Project 2A
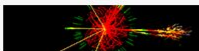## Website for Questions about Fundamental Physics and Cosmology

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Assignment Recap

- Re-design website for Physics professor (Dr. Abazajian)

- Website interface **isn't user-friendly** or **intuitive**

- UCI version of Wordpress is **limited**

- There should be an **easier** way to ask questions on the website

- Provide categories as a way to **browse** the website

- Make site design more **modern**, loosely follow **UCI style guide**

Questions on Fundamental Physics

Categories of Questions

Categories of Questions [Select Category ▾]

Welcome!

Welcome to UC Irvine's Questions on Fundamental Physics Page!

The questions posted here originate from questions on fundamental physics and cosmology that have arisen from high school instructors and undergraduate students that have not had advanced courses. The answers are meant to be sufficiently non-technical so that they should be comprehensible to a person with high-school level physics and math.

There are questions in two broad and overlapping categories here: cosmology and particle physics. Follow the menu above to see the question categories, search for questions on the search bar on the right, or submit a new question below.

This is a work in progress, as many good questions go unaddressed. Please submit new questions through the form linked here.
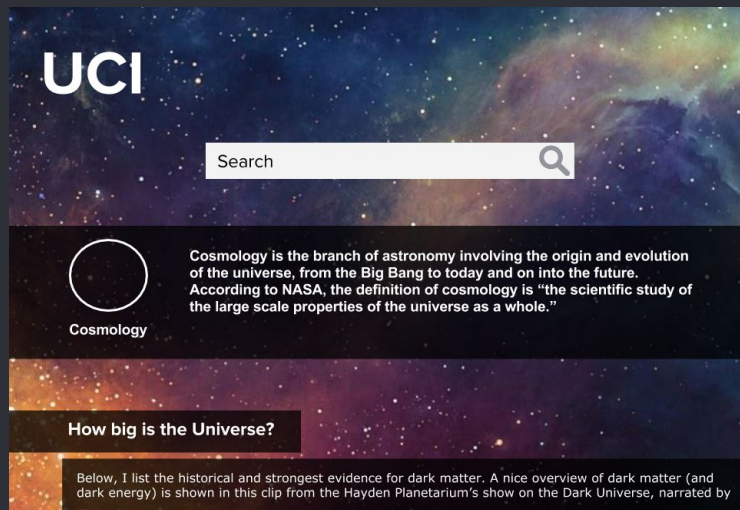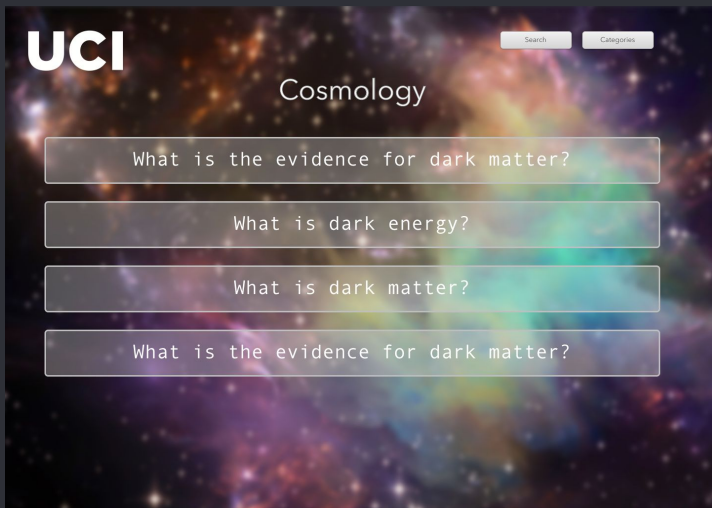
Search Questions

[Search this website…]

