

Technical Disclosure Commons

Defensive Publications Series

February 23, 2018

Interactive web browser learning tool

Eric Bellamy

Follow this and additional works at: https://www.tdcommons.org/dpubs_series

Recommended Citation

Bellamy, Eric, "Interactive web browser learning tool", Technical Disclosure Commons, (February 23, 2018)
https://www.tdcommons.org/dpubs_series/1071



This work is licensed under a [Creative Commons Attribution 4.0 License](https://creativecommons.org/licenses/by/4.0/).

This Article is brought to you for free and open access by Technical Disclosure Commons. It has been accepted for inclusion in Defensive Publications Series by an authorized administrator of Technical Disclosure Commons.

Interactive web browser learning tool

ABSTRACT

Students that suffer from learning disabilities often need specialized educational techniques to enhance learning abilities. Some of these include direct instruction, multi-sensory approaches, and repetition. This disclosure describes techniques to provide an interactive web tool that, with user permission, learns what a student likes and then uses those learned inputs to generate an interactive learning exercise tailored to a student's learning progress.

KEYWORDS

- Learning disability
- Education
- Educational web tools
- Web browser

BACKGROUND

Students with learning disabilities can benefit from specialized techniques that help them learn. Some common techniques include direct instruction, repetitive exercises, and exercises that involve multiple sensory inputs, such as associating textures or sounds to learning exercises. For example, a student may have a wide range of learning disabilities, and therefore any one conventional techniques would not suffice for all students.

DESCRIPTION

This disclosure describes techniques to provide an interactive web browsing tool that, with specific user permission, learns what a user likes to provide exercises in a separate section of a web browser that are tailored to the user. The user's likes are determined with user

permission and can be based upon user data such as browsing history permitted by the user for such determination. The user is provided with options to control what user data is utilized and to disable the interactive web browsing tool entirely. Further, one or more supervisory users, e.g., teachers, are also provided with options to specify use of user data, and/or configure the interactive web browsing tool.

