What Can I Do With My Science Degree

Usability testing

UX Lab, Student Communications Services

June - July 2019

Abstract

From May to July 2019, the UBC UX Lab, as part of Student Communications Services, ran usability testing on the newly launched "What can I do with my Science degree" page. Twelve Science students were asked to freely browse the page and verbalize their thoughts during an in-person testing session on the laptop.

Introduction

Project Background
The "What Can I Do with My Science Degree" webpage was launched on May 22, 2019, on the Student Services site (students.ubc.ca). To understand how users navigate the online resource, the UBC UX Lab conducted in-person usability tests with UBC Science students.

UX Lab Student Team
This study is conducted by the UX Lab student team, managed by Ariel Lee, UX Coordinator in Student Communications Services. The UX Lab is comprised of UBC students from diverse programs that support user experience (UX) research through a volunteer research assistant position.

The four students on the 2019 summer UX Lab student team were Carley Low, Jessica del Rosario, Wynonna Moo, and Tiffany Wu. They come from various backgrounds such as Psychology, Behavioural Neuroscience, Cognitive Systems, and Computer Science.

Research Goal

The purpose of the study is to understand how students are navigating the What Can I Do with My Science Degree page.

Methodology and Analysis

Methods

All usability tests were conducted in person with Science students via drop-in recruitment, the primary target audience of the online resource.

In the session, participants were asked to explore the page freely, verbalizing their thoughts and feelings during the session, as part of the think-aloud technique.

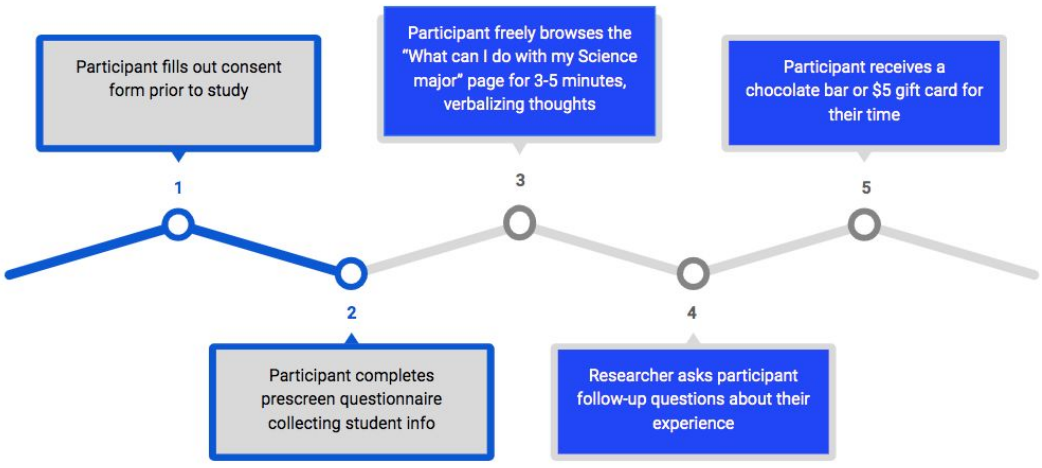


Fig. Test flow of in-person usability testing session

Location and Timing
All tests were held on Tues June 25 and Tues June 26, 2019 in different Science-specific and general buildings on the UBC Vancouver campus:

- Information for Computing, Information and Cognitive Systems
- Earth Sciences Building
- UBC Life Building
- AMS Nest

Piloting
Prior to the sessions, the UX Lab conducted two pilot sessions with 2 Science students in Brock Hall.

Compensation
Following the test, each participant received a $5 UBC Food Services gift card or chocolate bar.

