[HW 7] Evaluation: RateMyProfessors

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ABSTRACT

The RateMyProfessors website is one of the most well-known websites to students. Yet over the years, we've encountered many problems regardings the site's usability and how it could be improved. There's extraneous features, clunky navigation, unresponsive web design, and sloppy ad placement. In this abstract, we take the step to improve the website's design and usability. Our target demographic is college students. In particular, we are targeting college students who are interested in sharing their experiences taking classes with professors at their college.

KEYWORDS

ratemyprofessors; education; students; ux design; usability; prototyping; concept; sketch; cognitive walkthrough; empirical evaluation;

1. INTRODUCTION

This document will document the results of our evaluations for at least two distinct evaluation sessions:

- analytical cognitive walkthroughs, and
- an empirical evaluation with at least 1 user.

As our group has four people, we had one of our group perform a single empirical evaluation, while the others performed independent analytical cognitive walkthroughs.

2. ANALYTICAL EVALUATION

2.1 Goals

As stated in Project 6, our goals for our analytical evaluation / cognitive walkthroughs were to efficiently and effectively determine our prototype's learnability for new and infrequent visitors. With our cognitive walkthroughs, we'd be able to identify any gaps or unintuitive areas on our prototype and storyboards. It would also help aid us in preparation for our empirical evaluation.

2.2 Users and Tasks

Three members of our team independently conducted our cognitive walkthroughs, using our prototypes in Appendix 1 and following the evaluation forms in Appendix Section 2. Please see Appendix section 3 for the responses and raw data for these evaluations. The tasks that we completed are outlined in Appendix Section 2.

User 1 (Arthur): My user persona is a current student, having graduated from a 4 year college and is currently earning a second college degree. As a user, he would like to see better design while maintaining core functionality.

While I recognize and know what this website does, I have never rated a professor before and (before this class), probably spent less than 5 minutes in my entire life using the website. Thus, I would fall under the infrequent visitors section. The

tasks that Arthur's user persona performed included Search for Professor, Read Professor Reviews, and Add New Professor Review from the Cognitive Walkthrough Form in Appendix 2.1.

User 2 (Becky): My user person is a current student who used to use RateMyProfessors fairly often, usually to judge which professors to take the following term and for amusement. I'm familiar with RateMyProfessors's functionality, to the point where I can remember missing older features the site used to have, but have never submitted a professor review or added a new professor to the website. My former usage of the site is purely browse-only.

My cognitive walkthrough evaluation consists of visiting each prototype to do the following tasks: search for a professor, read a professor's ratings page, and add a new professor.

2.3 Techniques

As each one of our group fits under the umbrella of a student or former student, having our group perform cognitive walkthrough would offer the additional benefit of allowing us to empathize with our target user base during the analysis, as opposed to our evaluations / team members not being in the target demographic.

2.4 Materials

For the prototypes and storyboard we used for our cognitive walkthroughs, please see Appendix 1.

For the evaluation form that we used for our cognitive walkthroughs, Please see Appendix 2.1.

2.5 Detailed Analysis

From our evaluations, our analysis indicates that there are several points of confusion or inefficiency in the user finding what they need. For the most part, the storyboard that we have is well aligned, but for the prototypes of the different pages are missing a few pieces that are important to the overall user experience. We've noted these integral pieces in Section 2.7. However, for the most part the prototypes are well aligned with our storyboard and work well in driving the user experience. It is similar to a 80% great and complete, but 20% needs some minor tweaks and finesse.

2.6 Adherence

"Adherence to original plan plus well-explained changes."

The original evaluation plan included evaluating the Add New Professor page, which we didn't end up creating a prototype for. We should decide whether this page is central enough to the user experience to merit its own prototype. For most users, the existing professor database will be sufficient. However, every year there are thousands of new and temporary professors, so suffice to say, there will be a significant need for adding new professors.

