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**Author(s):** Niemelä, Marko, Kärkkäinen, Tommi; Äyrämö, Sami; Ronimus, Miia; Richardson, Ulla; Lyytinen, Heikki

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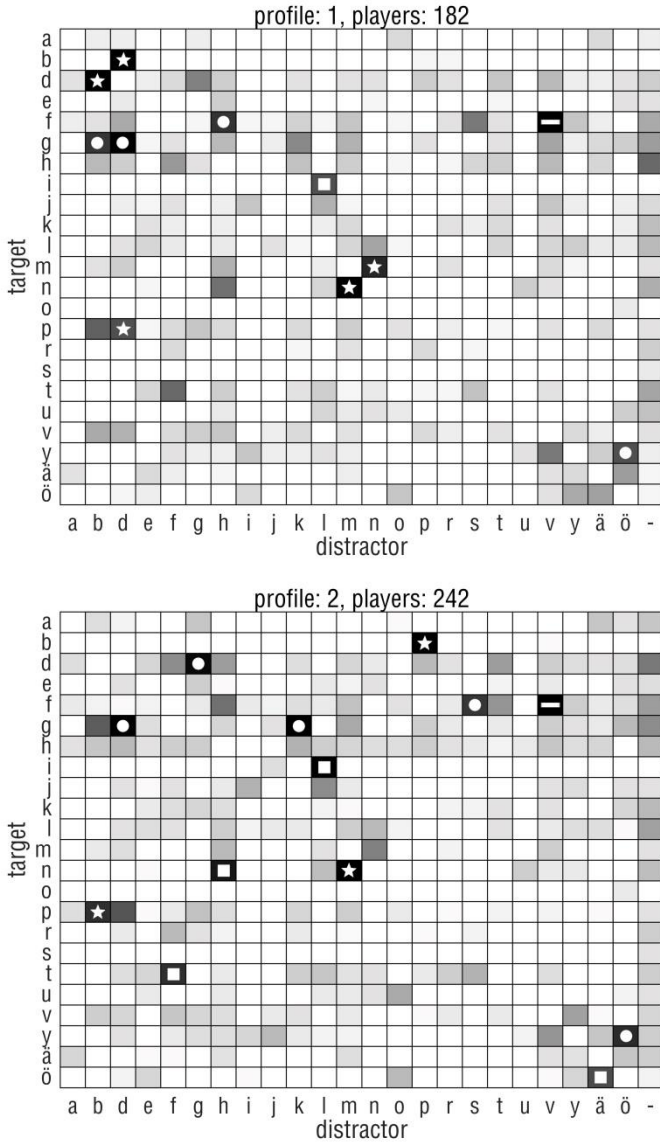
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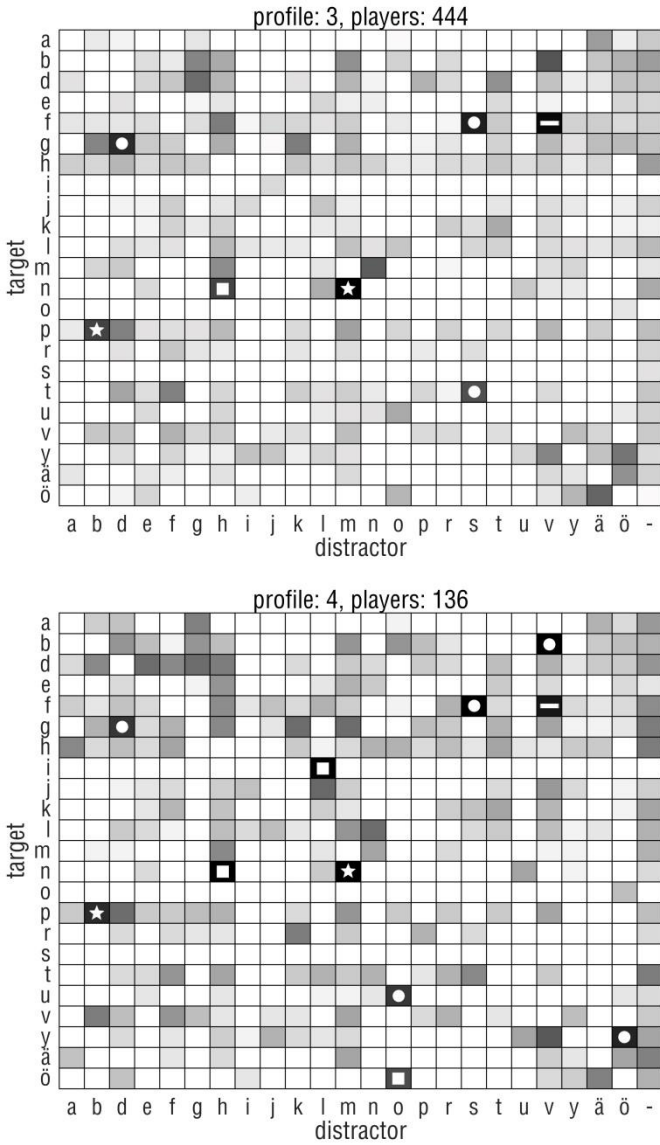
Niemelä, M., Äyrämö, S., Ronimus, M., Richardson, U., & Lyytinen, H. (2020). Game learning analytics for understanding reading skills in transparent writing system. *British Journal of Educational Technology*, 51(6), 2376-2390. <https://doi.org/10.1111/bjet.12916>