Participant Demographics

Total: 12 UBC undergraduate Science students

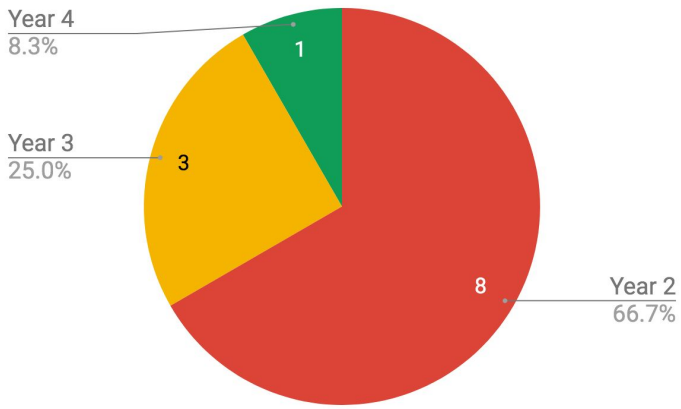


Fig. Year level breakdown of participants

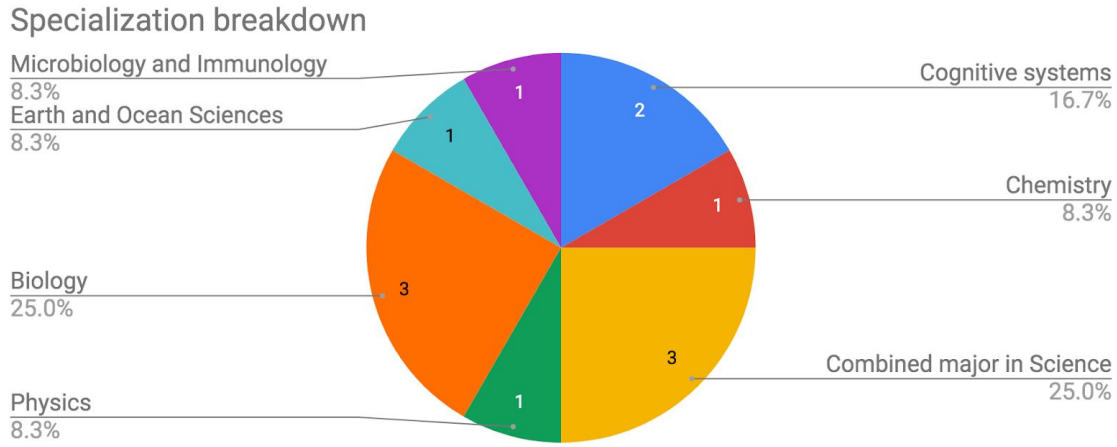


Fig. Specializations of participants

Results

Prescreen information

Choosing a major

When asked how they chose their specializations, for nine of twelve students, decisions were based on their interest in the subject. Future prospects of their specialization, such as opportunities and expertise in potential career, was an important consideration to eight out of twelve students.

All participants had studied at UBC during the past year. Only one student was still exploring his or her specialization options.

Post-graduation information

Participants also listed sources they accessed for post-graduation info, with the primary three sources being:

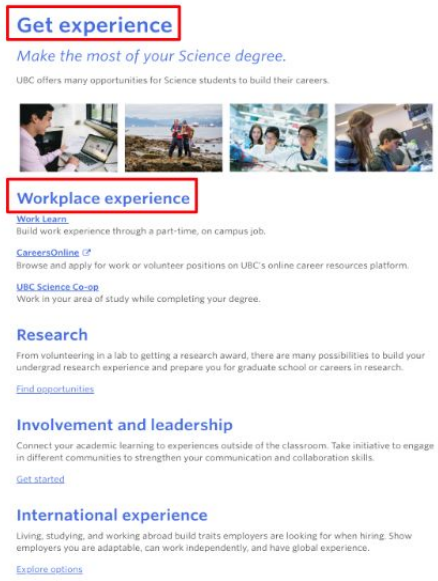
1. Online resources (10 of 12 participants)
2. Events or job fairs (4 of 12 participants)
3. In-person advising (2 of 12 participants)

Online resources was the most popular source; students mentioned searching online for graduation requirements, graduate school information, and potential career paths. Two of twelve students have not looked up post-graduation information before.

General layout and design

Headers and Fonts

Some students noted that the headers were sometimes difficult to distinguish between due to the color and font size.



Two of twelve students commented that they liked the blue headings for each of the paragraphs. One participant found the font size to be too small, having to squint while reading the words on the page.

Structure

Organization

Six of the participants appreciated the organization of the page, remarking that it was clean, organized, and easy to read. One of these six students mentioned that they appreciated the bullet points (a student commented: “no one likes paragraphs”). Another one of the six students mentioned that the page was easier to navigate than other existing UBC pages.