2.7 Results and Insights

Results from the analytical evaluations included several points where the user might encounter confusion or inefficiency in finding what they need. Highlights include clarifying the role of the two search bars on the home page, continuing to simplifying the search process (there is no easy way to get from ratings page back to results, for example), and finding a way to create a new professor review.

Possible changes for future prototypes include adding a link for the user to create a new professor review to the professor review page prototype. We could also add a link or some sort of functionality that lets the user return to their results page, on the professor ratings page. Sometimes users will click on a professor's page, judge that this is not the person they are looking for, and will want to go back to all results to find the right person. That will help streamline the entire search process and make it more user-friendly.

3. EMPIRICAL EVALUATION

3.1 Goals

The goals for the empirical evaluation are the same as for the cognitive walkthrough except that we are testing with actual users. Along with helping to determine our prototype's learnability, the inclusion of a user allows for us to examine how the user might interact with the prototype, giving us more concrete information on areas in which the prototype could be improved.

3.2 Method and Techniques

The method used for the empirical evaluation involved three parts: a pre-test briefing of the user, a talk-aloud walkthrough of the interface, where the user would explain how they would complete a given task using the prototypes provided in Appendix 1, and finally, the evaluation ended by giving the user a post-test questionnaire.

As stated before, the testing involved the prototypes in Appendix 1, and this may have been less than ideal, as working with these initially caused a large amount of confusion. Despite this, we were able to examine how a user would interact with this interface, and capture the overall flow of the application, that is, how the user expected the interface to act, and where they expected certain functionalities of the site to be.

The pre-test briefing explained to the user what the prototypes were for and encouraged the user talk as they explored the interface. In addition, the pre-test briefing informed the user that they would be given a series of tasks to complete, and to interact with the prototypes as if they were functional webpages. For the next phase of the evaluation, we asked the user to give a talk-aloud walkthrough of the interface as they attempted to complete the tasks given to them. Finally, the user was asked some questions dealing with their overall thoughts and impressions regarding the interface.

3.3 Materials

For the prototypes and storyboard we used for our cognitive walkthroughs, please see Appendix 3.

For the evaluation form that we used for our empirical evaluation, Please see Appendix 3.1.

Questions included in the questionnaire were:

- Did you think it was simple to use this system?
- Were there any particular points where you were confused?
- Do you think a beginner could understand how to use this application?
- Did you feel comfortable navigating this website?

3.4 Analysis

The analysis of the empirical evaluation obtained similar results to the analysis of the analytical evaluation (Section 2.5). Specifically, our analysis found several points of confusion between what the prototypes covered, and using the prototypes themselves as an interface to walkthrough.

3.5 Adherence

The original plan for the empirical evaluation involved taking a video or audio recording of the user as they traversed the interface. This was not included because the participant asked that no recording, video or audio, be taken of him.

