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## Hierarchy or List?: Comparing Menu Navigation by Emergent Users

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### ABSTRACT

With rapid penetration of mobile devices in India, it has become important to understand how well can emergent users navigate menus. Literature shows somewhat inconsistent result in their performances with menu elements organized in a deep hierarchy, in a shallow hierarchy, and in a list. The current study investigates the performance of emergent users on a navigation task using two different menus (5-level deep hierarchy vs. 5-page list). Prototypes were made with 3 separate interfaces; namely graphical user interface (GUI), audio only interface (AOI) and audio-visual interface (AVI). A total of 24 emergent users carried out 6 test-tasks each (GUI-deep, GUI-list, AOI-deep, AOI-list, AVI-deep, AVI-list). Results show that participants navigate faster-using list menu on GUI and AVI, whereas they perform faster-using hierarchical navigation on AOI. Modalities with visual elements (GUI, AVI) performed faster than the audio (AOI). We discuss the implications of our findings for designing interactive devices for emergent users and possibilities for future





1. Wikipedia. 2017. List of countries by number of mobile phones in use. Retrieved August 22, 2017 from [https://en.wikipedia.org/wiki/List\\_of\\_countries\\_by\\_number\\_of\\_mobile\\_phones\\_in\\_use](https://en.wikipedia.org/wiki/List_of_countries_by_number_of_mobile_phones_in_use)

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3. Grisedale, S., Graves, M., & Grünsteidl, A. 1997. Designing a graphical user interface for healthcare workers in rural India. In Proceedings of the ACM SIGCHI Conference on Human factors in computing systems (pp. 471--478). ACM.



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Doke P and Kopparapu S. (2024). Challenges and Opportunities Designing Voice User Interfaces for Emergent Users. Human-Computer Interaction. 10.1007/978-3-031-60449-2\_1. (3-16).

[https://link.springer.com/10.1007/978-3-031-60449-2\\_1](https://link.springer.com/10.1007/978-3-031-60449-2_1)

Gamage D, Wani A, Jain P, Padhi D, Borah P, Menon A, Mishra W, Ahmad M, Ahmed N, Sarcar S, Shahid S and Balkrishan D. Advancing HCI Research and Education within and across South Asia. Extended Abstracts of the 2023 CHI Conference on Human Factors in Computing Systems. (1-6).

<https://doi.org/10.1145/3544549.3573815>

Jain P, Ibtasam S, Sharma S, Bhattacharya N, Tuli A, Gamage D, Jain D, Tulaskar R, Chandra P, Razaq L, Rony R, Padhi D, Jain M, Shahid S, Ahmed N, Balkrishan D and Singh P. From the Margins to the Centre: Defining New Mission and Vision for HCI Research in South Asia. Extended Abstracts of the 2021 CHI Conference on Human Factors in Computing Systems. (1-6).

<https://doi.org/10.1145/3411763.3441327>

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