260 | <. 001 | -. 610 | . 287 | . 306 |
| Landing | . 381 | . 133 | . 036 | -. 388 | . 130 | . 027 | -. 585 | . 133 | <. 001 | . 320 | . 130 | . 126 |
| Random Effects |  |  |  |  |  |  |  |  |  |  |  |  |
| $\tau_{00, \text { word }}$ | . 187 |  |  | . 184 |  |  | . 087 |  |  | . 183 |  |  |
| $\tau_{00, \text { sentence }}$ | . 000 |  |  | . 000 |  |  | . 070 |  |  | . 048 |  |  |
| $\tau_{00, \text { participants }}$ | . 244 |  |  | . 136 |  |  | 1.763 |  |  | 1.512 |  |  |
| $\mathrm{N}_{\text {word }}$ | 145 |  |  | 145 |  |  | 145 |  |  | 145 |  |  |
| $\mathrm{N}_{\text {item }}$ | 30 |  |  | 30 |  |  | 30 |  |  | 30 |  |  |
| $\mathrm{N}_{\text {participant }}$ | 27 |  |  | 27 |  |  | 27 |  |  | 27 |  |  |
| Observations | 4016 |  |  | 4016 |  |  | 4016 |  |  | 4016 |  |  |
| $\mathrm{R}^{2} / \Omega_{0}{ }^{2}$ | . 252 / . 339 |  |  | .215/285 |  |  | . 047 / . 168 |  |  | . 028 / . 364 |  |  |

Table S11. Summary of LMMs for the duration measures in the L2 learner group. The cells with estimates in which there is a significant effect (Bonferroni correction applied) are in bold (at $\alpha$-level .005).

|  | Log FFD |  |  | Log SFD |  |  | Log GD |  |  | Log TT |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Est | $S E$ | $p$ | Est | $S E$ | $p$ | Est | SE | $p$ | Est | $S E$ | $p$ |
| Fixed Effects (Intercept) | 5.600 | . 087 | <. 001 | 5.748 | . 088 | <. 001 | 6.337 | . 114 | <. 001 | 7.298 | . 133 | <. 001 |
| Log frequency | -. 045 | . 019 | . 126 | -. 070 | . 020 | <. 001 | -. 079 | . 025 | . 001 | -. 099 | . 026 | <. 001 |
| Length scaled | . 018 | . 025 | 1.00 | -. 046 | . 031 | 1.00 | . 300 | . 035 | <. 001 | . 275 | . 037 | <. 001 |
| $n+l \log$ frequency | -. 011 | . 017 | 1.00 | . 008 | . 018 | 1.00 | -. 002 | . 022 | 1.00 | -. 023 | . 023 | 1.00 |
| $n+1$ length | -. 034 | . 025 | 1.00 | . 024 | . 025 | 1.00 | . 057 | . 031 | . 576 | -. 000 | . 030 | 1.00 |
| $n-1 \log$ frequency | -. 001 | . 017 | 1.00 | -. 011 | . 018 | 1.00 | -. 023 | . 022 | 1.00 | -. 035 | . 021 | . 918 |
| $n-1$ length | . 012 | . 025 | 1.00 | . 036 | . 026 | 1.00 | . 004 | . 032 | 1.00 | -. 085 | . 032 | . 063 |
| Saccade amplitude | -. 003 | . 007 | 1.00 | -. 011 | . 004 | . 027 | -. 017 | . 005 | . 009 | -. 005 | . 004 | 1.00 |
| Sentence position | . 171 | . 094 | . 603 | . 095 | . 095 | 1.00 | . 219 | . 119 | . 594 | -. 092 | . 120 | 1.00 |
| Landing | -. 205 | . 067 | . 018 | . 049 | . 034 | 1.00 | -. 028 | . 045 | 1.00 | -. 110 | . 036 | . 018 |
| Random Effects $\sigma^{2}$ | . 232 |  |  | . 203 |  |  | . 482 |  |  | . 294 |  |  |
| $\tau_{00, \text { word }}$ | . 004 |  |  | . 021 |  |  | . 047 |  |  | . 073 |  |  |
| $\tau_{00 \text {, sentence }}$ | . 001 |  |  | . 004 |  |  | . 003 |  |  | . 004 |  |  |
| $\tau_{00, \text { participants }}$ | . 032 |  |  | . 023 |  |  | . 067 |  |  | . 184 |  |  |
| $\mathrm{N}_{\text {word }}$ | 146 |  |  | 147 |  |  | 149 |  |  | 149 |  |  |
| $\mathrm{N}_{\text {item }}$ | 30 |  |  | 30 |  |  | 30 |  |  | 30 |  |  |
| $\mathrm{N}_{\text {participants }}$ | 27 |  |  | 27 |  |  | 27 |  |  | 27 |  |  |
| Observations | 927 |  |  | 1145 |  |  | 2083 |  |  | 2083 |  |  |
| $\mathrm{R}^{2} / \Omega_{0}{ }^{2}$ | $\text { 168. / } 033 .$ |  |  | . 039 / . 222 |  |  | . 199 / . 355 |  |  | $\text { . } 226 \text { / } 590$ |  |  |

