Project Proposal

Coursera Study Web Extension

Sunidhi Abhange

Gage Fleming

Hashem Ramadan

Mason Waldapfel

University of London

CM2020 Agile Software Projects

Module Leader: Dr. Sean McGrath

Team 68 (Tutor Group 6)

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# 1. Introduction

Coursera is a global platform specializing in online learning and career development. The platform allows millions of learners to grow, learn, and develop industry-standard skills through partnerships with universities, businesses, and governments. It has affected each of the author's lives via the Bachelor of Computer Science offered in collaboration with the University of London and allows a further 113 million learners the opportunity to cement lifelong learning as an integral part of their lives.

As avid users of the Coursera platform, we see an opportunity to enhance the platform via a browser extension. The overall goal of the extension is to aid in implementing and improving Coursera users' successful study skills. The extension will allow users to limit distractions by implementing a whitelist website blocker. It will also enable users to optimize their study patterns with analytics driven by a time tracker.

The tool’s value within the given market space, design and planned implementation have been thoroughly refined through our team's quality research, planning and iteration to ensure the tool meets the needs of the “power” learners on Coursera. The following sections outline the processes used to reach these conclusions.

# 2. Vision and Scope

## 2.1. Project Opportunity

Coursera serves over 113 million learners worldwide, offering a large demographic to tap into. While building a web extension that caters to all of these students is unreasonable, we have direct access to around 10,000 unique learners currently enrolled in the same program as the StudySync team. The BSc in Computer Science program is offered in cooperation with the University of London. These users display constant frustration with the ease of online distractions and the need for study habit tools provided by Coursera. Our preliminary questionnaire confirms the desire for a tool of this nature. Users are frequently distracted by unrelated websites, need help to focus on their Coursera studies and try to implement a wide array of technologies to mitigate this problem. They also see value in a time tracker, which helps display their study habits' effectiveness by semester.

Forms response chart. Question title: How easy is it for you to limit distractions while studying?
. Number of responses: 15 responses.

Figure 1: Questionnaire responses regarding limiting distractions while studying on Coursera. Scale: 1 - very hard to limit, 5 - very easy to limit.

A comparative analysis is completed in the following section to see the current market solutions and how StudySync will fit within this ecosystem. In brief, the current website blockers perform well and provide many functions to increase the student's productivity. Unfortunately, they all require high upfront setup costs, aren’t built directly for Coursera, and can ask for payment to be of actual use. On the other hand, the time trackers also suffer from the same issues the website blocker does. The lack of Coursera integration is also glaringly apparent here, as users cannot accurately understand their study time per course or task. The high barrier to entry for these solutions also limits the number of students who will put in the effort to solve this problem. With this in mind, combined with the results from our initial user research, we see this as an excellent opportunity to produce a fit-for-purpose web extension with a low barrier to entry. Using an agile development process, solving this problem will be a perfect opportunity for StudySync.

The web extension would limit the barrier to entry by providing base settings that integrate well with the average student’s desired settings. It would also be a free web extension, lowering the entry barrier. Focusing on Coursera integration would also provide a relevant, accurate picture of their study habits on the platform. The web blocker would behave as a whitelist as opposed to a blacklist which would limit the decisions needed by the user. These options would combine to provide the best productivity tool for students to pair with their Coursera studies. The direct access to the degree students is an excellent testing ground to get an MVP product tested, produced and published.

## 2.2. Comparative Evaluation

### 2.2.1 Limit

Limit is a web extension which limits the time you can spend on distracting websites, offering a solution to PP-2. It is a lightweight tool that allows users to input problematic websites and set daily time limits. Limit is built on a blacklist in which the onus is on the user to find and declare websites which are problematic to their productivity time. The extension has the following workflow:

* Ensure extension is enabled.
* Add a website URL they find problematic on the settings page.
* Set a daily time limit on the settings page for said URL.
* Limit tracks users time on blacklisted websites, and if the daily limit is reached, the user is notified they have reached their daily limit.

A screen shot of a computer

Description automatically generated

Figure 2: Limit dropdown menu.

The extension also helps pinpoint desirable traits for an app of this nature. The UI is simple, with clear, interactive elements and visual distinction to help guide the user through its functionality. The tool does not contain bloatware or unnecessary functionality to further the usability of the extension. It also indicates Limit takes privacy seriously, and the data used by the application is stored locally on the user’s machine without being sent to a database or the cloud. The lack of a paywall also helps user uptake and lowers the barrier to entry.

