

Gamifying phonetic data collection



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Motivations

[1] advocated a gamified approach for data collection in Applied Ling. We demonstrate gamification is also useful for phonetic experiments.

- **Participant engagement:** making lengthy & tedious phonetic experiments more attractive for wider participation and better data quality
- **Citizen science:** involving the public in scientific research to bring together science, policymakers, and society in an impactful way
- **Data validity:** capturing more ecologically valid data & diversifying the participant pool

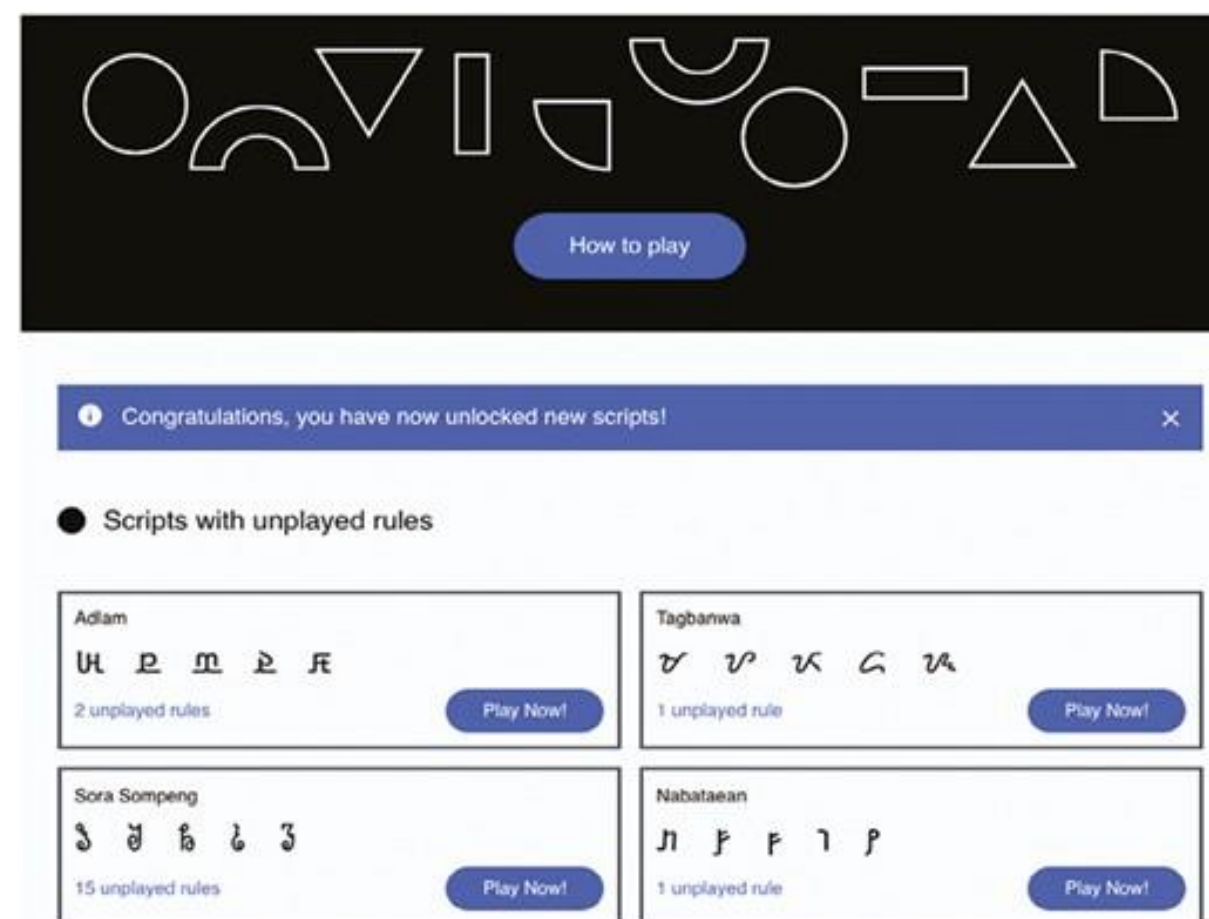
Successful applications

Applied linguistics:



See [1] for more details

Writing system research:



What is Gamification?