On the other hand, four participants thought that the information on the page could be arranged more neatly. Two of the four students verbalized that the page was “too messy”, while the other two students said that there were too much information and that some of that information could be summarized.

Look and feel

Five students expressed that the page looked appealing. One student liked the simple color scheme with the white background, stating, “I like it. It’s nice and clean to look at, not bombarded with too much information.”

Navigation Box

On the right of each details page, there is a navigation box with links to the different sections on the page. Two students mentioned that they did not like that the navigation box was consistently on the page - one stated preference for the navigation bar to be fixed at the top of the page, while another student mentioned, “I don’t know why it’s here; I would never click on it.”

On the other hand, two participants clicked the links in the navigation box, and remarked that they liked how it followed as they scrolled.

Location of Specialization Section

Nine of the twelve participants found the specialization section (titled “Keep Exploring”) to be the most useful and important part of the page. In particular, one student mentioned that this section was more in line with what she was looking for on a page like this.

Another student clicked off onto the Biology specialization page from the section, noting, “I definitely like this page the most because it’s the most direct.”

Six students openly noted that they would like to see this section at the top, since they felt that students would be most interested in that content. One student even mentioned “more information

about different majors would be nice" at the start of the page, before scrolling further down and realizing there was more.

One participant appreciated the diversity of career options provided outside of research, stating that there is typically a stereotype for Science careers being research-focused.

Content and information

General Website

In general, the majority of participants (eight in total) thought the webpage was useful and expressed that they would most likely use it. A few mentioned it would be helpful for choosing a specialization.

Promotion of page

Two students mentioned that they did not know about this resource and thought the web page should be more widely promoted.

Testimonials

Two students liked the first testimonial shown. One of the two thought that it makes the website more personable, while the other remarked, "I like that there's feedback from an actual student".

One participant expressed that they wished there were more testimonials and quotes shown from students from various specializations.

"Who You are Matters" section

Four students clicked on the "Identify Your Values" PDF during the testing session. One student stated that while they thought that the "Identify Your Values" PDF worksheet was interesting, they would not use it themselves. Another student was initially confused about the worksheet, but understood it after reading through, and thought it might be useful.

After scrolling through the sections, one student felt that the "Identify your values" PDF worksheet may fit better with resume info under the "Use your toolkit" section. Another participant mentioned that she skipped the "Identify Your Values" section because she found the title to be "too cheesy".

"Find Your Competitive Edge" section

A student was confused about whether the webpage was catered to prospective students or current students when browsing this section. Two students thought the bullet points in this section were too broad and that it could not be generalized to all specializations since they each have their unique differences.

"Get Experience" section

Work Experience

Half of the participants liked this section of the webpage and thought it was useful. One of those six students wanted there to be testimonials from students who had experience from the various student work programs (e.g., Work learn, Co-op.), mentioning that it would give them a better understanding of the programs.

Involvement & Leadership

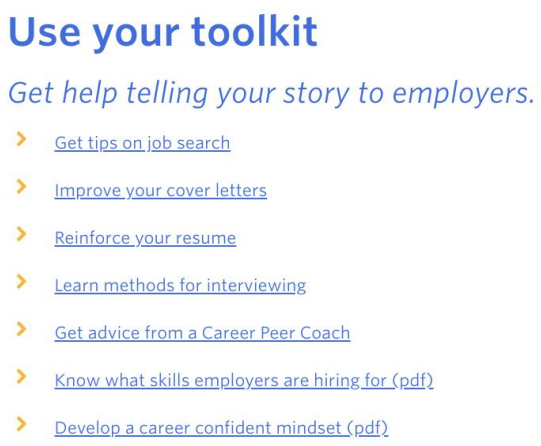
Three of twelve students liked the list of clubs and activities.

"Build Your Network" section

While most students did not comment on or explore this section particularly, one student wanted more information on how to build his or her network, as they mentioned "I don't really know much about building your network and using LinkedIn, but if there's information like that, I'd like it."

"Use Your Toolkit" section

When reading the section title "Use Your Toolkit", a few students stated that they were initially unsure what type of content to expect from this section, due to the ambiguity of the title. They did not expect to find various job search tools and career resources within this section.

