FocusUp: A Browser Extension for Enhancing Online Attention and Productivity for ADHD Individuals

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Abstract

Individuals with Attention Deficit/Hyperactivity Disorder (ADHD) often struggle with maintaining focus, managing tasks, and minimizing distractions while browsing the web. To address these challenges, we present *FocusUp*, a Chrome extension designed to enhance productivity and structured engagement for ADHD individuals. *FocusUp* integrates task-tracking tools connected to web locations and reading progress-tracking tools that track actual reading progress, helping users reduce cognitive overload in online environments. Developed with first-hand ADHD insights and refined through pilot studies with seven participants, *FocusUp* provides a flexible, user-driven solution that supports sustained attention and minimizes task-switching. Our findings suggest that *FocusUp* offers a promising and effective approach to enhancing focus, task execution, and web-based productivity for individuals with ADHD.

Keywords

Accessibility, ADHD, Task Management, Chrome Browser

1 Introduction

Web browsing presents unique challenges for individuals with Attention Deficit/Hyperactivity Disorder (ADHD), a neurodevelopmental condition characterized by persistent patterns of inattention, hyperactivity, and impulsivity [1]. This impacts the ability to effectively sustain focus, and manage tasks, [2] which also applies to online environments. While contemporary web tools offer time management, time progress indication (e.g. pomodoro timer) and

distraction-blocking features, they often fail to address individualized needs of users with ADHD.

However, ADHD symptoms vary widely among individuals [2], requiring a more holistic, adaptive, and personalized approach to support focus and productivity. *FocusUp* is a Chrome extension designed to help users navigate the web more effectively by combining task management, progress tracking, and structured engagement tools in a unified system.

Inspired by first-hand experiences from developers with ADHD and iterative feedback from users, *FocusUp* aims to bridge the gap between task execution and sustained attention. Unlike existing productivity extensions, which impose rigid constraints, *FocusUp* empowers users by providing a structured yet flexible system tailored to their unique browsing habits. To our knowledge, *FocusUp* is one of the first browser extensions explicitly designed by people with ADHD to enhance multiple facets of online productivity and focus for ADHD users through an integrated set of assistive tools.

We assessed *FocusUp* through pilot studies with twelve users having ADHD, examining the utility of our system's interactions. Participants found the tool helpful in maintaining focus and improving task management while browsing. They shared positive experiences, highlighting its effectiveness in reducing distractions and enhancing productivity. Additionally, they provided valuable suggestions for further improvements.

2 FocusUp

FocusUp is a Google Chrome extension designed to help individuals with ADHD maintain focus and improve productivity while browsing the web. ADHD affects executive function, leading to difficulties in starting and completing tasks, managing (online) distractions, and sustaining engagement, for example, with digital content [2]. To address these challenges, *FocusUp* integrates two key features:

- **Task List**: A structured task management system that enables users to create, track, and organize tasks linked to specific websites, reducing the cognitive load of managing multiple tasks. For example, while on an email provider's webpage, only email-related tasks are displayed.
- **Progress Tracking**: A real-time progress bar that visualizes actual reading progress rather than just elapsed time, helping users stay engaged and motivated to complete tasks.
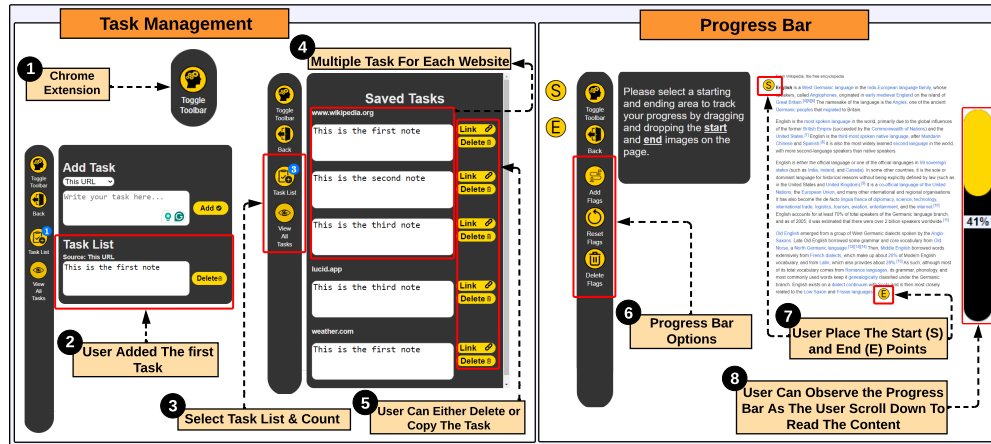
Figure 1: Overview of *FocusUp's* Chrome browser workflow, highlighting task management, multi-task tracking per website, and progress tracking with start/end point selection and a dynamic progress bar.

These features work together to offer a customizable and structured web browsing experience, reducing task-switching, procrastination, and distractions. Unlike restrictive productivity tools that require mixing and matching, *FocusUp* offers a holistic, flexible, and user-driven approach tailored to the Specific needs of individuals with ADHD.

Developed with first-hand insights from ADHD users and refined through pilot studies, *FocusUp* provides a user-friendly, intuitive solution for improving task execution and sustained attention in online environments.

2.1 Toolbar Design and Accessibility

The *FocusUp* toolbar uses extended high-contrast colors, non-serif fonts and allows for free positioning of the toolbar across usage sessions (stored in Chrome storage API) to ensure compatibility with various web contents. By default, the tool starts collapsed to minimize distractions. Users can expand and hide it as needed, maintaining a clutter-free interface.

2.2 Task List and Saved Tasks Management

With the *FocusUp* toolbar open, users can access the task management features, including both:

- **Task List Menu**: Displays tasks relevant to the current website. (e.g,. only showing email on the email site)
- **Saved Tasks Menu**: Stores all saved tasks across different websites. (e.g,. "buy cat food" leading to the pet store website)

The Task List Menu ensures that users only see tasks related to their active browsing session, helping them stay focused on their immediate context. This was inspired by *TangiPlan*, a physical task tracker that connects real-world tasks to physical markers [3] to reduce overwhelming lists of tasks. Meanwhile, the Saved Tasks Menu allows users to review and manage tasks across multiple browsing sessions, preventing the loss of important tasks.

To minimize cognitive load, the tool adjusts text field sizes or uses scroll bars to accommodate task length. Users can also edit tasks directly within the menus, eliminating the need to delete and recreate tasks when making modifications.

2.3 Pilot Study

We conducted a pilot study with twelve ADHD users to evaluate *FocusUp* and assess the effectiveness of its interactions in improving focus and productivity. Participants were asked to freely engage with the tool's task management and progress-tracking features while browsing the web. Afterward, we conducted interviews to gather feedback on their experiences.

Participants found *FocusUp* helpful in reducing distractions, improving task organization, and maintaining engagement with online content. They reported that the extension provided a structured yet flexible approach to managing web-based tasks, making it easier to stay on track. Additionally, they suggested potential improvements, such as changeable color themes, customizable reminders, and adaptive focus modes to better accommodate individual needs.

3 Conclusion

We developed *FocusUp*, a system that combines task management linked to websites and actual reading progress tracking to enhance engagement and minimize distractions. To evaluate its effectiveness, we conducted a pilot study with 12 participants, exploring how a Chrome extension can support individuals with ADHD in maintaining focus and improving productivity in web environments. Our findings indicate that users found *FocusUp* helpful, effective, and promising for enhancing online attention and task organization, while also identifying areas for further refinement.

References

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