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Abstract

We discuss our methods and justifications for game design decisions. We identify three major learning outcomes that must be met by our game designs. Through a literature review, we create a three-tier taxonomy of games and discover that most education cybersecurity games do not have empirically proven efficacy. We discuss our prototyping process and justify our game design decisions. We test the game with thirteen children in our target age range and identify four major themes: Mixed views on education and career goals, diverse opinions about developers' appearance and interests, impact of background knowledge, and two modes of character driven decisions. These observations support our thesis that type three games would be useful for addressing our design and educational goals. We also identify a need future work to be done in five distinct areas: cybersecurity educational game design, cybersecurity education game validation, the role of narrative in games, asynchronous, asymmetric games in relation to security, and youth perceptions of cybersecurity careers and practices.

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