A screenshot of a computer

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Figure 3: Limit settings page.

Limit offers a solution to our project problem PP-2 by allowing users to limit time spent on websites they see as distracting. However, when framed within our desired user class, we don’t see it as a good fit.

To start, the web extension is a blacklist which comes with a high overhead cost to set up correctly. Users must document all websites they see as problematic and write them into the extension. Meanwhile, StudySync would be a whitelist that removes this overhead time by stopping everything by default. The user would then have quick access to add URLs to the whitelist.

Furthermore, the extension still allows access to these problematic sites for a limited time. Users can get engulfed in a task on a given website when permitted. For example, a user is writing a comment to a Facebook post, and Limit jumps in and says the site is now blocked as they have spent too much time on Facebook. Users can get frustrated and turn off the extension to complete their comments. The user then forgets to enable the extension, and their study sessions are again at the mercy of distracting websites. The age-old adage “An ounce of prevention is worth a pound of cure” applies here. StudySync would solve this by preventing access from the start during study sessions. This would stop users from investing in these distracting sites during their study sessions. Reviewing Limit has validated the need for a whitelist approach to website blocking.

### 2.2.2 Web Blocker

Web Blocker is a web extension which serves as a simple blacklist for distracting websites, offering a solution to PP-2. The extension redirects users to a specified URL when they try to navigate to a blacklisted URL. Like Limit, it puts the onus on the user to find and document problematic websites for the extension to block. The extension workflow is below.

* Enter the URL to be blocked.
* Optionally specify the redirect link the user will be sent to when accessing backlisted websites.
* Optionally specify a schedule for the blocking to occur.
* Extension redirects the user if the URL is on the blacklist and the time falls within the schedule.

A screenshot of a web blocker

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Figure 4: Web Blocker dropdown menu.

Web Blocker provides all of its functionality with very little user interaction. The user does not need to go through complicated workflows to block pages. The extension does not contain bloatware and contains fit-for-purpose functionality. Much like Limit, the extension would allow a user to get quickly acquainted with its functionality—a vital aspect of these extensions. The redirect option is also a unique solution for blocking the page, but it could lead to confusion as no alert is provided when the user is redirected. Web Blocker also does not hide behind a paywall, which we see as a necessity for any web extension of this kind.

A screenshot of a web blocker

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Figure 5: Web Blocker settings page.

Web Blocker performs well as a blacklist web extension. However, much like Limit, its broad nature and high setup costs leave much to be desired. The user will again have to find and list all problematic pages in the extension. We see this as a high entry barrier in these kinds of extensions. The extension also does not offer a simple on/off toggle to disable the blocker. Users can switch productivity mindsets, and with this extension, it would need to be entirely turned off to allow for that switch. We don’t see this as a good solution, as the extension could be forgotten once disabled. StudySync could ask users if they want it enabled after navigating to coursera.org. Through this review, Web Blocker has confirmed the need for a whitelist approach to web blocking.

### 2.3 WebWork

WebWork is a full-fledged productivity tool which allows companies to track and monitor employee productivity and automate payroll tasks. The web extension provided by the company fits within PP-3. While the features offered by the company are geared more toward employee and company productivity, some features here can be attractive to our target market.

A screenshot of a phone

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Figure 6: Webwork dropdown menu.

Unfortunately, the extension has many workflows and cannot be briefly broken down into finite steps. However, the application allows users or managers to set a weekly limit to the work that can be completed by the individual in question. The individual can then choose what project, task and information they are working on by inputting it into the extension. WebWork then processes this information, allowing users to see their productivity or use it for reports or payroll.

A screenshot of a computer

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Figure 7: Webwork dashboard.

The simple design of the dropdown menu and task breakdown are great tools which would translate well into StudySync. Users should be able to quickly enter the information they need and be guided toward the correct input area. The many reports and data visuals also benefit the company's productivity market.

In contrast, when framed within our current market, we see WebWork as an overfit solution for our users. It’s locked behind a paywall, requires a user account, which is very difficult to close, and has a high barrier to entry with all the different options, reports and visuals. Our target market does not want a lot of setup costs, and the complexity of this tool does not lend itself well to that mindset. The tool also asks for a high degree of invasion regarding a user's privacy. Many students are privacy-focused, which can be an off-putting ask. While this tool seems an excellent fit for companies when used within our problem space, it doesn’t correctly solve PP-3.

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