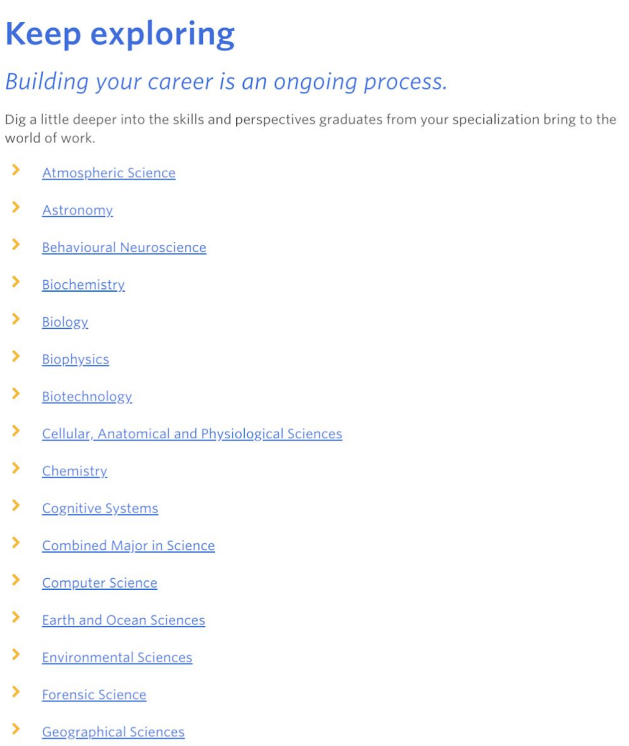


Three students found this section to be useful. A few comments included:

- "I didn't expect that they would have resumes, which is pretty good that they have it."
- "This is actually really useful for writing a resume."

"Keep Exploring" specialization listing section

At the bottom of the webpage, students read more about their specialization from a list. Users noted here that it would be more intuitive to have this section titled simply as "Specializations". A few students expressed again that the title was ambiguous; upon reading the header, they were unsure what to expect for content within this section.



The “Keep exploring” section was by far the most popular one on the page, with ten of twelve students clicking through to find out more about their specialization and career options.

Half of the users liked the list of majors provided, and expressed that they would like to see this section positioned closer to the top of the page.

Once they clicked into a specific specialization link, students were linked to its respective specialization page. Since we were only testing the “What can I do with my Science degree” landing page, after some time, the facilitator would redirect the participant to the main page when they were linked off to the specialization pages.

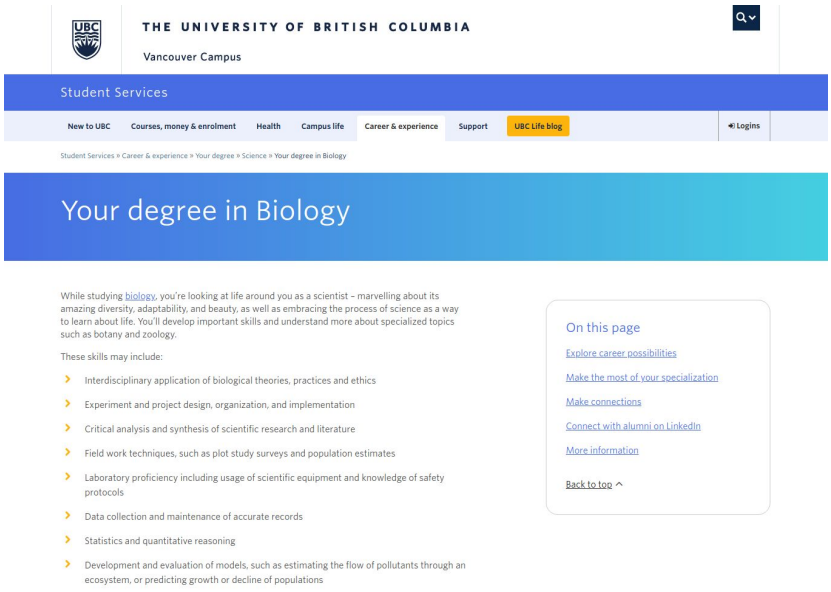


Fig. Specialization page for Biology

Specialization page

Career links

Within the specialization pages, a list of possible careers can be found along with other resources and opportunities that are related specifically to students' different specialization. Three students clicked on specific careers listed.