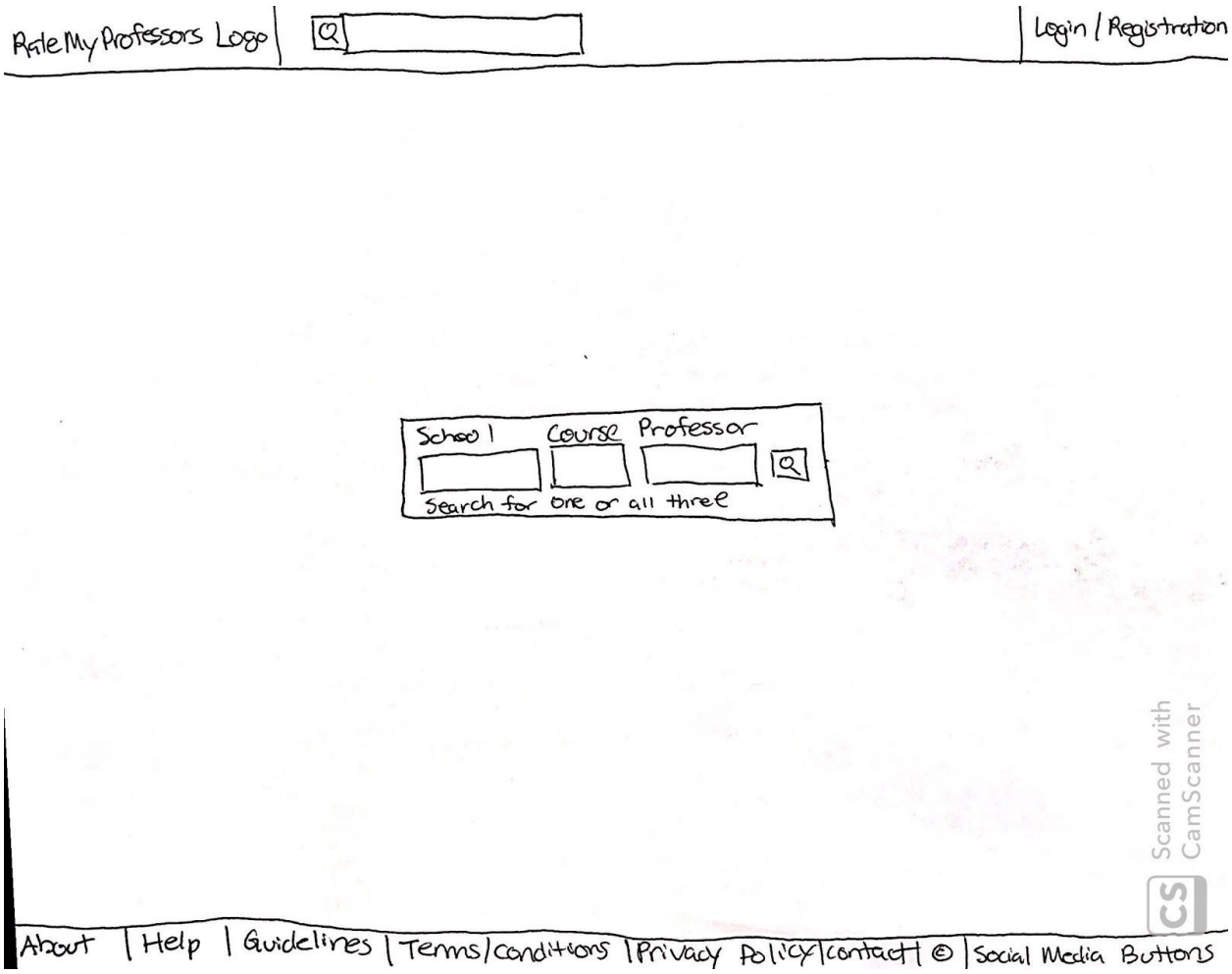
3.6 Results and Insights

Results from the empirical evaluation showed that several areas caused the user confusion and hindered their attempts to complete the tasks given to them. These areas included the purpose of two search bars on the home page and finding ways to create a new professor review more intuitive to the user. To address this issue, possible changes could include adding a link to the professor review page prototype that would allow for users to create new reviews, along with links to return the user back to the search results page, if they find that the professor they clicked on was not the professor they were intending on searching for.

