

A Quest for Knowledge in Our Backyards:
Using Widgets to Explore and Interact within Paterson Great Falls
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EDTC 803: Data Analysis and Report Writing
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¹The Mill Mile Website home page

²Widgets Moblie App

³Mill Mile Mobile App

⁴BingoWidgets

⁵PuzzleWidget

Introduction

Paterson Great Falls is a National Historical Park in Paterson, NJ, home to the second-largest waterfall east of the Mississippi (National et al. Association, 2022). Along with the natural beauty and wonders of the Great Falls, Paterson has much history. With ten historic landmarks, Paterson Great Falls is a self-guided walking and educational tour (Hamilton Partnership for Paterson, 2013).

To aid in preserving the history, geology, and social and cultural significance of the area around the Paterson Great Falls National Historical Park site, an educational initiative is currently underway. Paterson Great Falls has a website and app called Mill Mile (Hamilton Partnership for Paterson, 2013). The website provides general and brief information about each of the ten stops, accompanied by images that represent each. The website also prompts users to download the phone or tablet app “Mill Mile,” which is the interactive technology for the self-guided tour. Based on the question answer (mission statement) presented on the Mill Mile website, “*What is Mill Mile?*”, the goal of the self-guided tour is to promote interactive education for students and visitors alike (Hamilton Partnership for Paterson, 2013). Unfortunately, the application and information boards around each stop lack engagement with the audience.

Figure 1.0

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Sound design principles and purpose

Designers should not simply seek to solve a problem, but instead look to create a solution that is human-centered design (HCD), an approach that prioritizes human needs, capabilities, and behavior. This approach is designed to accommodate those needs, abilities, and ways of behaving (Norman, p. 8). The plan for the Mill Mile self-guided tour is to enhance the Mill Mile mobile app to continue promoting the history, geology, society, and culture of Paterson. Currently, the Content Management System (CMS) or application software that hosts the collection of material for the guide is Acoustiguide, an audio and visual app that explores multilingual experiences, pairing with audio tour software and hardware solutions (Tinoco, 2023). To complement the acoustiguide app's content, BookWidgets is suggested to act as the technology engagement for the guide. BookWidgets is an easy-to-use platform for creating interactive exercises, such as exit slips, games, timelines, photo- and video-based activities, and more (BookWidget: Interactive Learning, 2013).

Educational objectives relating to the concepts

The Mill Mile tour and Paterson Great Falls attract students and park visitors to experience the history of Paterson. Learners who embark on this self-guided approach will be

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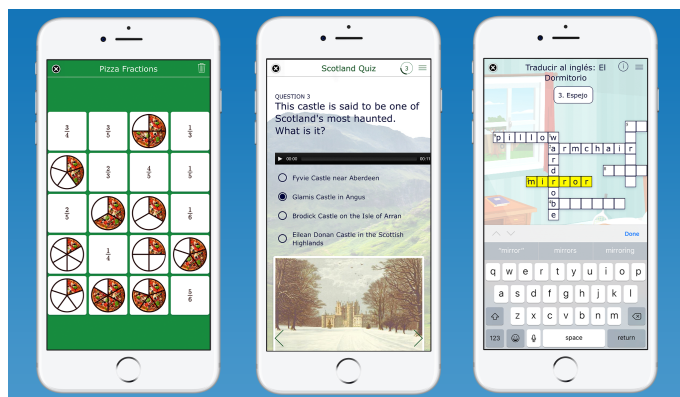
able to appreciate the material when using Applied game design or gamification to add engagement to the guide. Applied game design incorporates the elements we enjoy about games and integrates them into everyday activities to make them more exciting and engaging (Puckett, 2019). The Mill Mile tour was established to educate people about the rich history of Paterson; the information currently just needs to be supported by activities, engagement, and feedback. BookWidgets offers interactive activity options that cover each category to gamify learning for self-guided use.

A description of its features

BookWidgets' activities are mobile-friendly, with shareable links that can be coded into the Mill Mile application to access tests, reviews, games, pictures, videos, and math group widgets. The organization that provides content for the Mill Mile guide-tour application can also embed PDFs, Google Maps, and Wikipedia articles. The devices can be customized so that a wizard-like assistant guides them through the building process, much like completing a quest in a game. The analytic feature can track activities, allowing the Great Falls organization to receive participants' feedback (W., 2019).

Figure 1.1

Widgets Mobile App²



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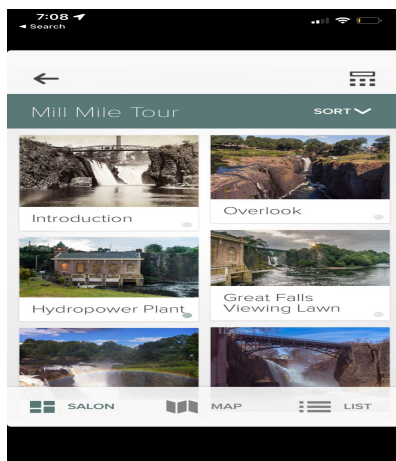
⁵PuzzleWidget

A rationale for its relevance

In 2016, students at the STEM Academy at John F. Kennedy High School, the Hamilton Partnership for Paterson, and the National Park Service collaborated to enhance and update the popular Mill Mile audio walking tour and smartphone app (Paterson et al., 2017). This initiative project started with passionate students who sought to make an impact by engaging the youth with meaningful content on the history of Paterson and the Great Falls. The app has helped students and visitors navigate the Mill Mile, meeting the goal of the students who designed the application. Adding *BookWidgets* will help gamify the app and attract more visitors.

Figure 1.2

*Mill Mile Mobile App*³



Feasibility

BookWidgets offers various one-year subscription rates, providing a cost-effective solution that allows Paterson Great Falls, a National Historical Park, to invest in the technology. The options available are between educational (\$55 yearly subscription) and commercial usage (\$245 annual subscription) (BookWidget: Interactive Learning, 2013).

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A case or cases on how participants would experience the elements.

Within Teacher blogs posted on the BookWidgets site, Bongers created a guide on enhancing engagement and meaningful learning to field trips using technology (Bongers, 2022). The Mill Mile tour can be modeled after Bongers' guide by utilizing the following activities to engage visitors and learners within these designated locations: Bingo widget and Game Widgets. The Bingo Widget can be completed throughout the Mill Mile tour, allowing participants to search for information to win Bingo actively. Game Widgets (Puzzles, Pair matching, and Crossword puzzles) can be a fun way to engage with younger visitors and students.

Figure 1.3

BingoWidgets⁴

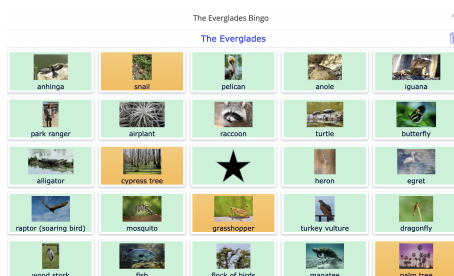
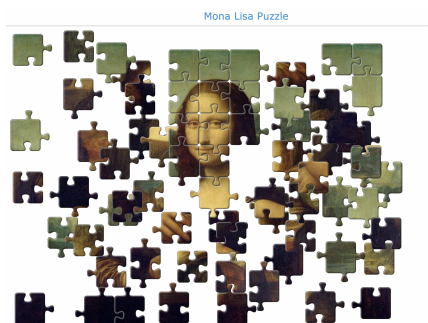


Figure 1.4

PuzzleWidgets⁵



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