One student stated that she was not expecting the list of possible careers listed to be linked to the Government of Canada website for more detailed information, although there was copy above informing students where they were being directed to.

Skills listing

On all specialization pages, the first section lists potential skills a student would gain after graduating from the specialization. One student mentioned that she did not understand some of the abbreviations of the technical skills (e.g., ELISA, PCR) when exploring the Forensic Science specialization page.

Quick Summary

The results from our usability testing have shown that in general, students had little trouble navigating the “What can I do with my Science degree” page.

The top feedback received from the participants was a request to move the ‘Keep Exploring” specialization listing section further to the top of the page.

Pitfalls and Considerations

One major pitfall was that the sample size was quite small compared to the real population of UBC Science students. According to an article written by Jakob Nielsen from the Nielsen Norman group, a leading UX research company, running many small tests with five users may be more efficient and potentially more effective than running elaborate usability tests with numerous users.

Another pitfall was that participants recruited for each year level were not representative of the UBC student population. Since the tests were conducted on campus, we were not able to recruit incoming or prospective students. Future usability testing on the page with these groups of students could be beneficial in understanding how these users navigate the page.

Recommendations

From the usability testing, there are a few recommendations for the webpage content and layout.

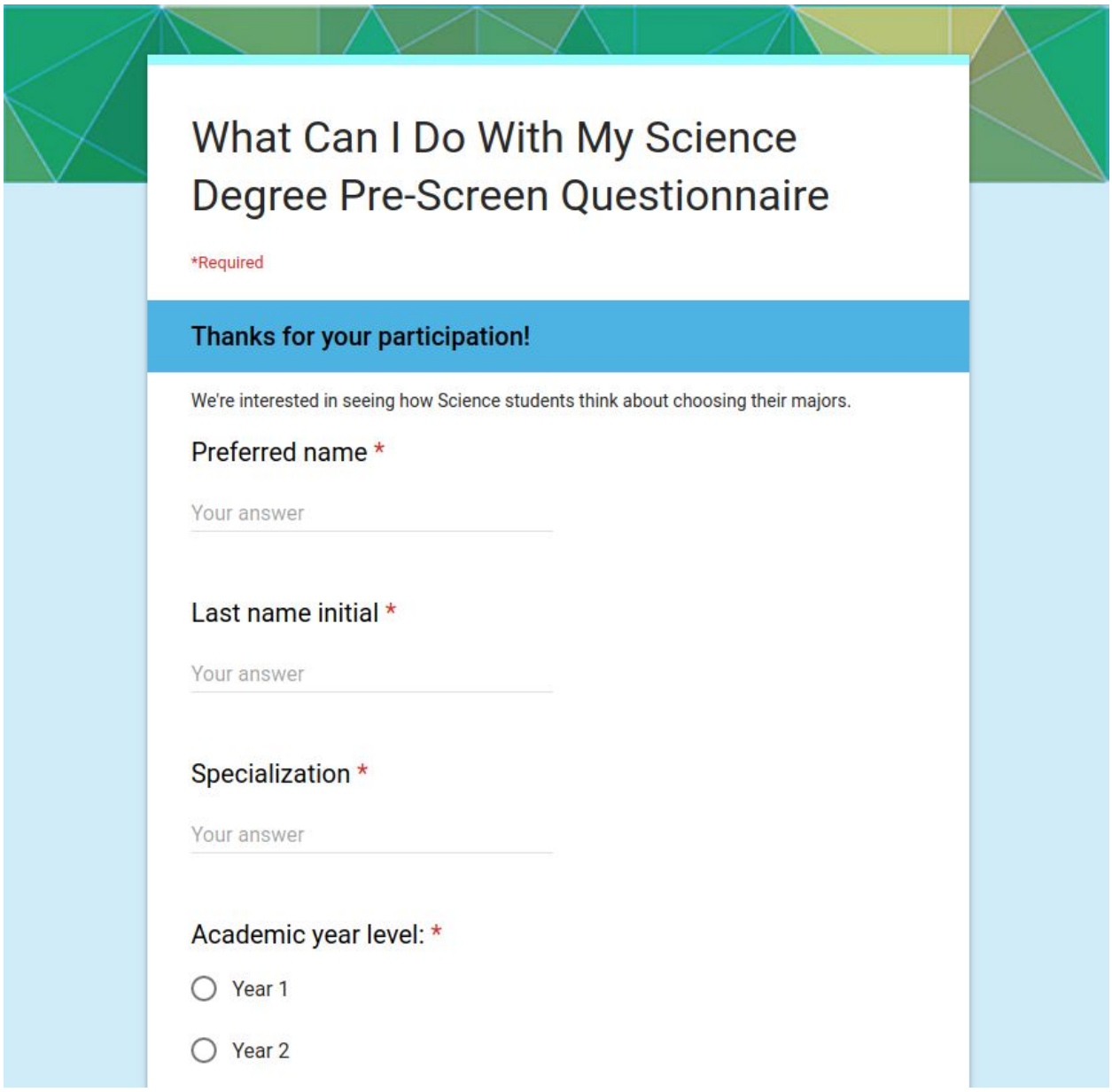
(1) Reconsider the location of the list of specializations on the page
(2) Make bullet-point descriptions in the “Competitive Edge” section more specific to each specialization and relocate them to the respective specialization page
(3) Rename section titles to be less ambiguous and more practical by using student language