APPENDIX

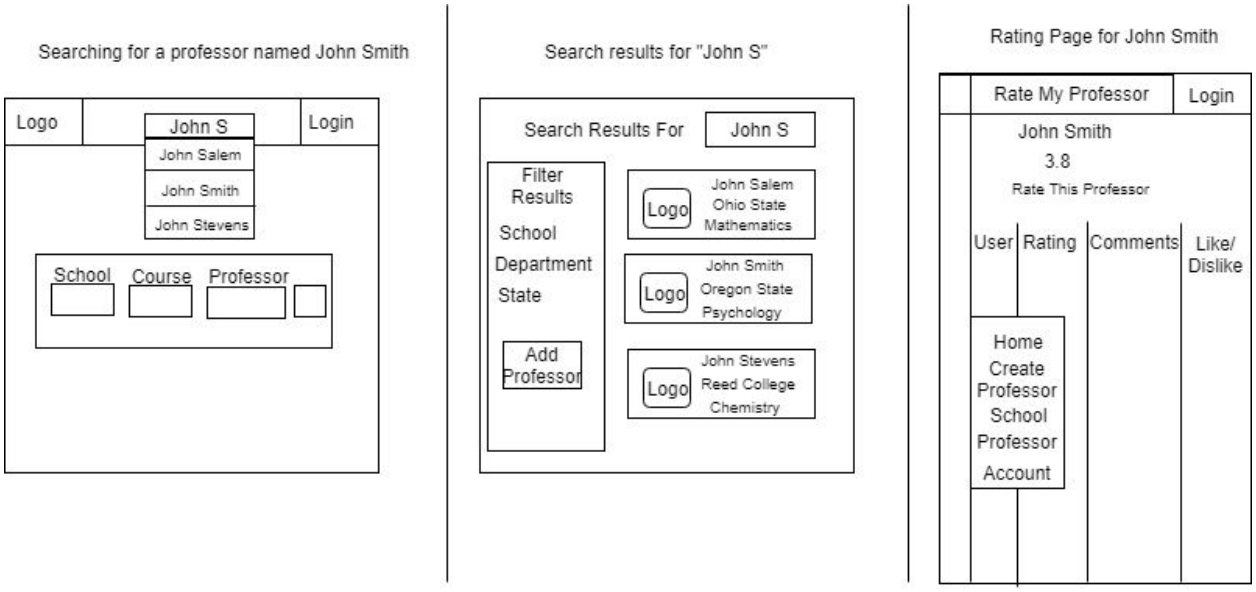
1. PROTOTYPES

1.1 Home Page



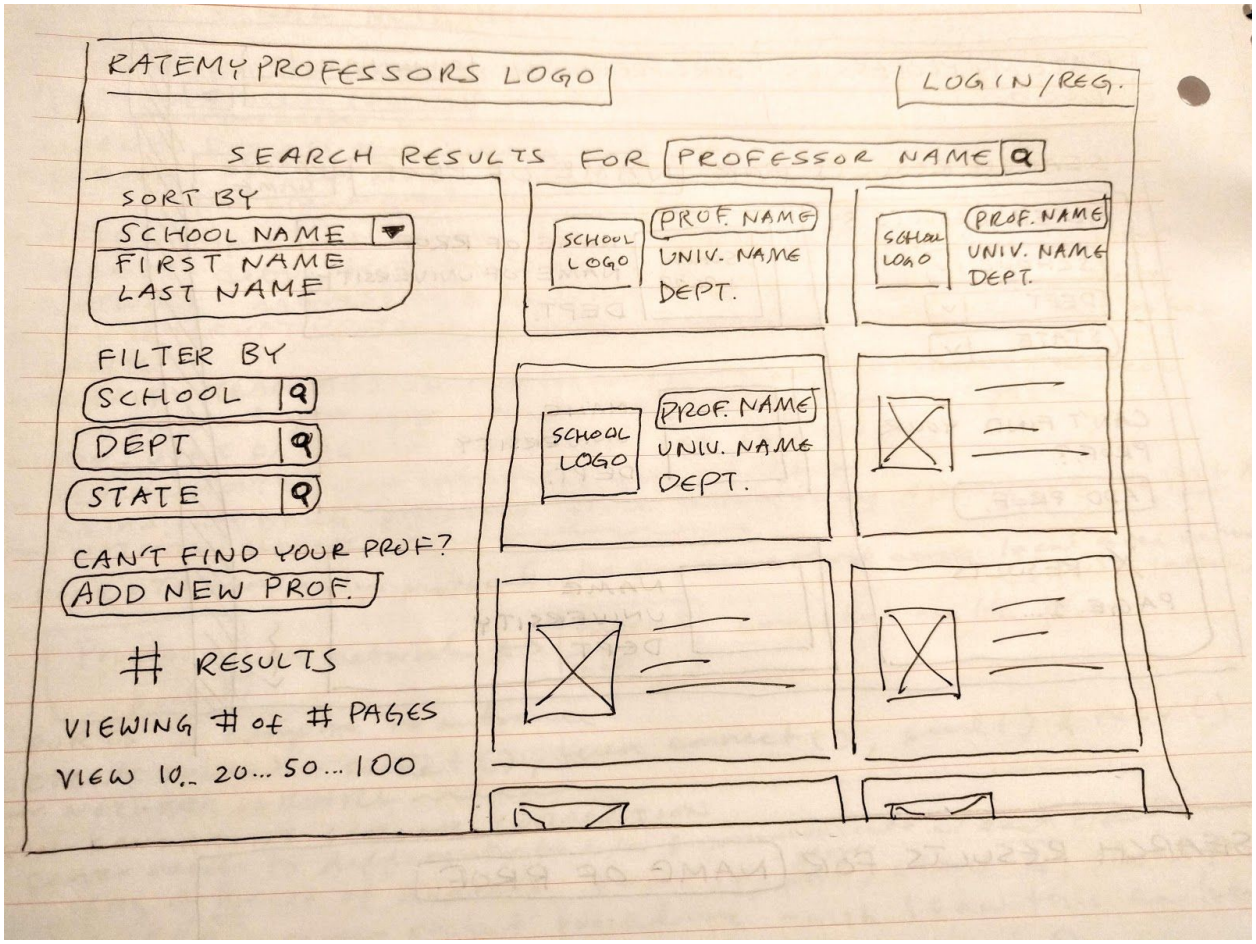
1.1.1 Home Page Prototype was selected due to the overwhelming support for this particular prototype (1A) over the second choice (1B).