Table S12. Summary of GLMMs for the probability measures in the L2 learner group. The cells with estimates in which there is a significant effect (Bonferroni correction applied) are in bold (at $\alpha$-level .005).

|  | P1 |  |  | P2+ |  |  | RO |  |  | RG |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Est | $S E$ | $p$ | Est | SE | $p$ | Est | $S E$ | $p$ | Est | SE | $p$ |
| Fixed Effects |  |  |  |  |  |  |  |  |  |  |  |  |
| (Intercept) | -. 253 | . 316 | 1.00 | . 288 | . 307 | 1.00 | -. 343 | . 321 | 1.00 | -. 427 | . 333 | 1.00 |
| Log frequency | . 042 | . 068 | 1.00 | -. 053 | . 067 | 1.00 | -. 021 | . 056 | 1.00 | -. 072 | . 064 | 1.00 |
| Length scaled | -1.002 | . 102 | <. 001 | . 933 | . 098 | <. 001 | -. 053 | . 083 | 1.00 | -. 055 | . 092 | 1.00 |
| $n+1$ frequency | . 001 | . 064 | 1.00 | . 003 | . 062 | 1.00 | -. 016 | . 053 | 1.00 | -. 110 | . 059 | . 576 |
| $n+1$ length | -. 164 | . 091 | . 657 | . 156 | . 089 | . 729 | -. 082 | . 077 | 1.00 | -. 246 | . 085 | . 036 |
| $n-1$ frequency | . 025 | . 064 | 1.00 | -. 029 | . 062 | 1.00 | -. 037 | . 053 | 1.00 | . 036 | . 059 | 1.00 |
| $n-1$ length | . 052 | . 095 | 1.00 | -. 054 | . 093 | 1.00 | -. 189 | . 080 | . 162 | -. 084 | . 088 | 1.00 |
| Saccade amplitude | . 035 | . 018 | . 477 | -. 035 | . 018 | . 495 | . 055 | . 018 | . 018 | -. 017 | . 018 | 1.00 |
| Sentence position | . 025 | . 353 | 1.00 | -. 103 | . 345 | 1.00 | -. 675 | . 286 | . 162 | -. 668 | . 321 | . 333 |
| Landing | . 679 | . 179 | <. 001 | -. 680 | . 177 | <. 001 | -. 491 | . 149 | . 009 | . 296 | . 149 | . 423 |
| Random Effects |  |  |  |  |  |  |  |  |  |  |  |  |
| $\tau_{00, \text { word }}$ | . 246 |  |  | . 225 |  |  | . 052 |  |  | . 164 |  |  |
| $\tau_{00, \text { sentence }}$ | . 000 |  |  | . 000 |  |  | . 024 |  |  | . 000 |  |  |
| $\tau_{00, \text { participants }}$ | . 362 |  |  | . 312 |  |  | 1.019 |  |  | . 986 |  |  |
| $\mathrm{N}_{\text {word }}$ | 149 |  |  | 149 |  |  | 149 |  |  | 149 |  |  |
| $\mathrm{N}_{\text {item }}$ | 30 |  |  | 30 |  |  | 30 |  |  | 30 |  |  |
| $\mathrm{N}_{\text {participant }}$ | 27 |  |  | 27 |  |  | 27 |  |  | 27 |  |  |
| Observations | 2083 |  |  | 2083 |  |  | 2083 |  |  | 2083 |  |  |
| $\mathrm{R}^{2} / \Omega_{0}{ }^{2}$ | . $241 / .360$ |  |  | . 227 / . 336 |  |  | . 025 / 268 |  |  | . 024 / 277 |  |  |