Gamification: using game mechanics such as competition and rewards in non-game environments [2] (c.f. **game-based approach:** the design and usage of standalone games or the repurposing of existing games)

Current study

Our gamified design: based on Self-Determination Theory [3], which distinguishes intrinsic and extrinsic motivation

Intrinsic elements:

- Leaderboard
- Progress-tracking
- Feedback

Extrinsic elements:

- Winner vouchers
- Prize draw

Other key game mechanics:

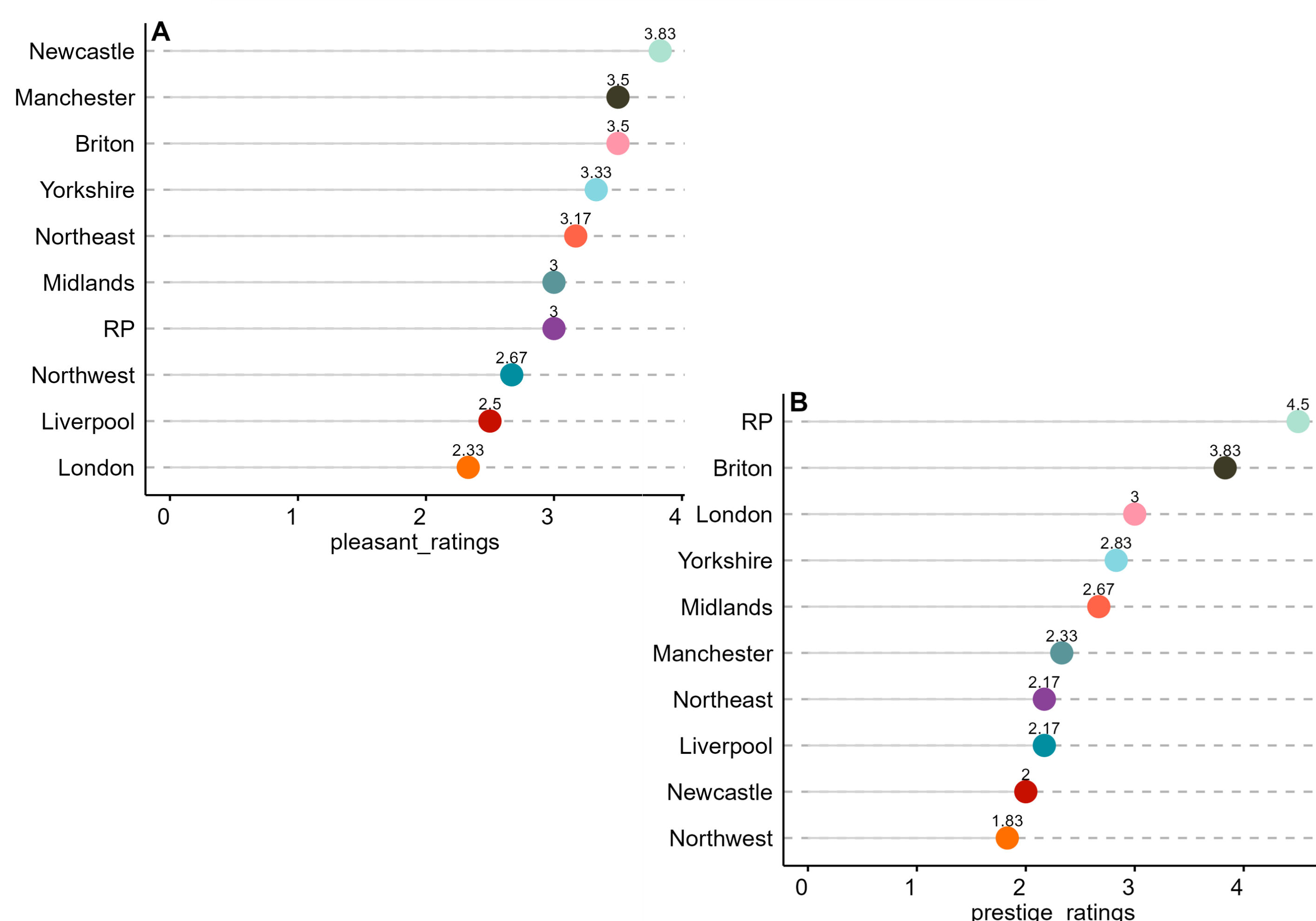
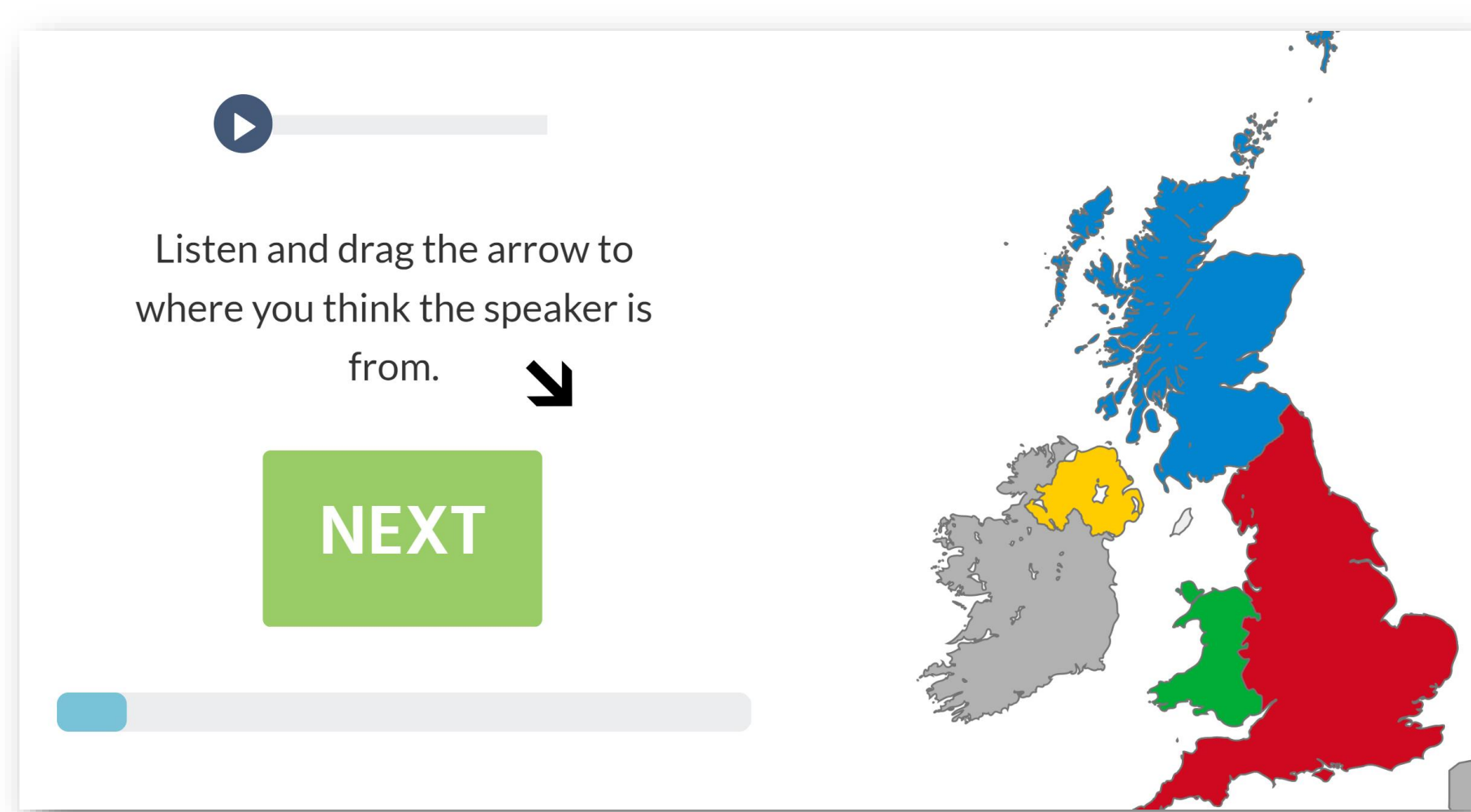
- Incremental difficulty levels
- Enticing game interface (e.g., colourful map & big clickable buttons)