1.2 Storyboard



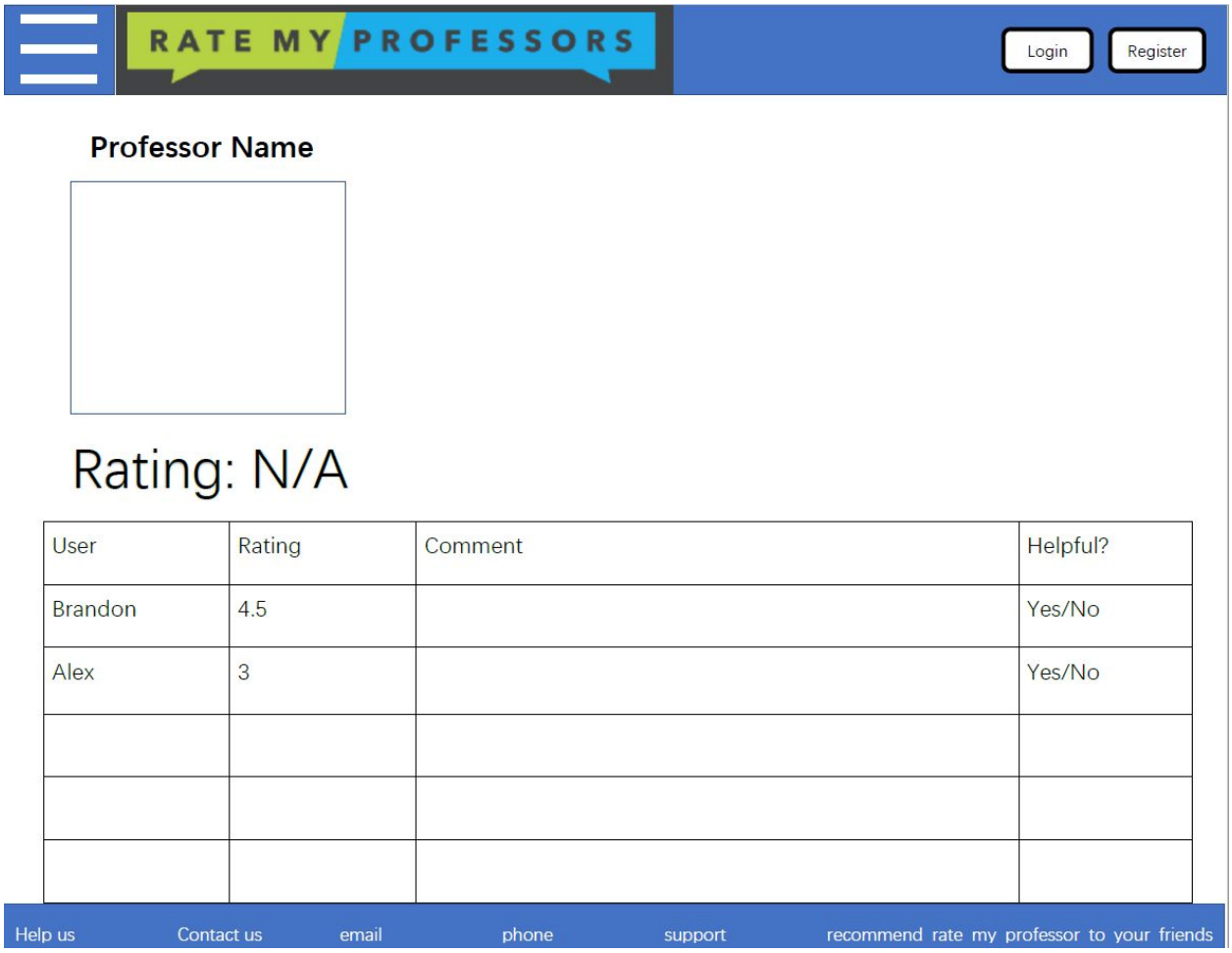
1.2.1 Storyboard Prototype shows a user searching for a professor named John Smith