Further research can also be conducted on the specialization pages with students from those specific specializations.

APPENDIX

Appendix A.

Pre-screen Questionnaire:



What Can I Do With My Science Degree Pre-Screen Questionnaire

*Required

Thanks for your participation!

We're interested in seeing how Science students think about choosing their majors.

Preferred name *

Your answer

Last name initial *

Your answer

Specialization *

Your answer

Academic year level: *

- ◯ Year 1
- ◯ Year 2

- ◯ Year 3
- ◯ Year 4
- ◯ Year 5+

Imagine that you land on a page with information about your specialization, what would you expect to see? *

Your answer

What other additional information about your specialization would you like to see? *

Your answer

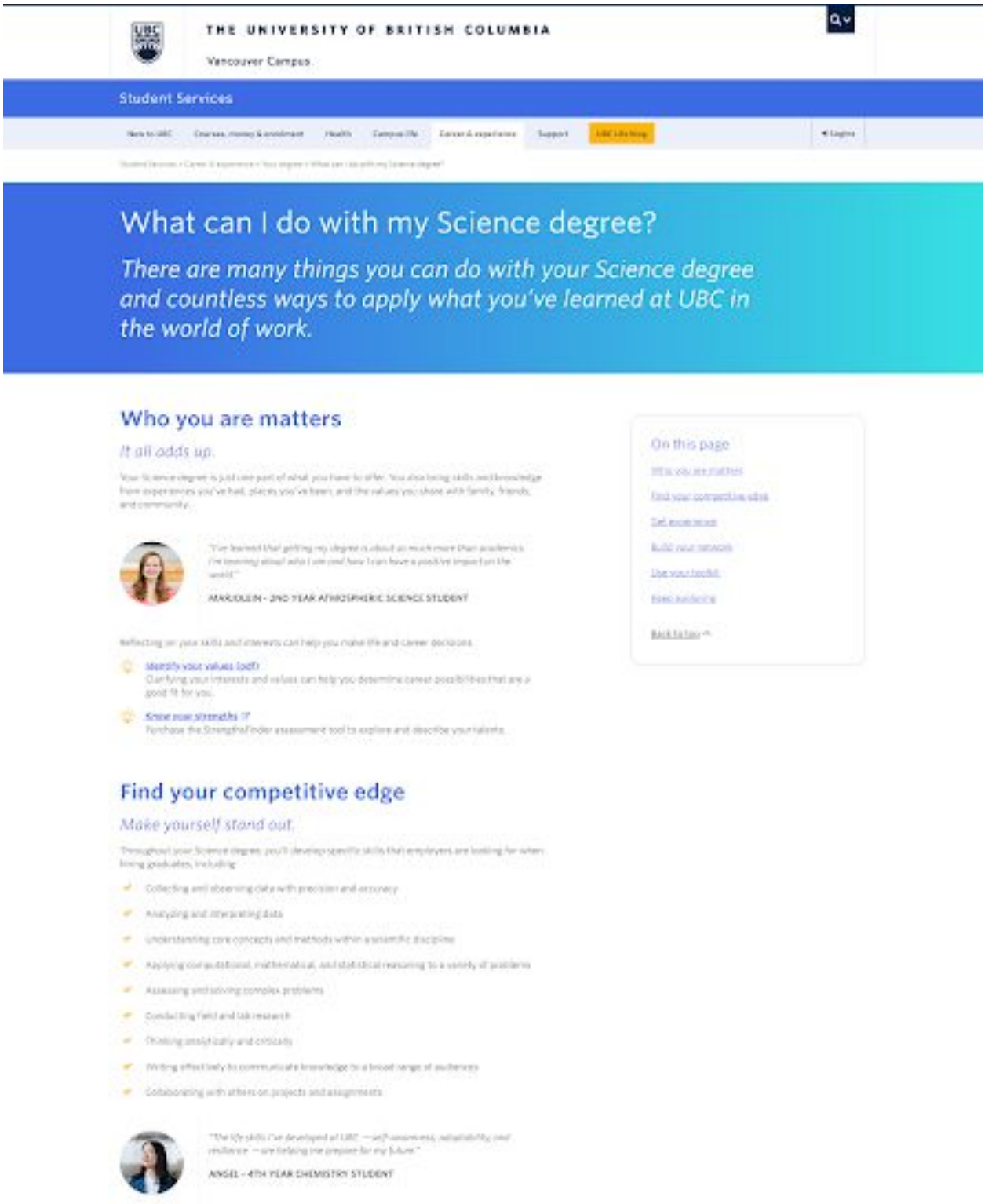
BACK NEXT

Never submit passwords through Google Forms.

Appendix B.

“What Can I Do With My Science Degree” page (June 2019)

students.ubc.ca /career/your-degree/science



Get experience

Make the most of your Science degree.

UBC offers many opportunities for Science students to build their careers.

Back to top ^

Keep exploring

Building your career is an ongoing process.

Dig a little deeper into the skills and perspectives graduates from your specialization bring to the world of work.

- Atmospheric Science
- Astronomy
- Behavioural Neuroscience
- Biochemistry
- Biology
- Biophysics
- Biotechnology
- Cellular, Anatomical and Physiological Sciences
- Chemistry
- Cognitive Systems
- Combined Major in Science
- Computer Science
