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# Inclusive Board Game Design Using Universal Design for Learning to Support Diverse Deaf and Hearing Students

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## ***Abstract***

Universal Design for Learning (UDL) offers a framework to make educational activities accessible to all learners, including deaf/hard-of-hearing (DHH) students. This research explores adapting an educational board game (originally for teaching art elements) using UDL principles. We survey recent literature on UDL and DHH education, conduct participatory co-design workshops with deaf students and instructors, and prototype multiple game variants that employ UDL strategies (e.g. visual symbols, sign-language support, multi-sensory cues). Usability testing and expert accessibility reviews evaluate each variant. Finally, we compare learning outcomes (knowledge gains and engagement) across adapted and original versions. This UDL-driven approach aims to ensure that deaf learners of varied language and sensory profiles can fully access and benefit from the game.

***Keywords :*** *Inclusive Design; Universal Design for Learning; Deaf Education; Board Games; Accessibility*

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