Process Recap

- Submit **mock-ups** to client for feedback

- Develop a **prototype** based on client feedback

- Conduct **User Testing**

    - Users were UCI undergraduate students

    - Give an incentive to participate in User Testing

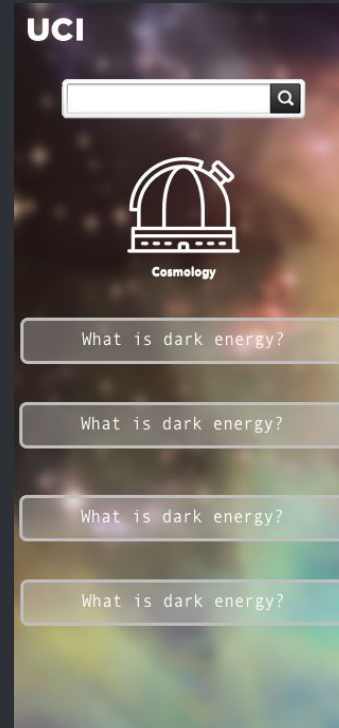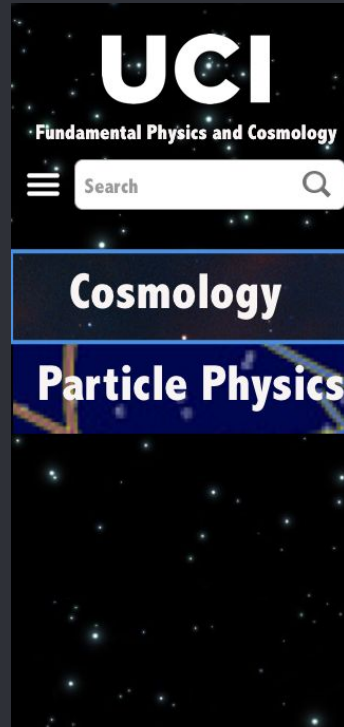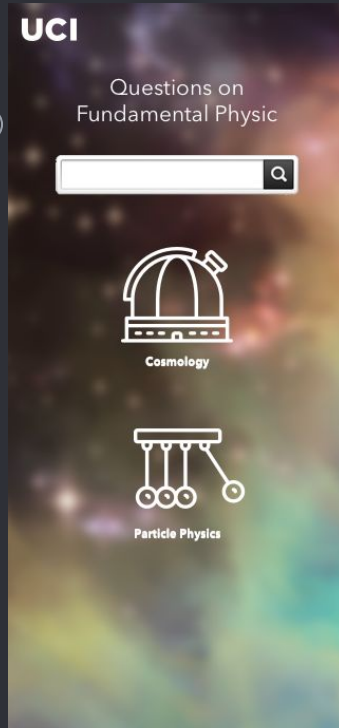- **Re-evaluate** and **redesign** prototype

Progress To Date

- Mockup designed and evaluated by Dr. Abazajian

- Accepted client feedback and implemented a **fully-functional** prototype of the website

- Conducted user testing on 9 participants over a span of two weeks

- Began evaluation of user-testing data and potential redesigns

Original Mockups

Mobile Mockups

Implementation

- Deployed Wordpress on a DigitalOcean virtual private server

- Created a baseline Wordpress theme and customized it to our mockups

- Setup Wordpress plugins to implement instant search, question submission, and other features

Division of Labor: User Testing

	Ney	Catherine	Mark
Pre-User Testing	Communicated with the participants and negotiated dates and times for user testing	Located and reserved locations to conduct the user testing.	Prepared and reviewed the required forms for user testing
During User Testing	Note-taker	Greeter	Facilitator
Post-User Testing	Reviewing audio and screen recordings, as well as the SUS Questionnaire and discussing our results with the development team		

User Testing

- Agreed on incentives for participants, thanks to funding from Dr. Abazajian

- Reached out to a Cosmology class, 2 Physics classes, the Astronomy Club, and friends
    - 12 responded, 9 participated

- Client reached out to 6 high schools (unfortunately no responses)

- Three parts to User Testing:
    - Pre-test Questions
    - Tasks
    - Post-test System Usability Scale Questionnaire

User Testing: Pre-Test Questions

Please give me your initial impressions about the layout of this page and what you think of the colors, graphics, photos, etc.

- "Looks pretty simple, like a Google Search."
- "Visually appealing"
- "Seems to be stuff lacking… just see a search bar. Other websites… have different tabs and pictures"

Who do you think the site is intended for?

- "Students"
- "Potential researchers who want to go into this field"
- "Professors"
- "Everyone"

User Testing: Tasks

Task #1: Question is word-for-word in the database

Purpose: To see if user goes to search bar or uses categories.

Question: "How big is the universe?"

Task #2: Question is not word-for-word, but related to an existing question in the database.

Purpose: To find out if the closest answer will appear on the search bar's possible options