- Earth and Ocean Sciences
- Environmental Sciences
- Forensic Science
- Geographical Sciences
- Geological Sciences
- Geophysics
- Integrated Sciences
- Microbiology and Immunology
- Mathematics
- Oceanography
- Pharmacology
- Physics
- Statistics

Why you are making

Find your competitive edge

Get experience

Build your network

Use your toolkit

Keep exploring

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Appendix C.

Testing Script

WCIDWMSD Testing Script

Greeting	Hi, <introduce selves>.
What are we doing?	Are you in Science? No: Thank you for your time. Yes: We're from UX Lab (Student Communications Services) and we're interested in seeing how students find information about their specialization.
Instructions	Please fill out this consent form so we can proceed. https://ubc.ca1.qualtrics.com/jfe/form/SV_b27VqcO7lDul0Nf Firstly, we will get you to fill out the pre-screen questionnaire. (On Laptop) [*Ask to fill pre-screen survey*] https://docs.google.com/forms/d/e/1FAIpQLSeJ1HAN3r5E15lfe7i8UoqxOPRD2CHERp4TQ45LSm3t_swufA/viewform At the end of the test, you will receive a chocolate bar or a $5 gift card. Okay, I will just ask for some basic information. - What is your first name and last initial? - What is your major? - What is your year level? - Why did you choose your specialization? - What kind of information have you looked at for your specialization in terms of what to do after graduation?
Instructions	We're now going to show you a page for science students to see what they can do with their degree.

