

By Cameron Tebbenham-Small
Cameron2.tebbenham-small@live.uwe.ac.uk
Department of Computer Science and Creative Technology
University of the West of England
Coldharbour Lane
Bristol BS16 1QY

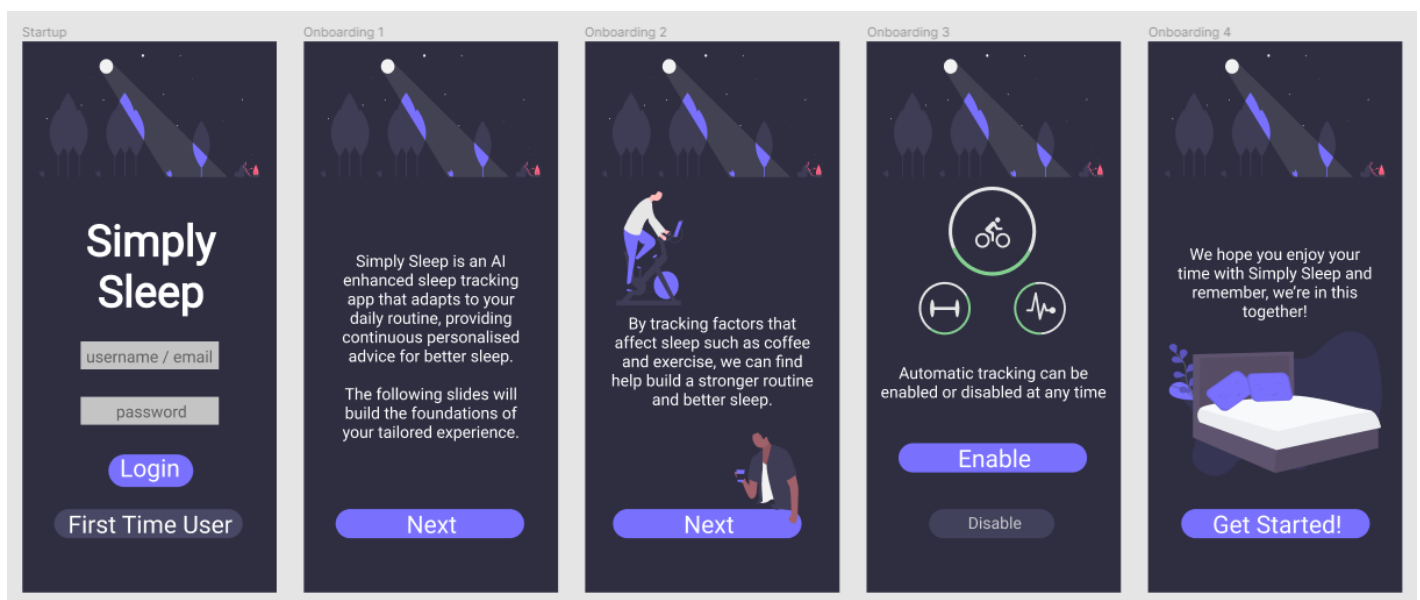
Contents

Summary of project:	1
Introduction:	2
Overview of main tasks completed for 'My Health Data' project (Feb – April): 200 w.....	2
Design Discussion: 900 – 1000 words.....	3
Conclusion and recommendations 100 words	6
References: (not included in word count).....	7
Bibliography	8

Summary of project:

Simply Sleep

A student targeted sleep and habit tracker that suggests changes to your lifestyle to improve sleep.



Introduction:

This report will summarize and critically evaluate my contribution to the My Health Data UX project; it will refer to materials in my design folio (*add URL*) as well as relevant academic sources. For this project we were tasked with creating an app that would empower users in a specific population group to overcome boundaries or limitations. We were placed into groups of 4 for the ideation, interview and first pitch, before splitting and individually finishing our pitch and app prototype.

Overview of main tasks completed for ‘My Health Data’ project (Feb – April): 200 w

Groupwork was a somewhat rocky experience as half the group was slow to react. This made setting tasks difficult and as such, Carly and I felt compelled to drive the group forwards. We worked together on padlet to brainstorm and set out a large list of issues to tackle, I added at least one extra step to each issue so that we had a range of topics and potential concerns to work from. “The first question...what issues or problems should be overcome” (Beyer 1997).

I wrote one pitch based on sleep, an issue we all agreed was important to students and something we as students could relate to. We later chose this as our pitch to move forward with. At this stage I created a website blog for our group so that we had a centralized collection of our groupwork:

<https://galbakor.github.io/UX-Blog/#> In this way I was the recorder for our group: “The recorder keeps notes of the meeting online, displayed so everyone can see them”. (Beyer, 1997)

I would have liked to gather more interviews, but encountered issues with participants not responding. I helped create the goals and frustrations for our persona and performed the entire SWOT analysis on four of the most popular sleep apps I found on the android app store. Following feedback, once the group split I performed a more extensive SWOT on a much wider range of apps, created a third persona and journey map.