1.3 Search Page



This search page was updated using classmates' suggestions. The magnifier icon helps users realize that they can use the area where the professor's name is boldly printed as a search bar, in case they need to correct the professor's name or if they'd like to search for a different professor. The original prototype didn't consider what pagination would look like for the page, an important feature considering there could be thousands of names as results. This one implements pagination and considers desktop resolutions better by including two columns of results instead of one, allowing the page to be shorter overall. It also includes more detail on the sorting and filtering functions.

1.4 Ratings Page



2. EVALUATION FORMS

2.1 Form for Evaluation - Cognitive Walkthrough

Questions for each step:

- What is the user feeling at each step? Confidence or confusion?
- How long does it take for the user to get to the next step?
- Do they understand how to complete this step?
- If not, do they get feedback about how to complete this step?

Tasks to evaluate:

- Search for Professor
    - Type name
    - Use filter and sorting mechanisms
    - Click on appropriate professor
- Read Professor Reviews
    - Read comments, tags, etc. written by other users
    - Comment or rate rating as appropriate
- Add New Professor Review
    - Click on link to review
    - Fill out forms
    - Click submit

2.2 <u>Form for Evaluation - Empirical Evaluation / Usability Study</u>

Instructions for User:

- Try to verbalize your thoughts and questions as you go through the tasks

Instructors for Researcher:

- Note the user's emotions as they go step by step. Are they comfortable? Confused?
- Ask them to explain their decisions if appropriate
- Try not to guide them, let them explore the prototype

Tasks to evaluate:

- Search for Professor

- Read Professor Reviews

- Add New Professor Review

3. EVALUATIONS - COGNITIVE WALKTHROUGH

3.1 <u>Evaluation - Cognitive Walkthrough (Arthur)</u>

Questions for each step:

- What is the user feeling at each step? Confidence or confusion?
- How long does it take for the user to get to the next step?
- Do they understand how to complete this step?
- If not, do they get feedback about how to complete this step?

Tasks to evaluate:

- Search for Professor
    - Type name

        On the Homepage (1.1), I can easily tell where to input my “intended search” professor. It makes sense for where I can type the professor’s name.

        On the Search Page (1.3), I can tell that I am to input my “intended search” professor’s name at the top of the page in the professor name’s search bar.