	Your task is to freely browse through the entire page for 2 minutes. During your browsing, we want you to say everything that comes to your mind, for example “I like this button” or “I hate this color” etc. You can also click on the links on the page. We are not affiliated with the website. We are just testing it, so you can be as honest as you want. Do you understand? If at any point you’re feeling uncomfortable, just let me know and we can stop the test at any time. Are you ready to begin? Are you okay with us recording? [Start screen recording] [Start timing for 5 mins] [*Give participant WCIDWMSD website*] **https://students.ubc.ca/career/your-degree/science**
Follow-Up Questions	Follow-up questions: 1. What is your overall impression of the page? 2. You mentioned _____. Could you tell me more about it? 3. What did you think of the information available on the page? 4. Any other thoughts? That was all we needed! Thank you for participating and answering our questions. Do you have any questions for us? Thank you again for participating. Here is your chocolate bar/gift card. Gift card: It is only available for use at certain locations, not including AMS. You can find a list online. [*sign gift card form*] **https://ubc.ca1.qualtrics.com/jfe/form/SV_735BLdQmeVHIe7H**

Appendix D.

Coding sheet

WCIDWMSD - Coding Sheet Template

Facilitator	
Observer	
Date	

First Name & Last Name Initial	
Major	
Year Level	
Why did you choose your specialization?	
What kind of information have you looked at for your specialization, in terms of what to do after graduation?	

Introduce study

- We're from UBC UX Lab, Student Communications Services
- We've recently launched a 'What can I do with my Science degree?' page
- Gift card/chocolate bar after session
- Ensure they are in science
- Ensure consent form is completed
- Questions?

Task

Greeting	Hi, <introduce selves>.
What are we doing?	Are you in Science? No: Thank you for your time. Yes: We're from UX Lab (Student Communications Services) and we're interested in seeing how students find information about their specialization.
Instructions	Please fill out this consent form so we can proceed. https://ubc.ca1.qualtrics.com/jfe/form/SV_b27VqcO7lDul0Nf Firstly, we will get you to fill out the pre-screen questionnaire. (On Laptop) [*Ask to fill pre-screen survey*] https://docs.google.com/forms/d/e/1FAIpQLSeJ1HAN3r5E15lfe7i8UoqxOPRD2CHERp4TQ45LSm3t_swufA/viewform At the end of the test, you will receive a chocolate bar or a $5 gift card. Okay, I will just ask for some basic information. - What is your first name and last initial? - What is your major? - What is your year level? - Why did you choose your specialization? - What kind of information have you looked at for your specialization in terms of what to do after graduation?
Instructions	We're now going to show you a page for science students to see what they can do with their degree.

	Your task is to freely browse through the entire page for 2 minutes. During your browsing, we want you to say everything that comes to your mind, for example “I like this button” or “I hate this color” etc. You can also click on the links on the page. We are not affiliated with the website. We are just testing it, so you can be as honest as you want. Do you understand? If at any point you’re feeling uncomfortable, just let me know and we can stop the test at any time. Are you ready to begin? Are you okay with us recording? [Start screen recording] [Start timing for 5 mins] [*Give participant WCIDWMSD website*] **https://students.ubc.ca/career/your-degree/science**
	Comments on page
FOLLOW-UP QUESTIONS	

What is your overall impression of the page?	
You mentioned _____. Could you elaborate more?	
What did you think of the information available on the page?	
Any other thoughts?	
Thanks!	

Appendix E.

Participant demographics breakdown

	Major	Year Level
P1	Cognitive Systems: CPSC stream	3
P2	Chemistry	2
P3	Combined Major - Microbiology and Computer Science	4
P4	Physics	2
P5	Biology	2
P6	Combined Major - Computer Science and Statistics	3
P7	Earth and Ocean Sciences	2
P8	Combined Major in Science	3
P9	Biology	2
P10	Biology	2
P11	Cognitive Systems: CPSC stream	2
P12	Microbiology and Immunology	2

Year level (Sept 2019)	# of participants
1	0
2	8
3	3
4	1

Specialization (Sept 2019)	# of participants
Biology	3
Chemistry	1
Cognitive systems	2
Combined major in Science	3
Earth and Ocean Sciences	1
Microbiology and Immunology	1
Physics	1