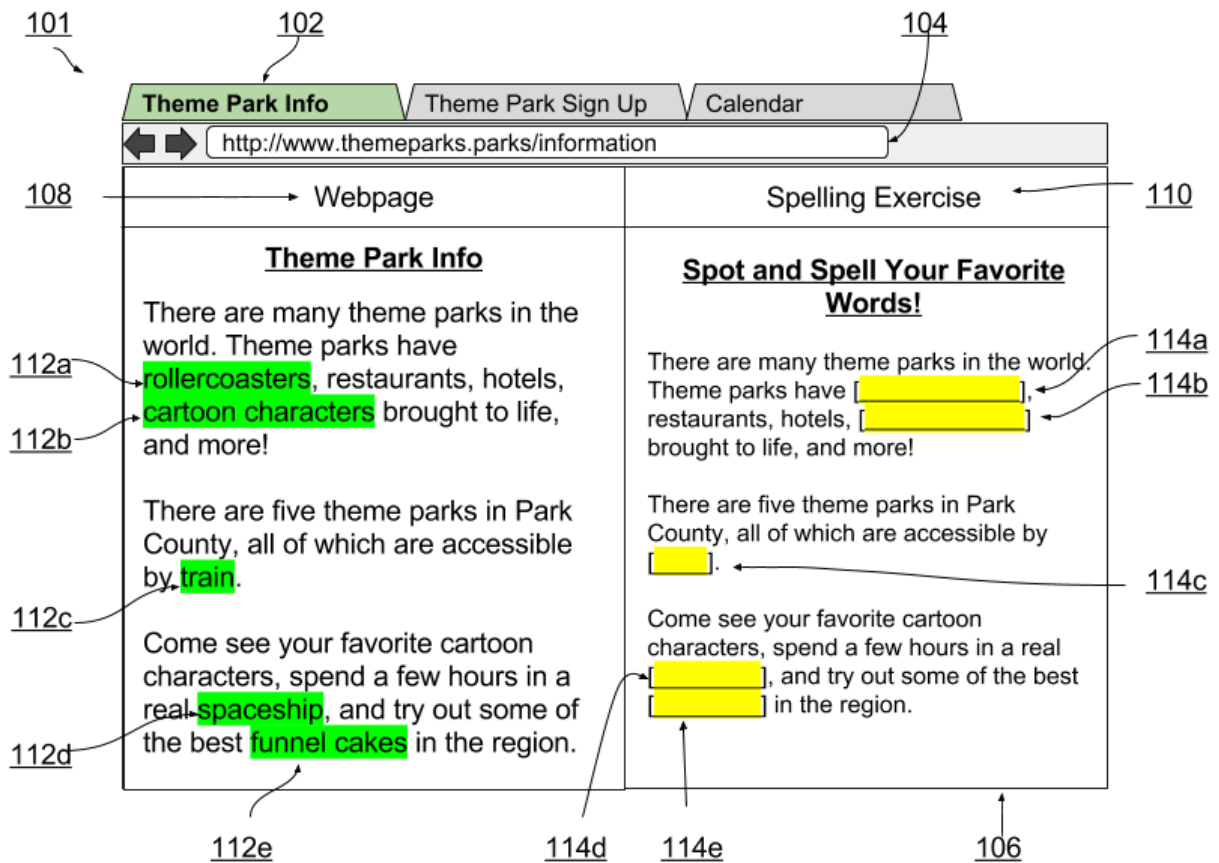


Fig. 1: Interactive web learning tool

Fig. 1 illustrates an example interactive web learning tool. The interactive web learning tool (101) can be part of a conventional web browser application (106) or operate within the web browser (e.g., plugin, browser-based application, etc.). As illustrated in Fig. 1, web browser (106) includes tab (102), which displays web content retrieved from a website (104). The tab website is entitled “Theme Park Info” (108). Per techniques of this disclosure, certain words or

phrases (112a-e) in the website content are highlighted indicating that these words or phrases correspond to a user's previously observed or indicated interests, determined with user permission.

A separate section, entitled "Spelling Exercise" (110), is included in the user interface. The separate section includes an interactive spelling game based on website (108). The highlighted words from the website are blanked out in this section. The user is prompted to spell the words or phrases by entering the sequence of letters in blank spaces (114a-e), which correspond to the selected words. Prompting the user to recall and spell words from the website they visit, can help bolster memory and spelling skills.

Variations of the technique are implemented for different learning disabilities. For example, the technique illustrated with reference to Fig. 1 can assist students that struggle with spelling. For students that have trouble with memory, section (110) of Fig. 1 is replaced with an interface that prompts the user to recall information, such as text, images, designs, etc., from the website. In another example, if a student has a stutter, section (110) is configured to prompt the user to repeat aloud the highlighted words. By providing suitable variations of learning exercises that are based on a user's likes, the techniques of this disclosure associate fun or enjoyment with such learning exercises and can help students learn. Providing responses to the various types of exercises helps stimulate sight, sound, memory, and repetition. When users permit use of response data, exercises are adapted over time based on the user responses.

The browser-based tools described herein can be implemented in a classroom setting or at home. Reports can be generated (as configured by the user or a supervisory user) to indicate a student's progress and deficiencies observed. In a classroom, a teacher may input the student's learning propensities to a secure web browser. The teacher may also sign off on learning

objectives through the browser. Prompting students through particular learning challenges enables continued reinforcement, can help a student develop confidence, and encourage greater risk-taking toward learning objectives. The more a student gains confidence by learning about their favorite people, places, things, etc., the more likely that the student will enjoy and continue to invest time and attention toward further learning and overcoming challenges. This technique provides real-time insight into learning.

Variations of this technique include, for example, displaying learning exercises in a pop-up window or in an alternative application on a mobile phone, a desktop computer, tablet, wearable electronics, etc. Further, the learning exercises can be provided on a separate screen from the screen on which primary content (e.g., website) is displayed.

The interactive web browsing tool of this disclosure is provided upon specific user permission, including that from students, teachers, responsible authorities, etc. The interactive web browsing tool can be disabled partially or completely, based on specific user preferences. Further, data generated by the interactive web browsing tool, e.g., regarding learning progress, etc. is stored securely and/or utilized as specifically configured by the users.

In situations in which certain implementations discussed herein may collect or use personal information about users (e.g., user data, information about a user's social network, user's location and time at the location, user's biometric information, user's activities and demographic information), users are provided with one or more opportunities to control whether information is collected, whether the personal information is stored, whether the personal information is used, and how the information is collected about the user, stored and used. That is, the systems and methods discussed herein collect, store and/or use user personal information specifically upon receiving explicit authorization from the relevant users to do so. For example,

a user is provided with control over whether programs or features collect user information about that particular user or other users relevant to the program or feature. Each user for which personal information is to be collected is presented with one or more options to allow control over the information collection relevant to that user, to provide permission or authorization as to whether the information is collected and as to which portions of the information are to be collected. For example, users can be provided with one or more such control options over a communication network. In addition, certain data may be treated in one or more ways before it is stored or used so that personally identifiable information is removed. As one example, a user's identity may be treated so that no personally identifiable information can be determined. As another example, a user's geographic location may be generalized to a larger region so that the user's particular location cannot be determined.

CONCLUSION

This disclosure describes techniques to provide an interactive web tool that, with user permission, learns what a student likes and then uses those learned inputs to generate an interactive learning exercise tailored to a student's learning ability and learning progress.