    - Use filter and sorting mechanisms

        On the Homepage (1.1), I can easily tell where to input my “intended search” professor and click the search button. It is also clear that I can input just one box or all three. For this step, I only need to fill in one box and click search.

        On the Search Page (1.3), I can easily tell where to filter by dept, state, school, and sort by school name.

    - Click on appropriate professor

        On the Search Page (1.3), I can easily tell where to click to navigate to a specific professor.

For each page and individual step for the “Search for Professor” task , it took less than 5 seconds, for this user / user’s persona to figure out where to go to get to the next step. The user is feeling very confident at each point in the task and understand how to complete the step. No confusion, but on the Search Page, the user was primarily looking on the left search panel for how to search for a professor, but then quickly looked at the other areas of the prototype and found that the top of the page had the search capability the user wanted

- Read Professor Reviews
    - Read comments, tags, etc. written by other users

        On the Ratings Page (1.4), it is in a very easy table format that makes it easy to find the user who rated the professor, rating, comments, and a helpful upvote/downvote.

    - Comment or rate rating as appropriate

        On the Ratings Page (1.4), I’m actually not sure where to comment or rate a professor.

For the “Read Professor Reviews” task, the user is feeling confident about reading comments and tags written by other users. It is very easy to get to this stage and doesn’t have any confusion. However, when I go to the task to “comment or rate rating as appropriate”, the user can’t easy find where to do this, and resigned himself to the fact there is no way (or at least no obvious way) to add a rating for a professor. They can’t easily find this step (and the following task).

- Add New Professor Review
    - Click on link to review
    - Fill out forms
    - Click submit

As the user can’t find the button / area to add a new professor review, we skipped filling out the individual steps, as was done for the tasks before. The user is feeling confused as to how to add a new professor new via clicking on the link to review and filling out forms & does not know how to get to the next step. As this particular evaluation was done independently, the user did not get feedback. If the ability to get and receive feedback was available, the user / user persona suggests that a button for adding a new professor review is clear and learnable & that it may need a new prototype for the “Fill out forms” steps

3.2 <u>Evaluation - Cognitive Walkthrough (Becky)</u>

Questions for each step:

- What is the user feeling at each step? Confidence or confusion?
- How long does it take for the user to get to the next step?
- Do they understand how to complete this step?
- If not, do they get feedback about how to complete this step?

Tasks to evaluate:

- Search for Professor

The search bar is pretty obvious and in a prominent place on the home page (prototype 1.1). The appearance of it should give the user confidence that this is a search bar since it adheres to the standard search bar model. There are form boxes for the user to type in, as well as a button with a magnifier icon, so it should spark recognition in the user. Perhaps they won't have to even think about this as an option. Admittedly there aren't any instructions on the page, which may confuse users who don't use the internet often. However, most students of college age (the target user for this website) will probably not have any trouble at this step.

One point of potential confusion is that there are two search bars, a plain one at the top and one with three text boxes at the center of the page. The user might stop to wonder what is the difference between the two (perhaps we should confirm the purpose of both).

- Type name
  When the form boxes are clicked on (in the home page, 1.1), a blinking type indicator should start, indicating the user should start typing. There should be a memorability factor from other electronic documents. There's an instruction line at the bottom of the center box: "search for one or all three," which should be helpful. The user should be able to understand this indicator and type in the professor name (or school name or course name) pretty quickly.

- Use filter and sorting mechanisms
  On the search page (1.3), the sorting functions offer three options: school name, first name, and last name. A user that has used a sorting function before should understand how this option works. One point that might need clarification is that first name and last name could be rewritten to specify that first name and last name refers to professor names. There is a little triangle option on the right that lets users know that this is a drop down menu. For web-savvy students, they should be able to master the sorting mechanism without a problem. There are only three options, so if they wish to sort, the user can browse and select sorting options quickly.

  The filter functionality in the search page includes form boxes and buttons with a magnifying glass icon, which mirrors the search boxes on the home page.

Students can type in part of or a full school name, department name, or state to narrow down search results. This shouldn't be a problem for the user.