Platform: *Labvanced*, a commonly used platform for linguistic studies [Next step: ShinyApp or other open-source platforms]

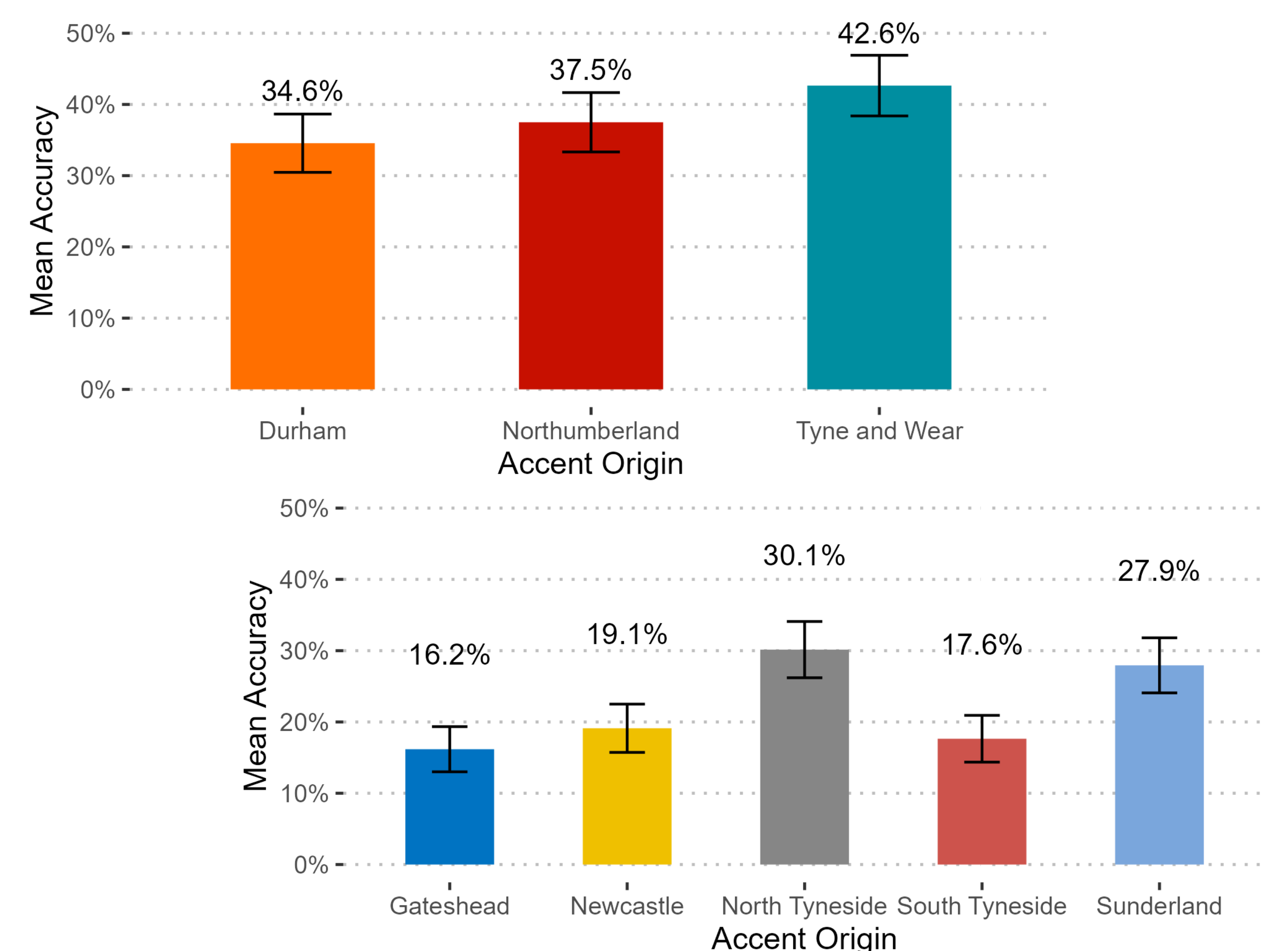
Caution: Balance between study design and game design, e.g. perceptual learning by giving feedback at every level

Make data collection more fun by integrating gamified designs.

Study 1: Accent identification & attitude



Study 2: Think you know North-East accents?



Research funded by



Newcastle University

Institute for Social Science

Approved by Newcastle University Ethics Committee: 33175/2023

[1] Kim, Y., Kogan, V. V., & Zhang, C. (2023). Collecting Big Data Through Citizen Science: Gamification and Game-based Approaches to Data Collection in Applied Linguistics. *Applied Linguistics*, amad039. [2] Deterding, S., Khaled, R., Nacke, L. E., & Dixon, D. (2011). Gamification: Toward a definition. *CHI 2011 Gamification Workshop Proceedings*. [3] Sakamoto, M., Nakajima, T., & Alexandrova, T. (2012). Value-Based Design for Gamifying Daily Activities. *International Conference on Entertainment Computing*, 421-424.

<https://tinyurl.com/BAAP-NorthEast-Accent-Game>