

고령인의 터치스크린 인터페이스 사용 능력 향상을 위한 트레이닝 효과 극대화 방안에 관한 통합적 문헌 고찰

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Training material design for helping older adults use touchscreen interfaces: an integrative literature review

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ABSTRACT

Objective: This study aimed to review and synthesize past research on the efficacies of different training material designs for helping older adults interact with touchscreen interfaces. **Background:** Designing proper instructions and training materials for older adults is considered important for improving technology accessibility for them. Accordingly, related to training older adults to interact with touchscreen interfaces, different training materials, including text descriptions, graphical tutorials, video instructions, and interactive tutorials, have been proposed and evaluated. Despite the previous research efforts, however, the design knowledge and guidelines from the past studies have not been integrated, and this lack of integrative understanding hinders designing effective training materials. **Method:** The current study was intended to provide a comprehensive literature review. Four online databases were utilized (ACM digital library, Science Direct, Scopus, and Web of Science), and three concepts were selected as the keywords for literature search: older adults, training design, and touchscreen interfaces. Among the documents that were obtained as a result of the keyword searches in the four databases, qualified documents were carefully reviewed and relevant design knowledge and guidelines were extracted. **Results:** The review results indicated that: 1) while general guidelines for designing an effective training material for older adults have been established, actionable design guidelines, such as the proper amount of information to be delivered in each step of interaction, are lacking, and 2) several empirical results and design suggestions contradict one another. These limitations make it difficult to design effective training materials. Thus, future research studies are needed to address the current lack of knowledge and inconsistencies in study results. **Conclusion:** In an effort to address the question of how training materials should be designed to maximize the efficacy of training for helping older adults interact with touchscreen interfaces, the current study carefully reviewed multiple research studies relevant to the research question. Two main future research directions concerning the training material design for older adults were derived from the current review results. **Application:** Future studies that address the current lack of knowledge would contribute to establishing more actionable guidelines for designing training materials for older adults.

Keywords: Older adults, Training design, Touchscreen interface

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