### Supplement S1: Confusion matrices for lowercase letter data



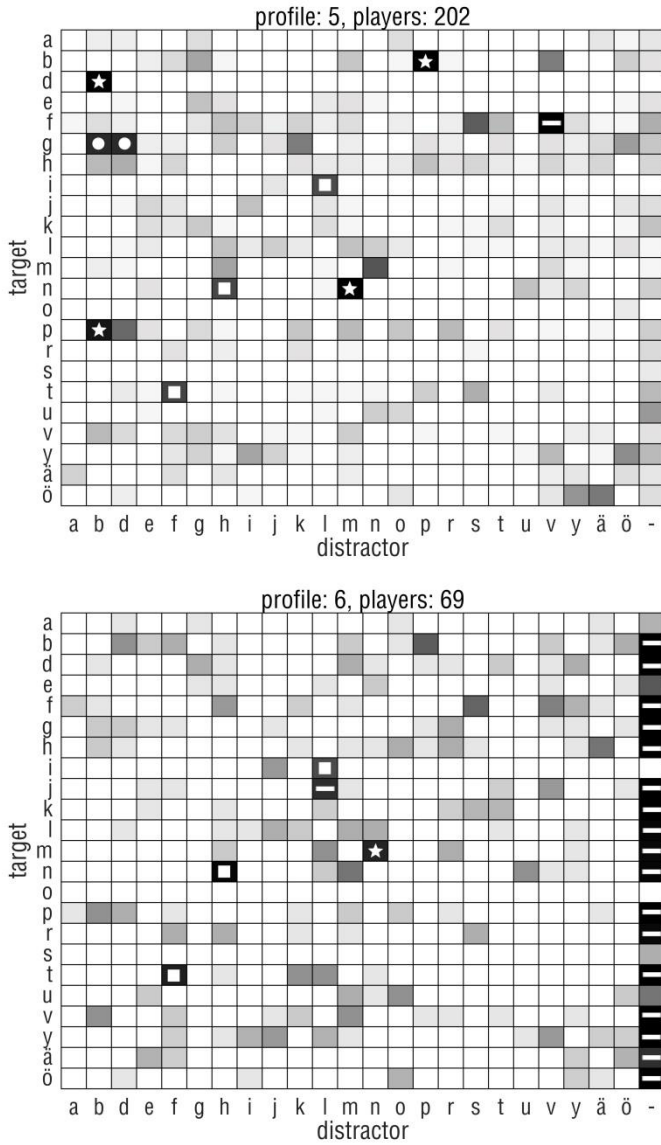
Darker colors indicate more confusion. Confusions exceeding 10 % are marked with symbols. There are two main categories of letters' similarity: phonetic similarity (marked with a "circle") and visual similarity (marked with a "square"). It is also possible that both or neither categories are occurring (marked with a "star" and a "rectangle", respectively).

Figure S1.1: Profiles 1 and 2 for lowercase letter data



Darker colors indicate more confusion. Confusions exceeding 10 % are marked with symbols. There are two main categories of letters' similarity: phonetic similarity (marked with a "circle") and visual similarity (marked with a "square"). It is also possible that both or neither categories are occurring (marked with a "star" and a "rectangle", respectively).

Figure S1.2: Profiles 3 and 4 for lowercase letter data



Darker colors indicate more confusion. Confusions exceeding 10 % are marked with symbols. There are two main categories of letters' similarity: phonetic similarity (marked with a "circle") and visual similarity (marked with a "square"). It is also possible that both or neither categories are occurring (marked with a "star" and a "rectangle", respectively).

Figure S1.3: Profiles 5 and 6 for lowercase letter data