

Assignment M1: Outlooks for Outlook

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Abstract. The interface of Microsoft Outlook can be improved, especially from a student perspective. As the default email interface for students at GT, it should emphasize the task of manipulating emails. This study will explore if Outlook's purpose is met, as well as possible improvements for the interface.

Problem Space

It's 0600 EST on a Monday when your paper is due, and you need to email your amazingly responsive professor regarding clarification on a question before submission through Canvas. You log into Outlook and you're immediately greeted with an interface of colorful icons. Front and center, a list of emails, and to the immediate right, a giant iconic symbol for an email with text that displays "Select an item to read". The dark contrasting bar at the top of the page then grabs your attention with relatable icons for a menu, Skype, alerts, settings, and questions. Another contrasting bar appears at the bottom left with icons for email, calendar, groups, and tasks. It's early, you're used to Gmail, and through personal experiences you click the two buttons that look like an option for creating a new email. First the giant email icon front and center. Feedback? Null, it appears to do nothing. Your eyes then seek the next email icon. Above the Inbox, a bar with text that says "New" with a mail icon to the right of it. You click the icon. Feedback? Your 420 emails from "Weekly Digest" and "Melissa Moore" are marked as read. As the caffeine sinks in, you vaguely remember that the mathematical "XOR" button is used to create a new email. Disgruntled but not defeated, you finally create a new email. After clicking the button and waiting a few moments, you soon realize the new email column is cut off because the interface is not optimized for split-screening; the column is appended offscreen to the right. Small oversight you think and fully expand the window. You write your question in the email and

begin to type your professor's name in the "To" address. A drop-down menu appears almost immediately and it finishes populating their address. You decide that it's also a good idea to include your TA on CC. As you type their name, a drop-down box doesn't appear, and you realize that you've never emailed them in the past. You go back to Canvas to find their email address in the syllabus, copy and paste it into the CC address, and send off the email at 0630. Your Fitbit monitor also congratulates you on the strenuous activity.

Here lies just some of the issues surrounding Outlook. Why is an interface seemingly designed to create, read, and respond to emails make it so difficult to accomplish these simple tasks? Especially as a default application for not only a Georgia Tech (GT) student but various other universities, why is there not a layout option to complement the needs of specific users, such as students? Are these issues warranted or do they exist in the confines of a small population? This study is created to explore these issues within the Outlook application.

User Types

The user focus for this study will be on students, specifically GT students, but it may eventually include users who have never used Outlook to function as a benchmark. Since GT students are all provided with Outlook email's by default, the entire student body has access to the system and very likely has interacted with it. The unfortunate side effect of this certainty is that the study cannot include users who have never interacted with the interface before, which may be an issue if an absolute benchmark of performance is desired. For example, if there becomes a decision to perform experiments on how quickly users can create an email and send it out, the study will be biased from this population, unless it includes users who have never used the interface before. While this poses an issue, the study does not necessarily need to focus on quantitative performance metrics to explore significant improvement options. This fallacy should certainly be documented however. In contrast, a benefit of this user assurance is that the study will probably receive a large spread of different expertise levels. Many participants may not use Outlook as their primary interface of choice but have had to interact with it by default, while others may use it as their primary interface.

The General Survey

This experiment should begin with the use of a survey in order to avoid confirmation bias, determine if there exists a distribution in the population that even uses Outlook, and to understand the population's overall experience with the interface. The rationale for initiating the study with a survey is that they provide an inexpensive approach for gathering information, can easily be analyzed and documented through computational means, and can indirectly be used as a filter. Initially the study needs to determine if the problem stated is actually an issue or not. Contingent to that understanding, it is also important to identify what the population uses Outlook for. One of the major assumptions made is that students do not primarily use Outlook for the calendar feature, Skype, user groups, task management, etc. and focus solely on emailing. If that assumption is false, the study will need to shift gears. Since a survey can be sent out via email, filtering students who do and do not use Outlook may be as simple as ensuring that the recipient's email is an Outlook address (e.g. @gatech.edu).

To begin, questions can be phrased to ask user's what their primarily use for Outlook is, most likely though a list of choices since the feature space is limited and discrete; using this approach will make analysis a lot easier. The result of the first question will determine if the crucial assumption holds true. Once the study can confirm what the primary role of Outlook is used for, it can focus on the specific interface. The study will also keep in mind that even if the results do support the email focus assumption, there should be follow up questions to ask if they utilize Outlook for any other functionality; the interface shouldn't simply strip out all of the additional features just because users use it primarily for a single function. Those additional inferences will guide the study into determining how those separate features could be integrated to surround the primary objective.

After the overarching question is asked, the survey should progress into detail regarding the user's gulf of execution with the Outlook interface. These questions can consist of what they first see when they open the application, what catches their eyes, what is distracting, etc. These more superficial questions will aid the study in contrasting the user's intentions with what their perception of the interface actually does. The study could then transition into questions regarding

the response of the system, and their overall enjoyment. Do they find their primary use of the interface to be cumbersome? Are actions moving quickly? Are they receiving the feedback they want? To conclude the survey, users can be asked what other interfaces and systems they use to supplement Outlook, what they enjoy about Outlook that another interface does not provide, and vice-versa. These questions will provide a basis for what improvements can be made in relation to a separate interface, or even how characteristics of one feature in Outlook can be extended to another.