Design Discussion: 900 – 1000 words

*While you were working on the My Health Data design brief, what were the key decision-making moments and why? Explain using evidence from your **design folio** and contextualise this by referring to **UX academic/professional sources**. Your chosen examples could be conceptual, technical, practical, legal (think copyright, or project branding) or ethical (think user interviews, vulnerable user groups), but definitely UX-related. Tell us how UX design problems were overcome, or at least how every method was exhausted to arrive at the best possible solution. Lead over to wider the professional context of the app: critically evaluate how your completed concept & design compares with leading **industry competitors** (insert app names/ screenshots). Refer to **industry design guidelines for mobile applications**.*

The first key decision-making moment was creating and choosing a pitch based on perceived concerns and issues in population groups. Though we chose a pitch that made sense to us – an app to improve sleep, we needed more information on what the intended users actually needed. “Get close to the customer” and “Listen to the voice of the customer” (Leonard, D. 1997) and in the words of Norman, modern industry is distinguished “through its consideration of the needs of its customers” (Norman, D.A. 1989). As such our interviews were based around understanding how different factors affected the participant’s lives, how well they slept and why they thought that might be the case. Interpreting our interview data, we found that the majority of participants slept poorly, with screen time and stress playing large roles in people’s lives. Before creating a user journey map for our proposed solution, we needed to “visualize something implementable” with a “desired outcome” that we planned to achieve (Szabo, Peter W 2017). For me the desired outcome came from a MoSCoW analysis. A proposed app must improve sleep and should in turn improve daily structure by enforcing positive decisions. My could have come from my SWOT analysis – the app could contain features such as blue light filters, an inbuilt alarm and other niceties, but those aren’t the focus. Further, I decided to focus on habits and factors that the user could more easily control – not longstanding issues or those caused by medical constraints. As such the app wouldn’t directly assist with mental health, though it is possible that mental health would be bettered as an outcome.

From my SWOT analysis of 10 popular sleep apps, I found that they were too heavily focused on the data itself, or were too limited in their assistance. Calm Sleep for example, provides sounds, stories and meditation techniques but leaves it up to the user to figure out what they actually want or need from the app. Sleep Tracker meanwhile, allows the user to choose factors that they think might affect sleep such as caffeine, smoking and eating late, but the large amount of data that’s fed back to the user merely shows sleep trends. While this could be useful to show to a sleep professional, there is no guidance as to what the user should do with this data. As such there is a gap in the market for an app

that not only takes in data from the user, but outputs a response that guides the user on a path to improvement. I did pick and choose aesthetics and similarities between the apps which, alongside extensive research into the ways different lights affect sleep, determined the overall aesthetic of my app prototype. While humans are more sensitive to blue light (Shechter, A et al, 2018), blue lights from screens provide an exposure level a fraction of that which would be gained by “walking outdoors on a cloudy day” (Fleming, A 2018). What’s more, researchers from Manchester University found that adjusting yellow lights has a more negative affect than dimming blue light. (Roberts, M 2019). Lastly, a common consensus amongst articles about the best colours for sleep is that “people whose rooms are painted blue tend to sleep longer” (National Sleep Foundation) and blue holds connotations with calmness – promoting reduced blood pressure and heart rate. (Cushner, K 2018).

I researched app design from a variety of sources before starting work on my prototype model. I found that the perfect size for a menu button is around 45-57 pixels according to Babich, N (2016) and that “young people are more used to holding their phone in one hand”, with “94%” of users using their phone in portrait orientation. (Gove, J, 2017. Wroblewski, L 2015) Further, the four main smartphone postures all feature thumb positions at the middle to bottom of the screen. Due to this, I decided to keep as many key interactable elements towards the middle-bottom of the screen. More research into mobile app designs established a consensus that the mobile app should be as decluttered as possible, only containing the most important elements with a minimalist design (Babich, N 2018. Mobile App Daily). What’s more, nested navigation behind burger menus or similar should be used for settings options that are infrequently used, while menus containing app features should be kept visible as “usability testing shows that exposing menu options in a more visible way increases engagement” (Babich, N 2016). In order to keep the prototype as decluttered and focused as possible, I eschewed my could haves and focused on what the app must do – track user data (automatically if possible with user permission) and provide a response. Moreover, the app should contain an onboarding experience to display how the app should be used and provide context for why permissions are present.

Evaluation of Learning: 400 words

Looking back over your learning this academic year, please evaluate in which areas of UX you have made the most progress and why. Refer to **specific UX methods or UX design stages** and contextualise this with **UX academic/ professional sources**. What would be your top tip for next year's students for the UX design project?