- Click on appropriate professor
  Search results include a professor name, which should link to the professor's rating page. I think this will be pretty self-explanatory and the user should have no issues understand that there is more information on another page about the professor they're searching for.

- Read Professor Reviews
  The ratings page (1.4) lists vital information the professor as well as user-provided comments. The page lists the professor's name and their rating. Visual indicators like that will help the user understand immediately what the page is intended for.

  There's no "back to search results" option on this page, assuming that most users will have come from the search page. That would be a typically-offered link for search results like this. I think it would be helpful for users who click on this page and realize this professor page isn't the one they're looking for.

  - Read comments, tags, etc. written by other users
    Any user who has encountered user-provided comments before (e.g. Yelp) should understand what this page is for -- we assume that the user is using the site to look specifically for professor reviews. They should feel confident that this is the data they've been looking for.

  - Comment or rate rating as appropriate
    Unlike the last prototype model, this one is missing a link to create a new rating for the professor. Since this page is ideal for that link, we should add it again.

- Add New Professor Review
  Note: This hasn't been added to prototypes yet so there are no comments about it visually. We'll go through what the user should go through when adding a new professor.

  - Click on link to review
    This link to add a new professor review can currently be found on the search page, but not the home page. I think it does make sense that there is no link on the home page, presuming the user hasn't even made an attempt to search for the professor yet. The search page, particularly on the last page of results, would be the ideal place for the user to go from searching to adding. The user has made their way to the end of their potential results and still hasn't found the right professor page this. Hence, they must go to this new page to add their professor.

- Fill out forms
  The forms should be self-explanatory -- questions followed by textboxes. Any web savvy user should know how to use them.

- Click submit
  There should be a prominent submit button at the end of the form.

3.3 <u>Evaluation - Empirical Evaluation (Peter)</u>

Instructions for User:

- Try to verbalize your thoughts and questions as you go through the tasks

Instructors for Researcher:

- Note the user's emotions as they go step by step. Are they comfortable? Confused?
- Ask them to explain their decisions if appropriate
- Try not to guide them, let them explore the prototype

Tasks to evaluate:

- Search for Professor

Although it was clear to the user how to search for a professor, the user appeared to be confused about why there appeared to be two locations that he could use to search for a professor. The sight of the two search bars almost seemed to aggravate him, as he loudly asked "Why are there two search bars?". Although the purpose of two separate search bars that do the same thing may need to be re-evaluated in the future, the encouraging news was that the task of searching for a professor was straightforward to the user, so much so that he was able to complete the task in mere seconds.

- Read Professor Reviews

Reading through professor reviews proved to be another straightforward task, as he was able to quickly navigate to where the professor reviews were located. The ease of which he navigated the website to complete this task is encouraging, as it suggests that the user was comfortable with navigating the site, and that at the very least, the professor reviews are located in a position where the users would expect to find them.

- Add New Professor Review

When tasked with adding a new professor review, the user appeared to be very uncomfortable. The fact that he had to scroll through all the prototyped pages multiple times before he spotted where he could add a new professor review indicated that more work could be done to make adding a new professor more visible.

Participation Report

Group Member name	Role	Responsibilities and Assigned tasks	Tasks Completeness Grade*0-5
Arthur Liou	Leader	● Summary / Abstract ● Homepage concept ● 1 - Intro ● 2 - Evaluation Plans ● ACM Formatting ● Homepage prototype updated ● Evaluation - Cognitive Walkthrough ● Proofreading and editing	5
Becky Chao	Writing	● Updated search page concept ● Tasks for evaluation plan ● Forms for cognitive walkthrough and empirical evaluation ● Proofreading and editing ● Evaluation - Cognitive Walkthrough ● User personal information ● Adherence to Plan ● Results and Insights	5
Peter Nguyen	User Communication	● Storyboard Prototype ● Empirical Evaluation	5
Zijing Huang	Visual Design	● Professor Rating Page concept ● Developing a actual site that present the concept	5