Table S13. Summary of LMMs for the pretest assessments for high-proficient HSs. The cells with estimates in which there is a significant effect (Bonferroni correction applied) are in bold (at $\alpha$-level .012).


Table S14. Summary of LMMs for the pretest assessments for low-proficient HSs. The cells with estimates in which there is a significant effect (Bonferroni correction applied) are in bold (at $\alpha$-level .012).

|  | Log FFD |  |  | Log SFD |  |  | Log GD |  |  | Log TT |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Est | SE | $p$ | Est | SE | $p$ | Est | SE | $p$ | Est | SE | $p$ |
| Fixed Effects (Intercept) | 5.755 | . 073 | <. 001 | 5.620 | . 081 | <. 001 | 6.552 | . 077 | <. 001 | 7.551 | . 077 | <. 001 |
| Word ID-Rus | -. 008 | . 064 | 1.00 | . 022 | . 068 | 1.00 | . 018 | . 057 | 1.00 | -. 092 | . 052 | . 312 |
| Word ID-Eng | . 002 | . 063 | 1.00 | . 023 | . 068 | 1.00 | . 125 | . 056 | . 104 | . 106 | . 052 | . 172 |
| ORF-Rus | -. 075 | . 064 | . 960 | -. 047 | . 069 | 1.00 | -. 103 | . 057 | . 292 | -. 052 | . 053 | 1.00 |
| ORF-Eng | -. 111 | . 066 | . 364 | -. 112 | . 071 | . 448 | -. 108 | . 058 | . 260 | -. 068 | . 054 | . 840 |
| Log frequency | -. 060 | . 014 | <. 001 | -. 073 | . 020 | <. 001 | -. 160 | . 021 | <. 001 | -. 237 | . 022 | <. 001 |
| Length scaled | . 061 | . 019 | . 008 | -. 017 | . 030 | 1.00 | . 323 | . 028 | $<.001$ | . 317 | . 031 | <. 001 |
| Saccade amplitude | -. 010 | . 006 | . 024 | -. 017 | . 003 | <. 001 | -. 028 | . 003 | <. 001 | . 003 | . 002 | . 744 |
| Sentence position | . 253 | . 070 | <. 001 | . 392 | . 081 | <. 001 | . 353 | . 087 | <. 001 | -. 327 | . 082 | <. 001 |
| Landing | -. 064 | . 054 | . 936 | . 133 | . 035 | <. 001 | . 110 | . 037 | . 012 | -. 108 | . 027 | <. 001 |
| Random Effects |  |  |  |  |  |  |  |  |  |  |  |  |
| $\sigma^{2}$ | . 324 |  |  | . 300 |  |  | . 519 |  |  | . 274 |  |  |
| $\tau_{00, \text { word }}$ | . 005 |  |  | . 020 |  |  | . 040 |  |  | . 057 |  |  |
| $\tau_{00 \text {, sentence }}$ | . 001 |  |  | . 000 |  |  | . 000 |  |  | . 010 |  |  |
| $\tau_{00, \text { participants }}$ | . 074 |  |  | . 081 |  |  | . 058 |  |  | . 051 |  |  |
| $\mathrm{N}_{\text {word }}$ | 145 |  |  | 145 |  |  | 145 |  |  | 145 |  |  |
| $\mathrm{N}_{\text {item }}$ | 30 |  |  | 30 |  |  | 30 |  |  | 30 |  |  |
| $\mathrm{N}_{\text {participant }}$ | 27 |  |  | 27 |  |  | 27 |  |  | 27 |  |  |
| Observations | 2408 |  |  | 1604 |  |  | 4074 |  |  | 4074 |  |  |
| $\mathrm{R}^{2} / \Omega_{0}{ }^{2}$ | . 074 / 258 |  |  | . 079 / . 319 |  |  | . 289 / . 403 |  |  | . 465 / . 6 |  |  |