Over the past year, I think that I have improved in how I collect and interpret data. During the first semester, we had plenty of time to make a detailed analysis of our interviews, writing up observation summaries, user attitude reports and creating data matrices. During the second semester however, we were required to perform all our tasks in groups which led to prioritisation of certain design stages due to the amount of group input. As such, I had to be agile with how I interpreted data and drew conclusions, while still ensuring that my thoughts and solutions were driven by user data. (Beyer 1997) While we began with personal introspection and ideation, without user data we may have created a prototype that didn't achieve what the user genuinely needs. I would highly recommend using the previous semester's work as a template for what you should do for the semester 2 design project. If I were to look at the groupwork in terms of Belbin's behaviour clusters or roles, I found that I moved between a group of different roles, from the Implementer to Plant and Completer-Finisher. Due to the atmosphere of the group feeling strained at times, I was quick to set out my ideas for the project and move the group forward. If you are part of a group and not much is getting done, but you have a vision, I've found that it is best to put your idea on the table to get the gears moving. I progressed in how I analyse and compare different competitors, and while I didn't use SWOT analysis in the strictest method of listing strengths, weaknesses, opportunities and threats, I was able to determine overarching narratives between apps. I was then able to back up my interpretations of these narratives by linking to academic sources and linking back to the perceived issue in my pitch. When researching competitors, I would recommend picking one of two approaches – either take a small sample size and thoroughly interrogate the ins and outs to understand specific design choices, or go broad so you can gain a bigger understanding of the market.

Conclusion and recommendations 100 words

Briefly summarize the main achievements of your completed UX prototype app. To what extent does the project fulfil with what it set out to do? What significance could this project have in a wider professional context? What can other professionals draw from this project? What does it improve on?

In conclusion, I think that the project mostly fulfilled what it set out to do. I would have liked to spend more time on the prototype itself and achieve some of the could haves, but the simplistic design of the app feels appropriate for its use case as a casual giver of advice and collector of data. The prototype takes aspects of previous sleep apps but improves upon it by responding to user input. The user doesn't input data and read the results like they might do for an excel spreadsheet. They instead input results and are told by the app how they can improve. I think that the collection of data through automatic means could be of great significance across a wider context as it minimizes the need for tasks that some might see as a chore. By taking out the laboriousness in certain actions, apps can become more fluid and reduce the need for users to interpret walls of data that can at times appear unbreachable.

References: (not included in word count)

Make sure you use UWE Bristol Harvard referencing, see <https://www.uwe.ac.uk/study/study-support/study-skills/referencing/uwe-bristol-harvard>.

Beyer, H. (1997) Contextual design: defining customer-centered systems. Morgan Kaufmann

D. Leonard, J.F. Rayport, Spark innovation through empathic design, Harvard Business Review, November/December 1997, pp. 102–113.

D.A. Norman, The Design of Everyday Things, Doubleday/Currency, New York, 1989.

Szabo, Peter W (2017). User Experience Mapping, Packt Publishing.

Shechter, A et al. Blocking nocturnal blue light for insomnia: A randomized controlled trial. January 2018, J Psychiatr Res. 2018 Jan; 96: 196-202

<https://www.sciencedirect.com/science/article/abs/pii/S0022395617308592?via%3Dihub>

Fleming, A. The truth about blue light: does it really cause insomnia and increased risk of cancer? 28 May 2018. The Guardian. Accessed 16/03/2021 from:

<https://www.theguardian.com/lifeandstyle/2018/may/28/blue-light-led-screens-cancer-insomnia-health-issues>

Roberts, M. What's the best colour lighting for sleep? 17 December 2019. BBC. Accessed 16/03/2021 from: <https://www.bbc.co.uk/news/health-50807011>

The Best Colors for Sleep. National Sleep Foundation. Accessed 16/03/2021 from:

<https://www.sleep.org/best-colors-for-sleep/>

Cushner, K. Best bedroom colors for sleep. March 15 2018. Tuck. Accessed 16/03/2021 from:

<https://www.tuck.com/best-bedroom-colors-sleep/>

Babich, N. March 2016. Perfect Menu for Mobile Apps. Available from: <https://uxplanet.org/perfect-menu-for-mobile-apps-39b2cb5b7377>

Gove, J. Mobile in context: design principles of flow and navigation. Available from:

<https://www.youtube.com/watch?app=desktop&v=OZRczPw1BBw&feature=youtu.be>

Wroblewski, L. April 2015. Defining Mobile: 4-5.5 Inches, Portrait and One-Thumb. Available from:

<https://www.lukew.com/ff/entry.asp?1944>

Babich, N. February 2018. A Comprehensive Guide To Mobile App Design. Available from:

<https://www.smashingmagazine.com/2018/02/comprehensive-guide-to-mobile-app-design/>

February 2021. Principles of Mobile App Design: A complete Guide to UX Design and Development in 2021. Mobile App Daily. Available from: <https://www.mobileappdaily.com/principles-of-mobile-app-designing>

Bibliography

Karl L. Smart, Matthew E. Whiting. Designing systems that support learning and use: a customer-centered approach, Information & Management, December 2001, Volume 39 Issue 3, pp. 177-190.

Ducharme, J. Forget What You Think You Know About Blue Light And Sleep. Time. January 10 2020. Accessed 16/03/2021 from: <https://time.com/5752454/blue-light-sleep/>

Brown, H. What Color Light Helps You Sleep the Best? Bestlightguide. Accessed 16/03/2021 from: <https://bestlightguide.com/what-color-light-helps-you-sleep/>

Bufe, A. September 2020. Mobile UX Design: The Complete Expert Guide 2021. Available from: <https://uxcam.com/blog/mobile-ux/>