From the first few survey questions, the study can ultimately determine if students suffer from similar experiences that the problems space explores (hopefully not as exaggerated), and to determine what needs to be improved. If that first assumption holds true, the study also gains insight of the user's perspective in what they believe the interface is used for. The final questions will be geared towards how the user believes the system can be improved, potentially through a relative comparison with similar services. While the goal is not to mimic other interfaces, it will provide insight into what is important to the user and how that can be modified in the current Outlook interface.

Apprenticeship and Ethnography

One of the great benefits of the Outlook platform is that it is developed by Microsoft, who happens to sponsor a few local Meetup groups in the authors location. Additionally, within Booz Allen Hamilton (the author's current company) is an entire group dedicated to human centered design (HCD), which encompasses all features surrounding technical design approaches, including HCI. With these resources, the goal is to generate support for the study by gaining insight into the foundation of both the Outlook system and general email interface's as a whole.

From a few Microsoft connections, a goal of this study will be to reach out and see if anyone from the UI/UX side of Outlook is available for apprenticeship. Assuming a connection is made, the goal would be to gain an inside perspective of the application. At a minimum, this should provide confirmation to the general purpose of Outlook from Microsoft's perspective. If, for instance, the interface

was designed to focus on scheduling, then a lot of the issues raised may not be warranted. To support the study, it would be beneficial to learn what Microsoft believes (or knows) users use Outlook for. This information would be fantastic as it would both supplement the survey results, as well as provide an overarching perspective of the system, outside of the study's student focused approach. Additionally, while the subject of development may be difficult to discuss, it would be beneficial to gain insight into what Microsoft is planning on developing and improving next for the interface. This information can be used to confirm if some of the issues presented in the survey responses are warranted, and possibly shift future development of this study. In addition to interface design, a question of interest would be if Microsoft plans on creating separate layouts for different user groups, for instance, students vs employers. Certainly, a lot more questions will arise contingent to the answers provided, but the mentioned questions are core for the initial conversation. The goal of this apprenticeship would hopefully be mutually beneficial, where Microsoft provides information regarding the interface from their perspective, while the study provides them with feedback and analysis from a specific user perspective.

In addition to understanding the foundation of Outlook, the foundation of email interface design can be learned from other connections. With the support from individuals of the HCD group at Booz Allen Hamilton, the hope is to gain insight into what goes into an interface such as email. It's very easy to sit back and complain about the UI/UX, but truthfully, this does not include the perspective of why design considerations have to be made from a theoretical level. There may be reasons outside of this study's knowledge for why certain features are made difficult to access, why certain icons are made that way, etc. From this group, the primary focus will be an ethnography approach, and immersing the study into the perspective of a UI/UX designer. With this insider knowledge of the system, it will certainly aid in both the understanding of certain features and equally important, what improvements are available. Additionally, these individuals could provide expert feedback on possible design choices during the later stages of the study.

With these two resources, the knowledge gained is Outlook interface specific as well as fundamental interface design. Microsoft will hopefully provide a personal perspective as to the intentions of the system, while the Booz Allen Hamilton team

will provide insight into HCD/HCI of email interfaces (if that is indeed the focus of Outlook) from a fundamental level.

Existing Interfaces

A significant benefit of this study is the existence of other email and general applications for features that exists in Outlook, many of which are free. As captured in the survey question, the goal is to extrapolate information from what users find superior in their alternative interfaces that Outlook also provides. Mentioned previously, the goal isn't necessarily to mimic the other interfaces, but to understand why they perform better; there's no point in directly copying another interface since it doesn't give the user an incentive to change.

Through the survey, the goal is to capture what major interfaces people use, and potentially for what specific feature(s). The next step would be to contrast the interfaces to gain a better understanding of what makes one more successful than the other, specifically why they may choose it over Outlook. Additionally, if opposing interfaces contain similar features, it would be possible to understand what Outlook does better than other interfaces, and focus on maintaining that design, or even to extend those positive aspects to other features within Outlook. The goal is to effectively benchmark Outlook against what the surveyed population believes is a superior approach to a feature. This could be anything from qualitative aspects such as the perception of certain icons, to quantitative measures such as the number of actions required to execute an intention. It may be entirely possible that certain features are shared between the interfaces, but the user is unaware that Outlook has that capability.

In addition to the survey, and if an apprenticeship with Microsoft occurs, it is likely that Microsoft is aware of these other services. As such, questions can circulate relative to those other services. Questions such as interface decisions, why certain features were made more complex than another interface, what studies have been done on a particular feature, how they anticipate improving a feature beyond their competitor, etc. Other questions may be more systematic, such as who the improvements are geared towards to capture that specific userbase, how

does the backend prevent a specific feature from being used, etc. It's unlikely that iterative design choices were made without reference to these existing interfaces, so what aspects were decided to be/not to be captured in Outlook's interface, and why? Only Microsoft can really answer these questions.

Overall, in conjunction with survey results, an analysis of other interfaces will provide insight into what Outlook does well but can improve on. In addition, it may uncover features that Outlook does provide, but users are unaware of. Microsoft's perspective would also be interesting for understanding why certain design choices were made, contrary to the existence of other successful interfaces. Their perspective may also adjust what improvements are appropriate for the study. These perspectives overall will ease the decisions considered for improving the Outlook application.

Conclusion

The goal of these needfinding experiments is to first understand what users use Outlook for. Since it is by default an application used by GT students, there exists a large survey population and likely a healthy distribution of experience levels. Once a consensus is determined on what the primary use case is, the study will dive into what issues exist in the interface and how those issues prevent users from accomplishing their goal. Lastly, the needfinding experiments will hopefully determine plausible solutions that can be explored and tried later on in the study.