Table S15. Summary of LMMs for the pretest assessments for L2 learners. The cells with estimates in which there is a significant effect (Bonferroni correction applied) are in bold (at $\alpha$-level .012).

|  | Log FFD |  |  | Log SFD |  |  | Log GD |  |  | Log TT |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Est | $S E$ | $p$ | Est | $S E$ | $p$ | Est | SE | $p$ | Est | $S E$ | $p$ |
| Fixed Effects (Intercept) | 5.596 | . 064 | <. 001 | 5.665 | . 060 | <. 001 | 6.239 | . 083 | <. 001 | 7.198 | . 105 | <. 001 |
| Word ID-Rus | . 018 | . 047 | . 1.00 | . 003 | . 034 | 1.00 | -. 034 | . 061 | 1.00 | . 015 | . 098 | 1.00 |
| Word ID-Eng | -. 023 | . 047 | 1.00 | -. 080 | . 035 | . 088 | . 106 | . 062 | . 348 | . 132 | . 099 | . 724 |
| ORF-Rus | -. 035 | . 042 | 1.00 | . 039 | . 031 | . 852 | -. 112 | . 056 | . 176 | -. 191 | . 089 | . 124 |
| ORF-Eng | -. 025 | . 040 | 1.00 | . 027 | . 030 | 1.00 | . 002 | . 053 | 1.00 | -. 001 | . 084 | 1.00 |
| Log frequency | -. 047 | . 015 | . 012 | -. 068 | . 017 | <.001 | -. 064 | . 021 | . 008 | -. 063 | . 022 | . 016 |
| Length scaled | . 019 | . 021 | 1.00 | -. 070 | . 027 | . 036 | . 292 | . 030 | <. 001 | . 296 | . 032 | <. 001 |
| Saccade amplitude | -. 003 | . 006 | 1.00 | -. 009 | . 004 | . 036 | -. 011 | . 005 | . 064 | -. 006 | . 004 | . 480 |
| Sentence position | . 110 | . 064 | 1.00 | . 196 | . 065 | . 012 | . 248 | . 081 | . 008 | -. 189 | . 083 | . 092 |
| Landing | -. 190 | . 063 | . 008 | . 049 | . 033 | . 548 | -. 019 | . 044 | 1.00 | -. 131 | . 035 | <. 001 |
| Random Effects $\sigma^{2}$ | . 233 |  |  | . 206 |  |  | . 498 |  |  | . 308 |  |  |
| $\tau_{00, \text { word }}$ | . 002 |  |  | . 019 |  |  | . 042 |  |  | . 069 |  |  |
| $\tau_{00, \text { sentence }}$ | . 001 |  |  | . 000 |  |  | . 004 |  |  | . 010 |  |  |
| $\tau_{00, \text { participants }}$ | . 031 |  |  | . 017 |  |  | . 061 |  |  | . 166 |  |  |
| $\mathrm{N}_{\text {word }}$ | 146 |  |  | 147 |  |  | 149 |  |  | 149 |  |  |
| $\mathrm{N}_{\text {item }}$ | 30 |  |  | 30 |  |  | 30 |  |  | 30 |  |  |
| $\mathrm{N}_{\text {participant }}$ | 27 |  |  | 27 |  |  | 27 |  |  | 27 |  |  |
| Observations | 1123 |  |  | 1374 |  |  | 2516 |  |  | 2516 |  |  |
| $\mathrm{R}^{2} / \Omega_{0}{ }^{2}$ | . 039 / . 163 |  |  | . 053 / . 199 |  |  | . 198 / . 340 |  |  | . 235 / . 5 |  |  |