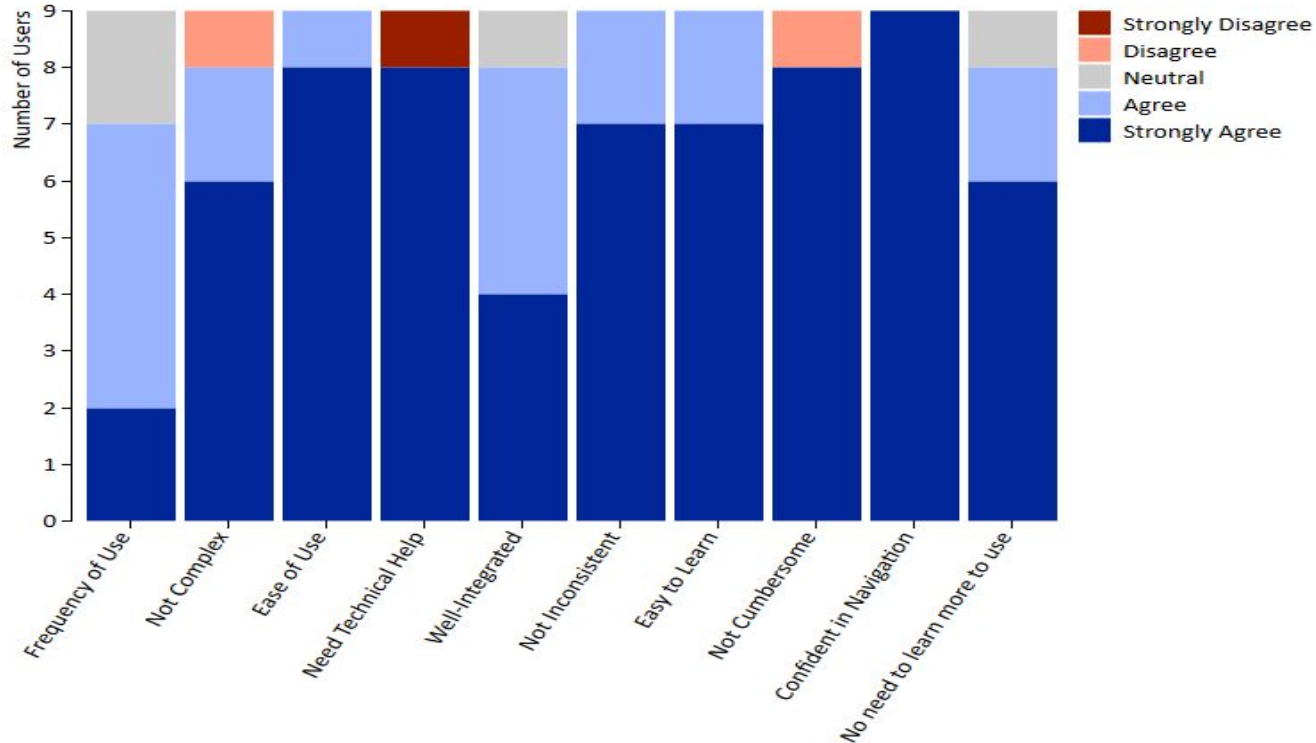*Question: "Is dark matter different than dark energy?"*

Task #3: Question is not in the database

Purpose: See if the user utilizes the submit a question feature

Question: "Is the Big Bang a black hole?"

User Testing: Post-Test, System Usability Scale

Insights related to Usability problems

- UCI's version of Wordpress was limited
    - Prevented us from using plugins to implement a certain feature
    - Limited our creative freedom (forced to use UCI WP themes)

- Submitting a question was made easier by our design but…
    - Some users didn't realize they could submit a question
    - This was a design decision to avoid duplicate questions

- Categories not used to the extent we expected
    - Needed to make the icons more "clickable"

- A couple users had trouble figuring out the exact purpose of the website, so we had to come up with an idea to solve that issue
    - About Section on the home page

Difficulties encountered

Implementation

- Making the website responsive was challenging
- Wordpress had a steep learning curve
- We decided to pay for a server on DigitalOcean to deploy Wordpress in order to develop themes and plugins together efficiently

User Testing

- Acquiring user test participants
  - Unable to get high school teachers to participate in testing
- Was still communicating with unconfirmed participants during testing
  - One participant didn't show up
  - Another participant had a last-minute reschedule
- The fire alarm went off unexpectedly

Project Decisions

Already made:

- Fixing minor UI issues such as icons and colors
- Postponing the tag cloud feature request

To be determined:

- Emailing a user or otherwise informing them that a question has been answered
- Content for About Section
- Project Report
- Delivery of final product to client

Updated Timeline

Date	Activity
~~April 11 - April 15 (5 days)~~	~~Create mock-ups~~
~~April 18 - May 3 (12 days)~~	~~Implement final mock-up as a website Reach out to user testing participants~~
~~May 4 - May 11 (5 days)~~	~~User Testing~~
~~May 12 - May 16 (5 days)~~	~~Results Evaluation~~
May 17 - May 18 (2 days)	Pre-final preparation and presentation
May 19 - May 26 (6 days)	Website modifications based on the results from user testing
May 27	Final meeting with Kevork
May 30 - June 3 (5 days)	Final touches and documentation

Thank you!