

Saloni Saluja (T00608615) || Anandpreet Singh (T00608596) || Preet Kamal Singh (T00608608)

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USABILITY GOALS

For conducting the evaluation, we have cut-short our list of usability goals to the following:

1. Learnability

It should be easy for the user to become familiar with the user interface during their first interaction with it. [1] In order to successfully exploit this attribute, we tried to keep our website as simple as possible. We did not include too many callouts, navigation options, and images as they could potentially distract a user from knowing what to do.

2. Memorability

It should be easy for the users to remember how to use the interface of the website without having to refer to the manual repeatedly. [2]

3. Utility

Utility is a measure of how much does the user benefit from the content on the website. [1] In our website, we tried to implement utility by delivering content that our target users, i.e. international students want.

USER EXPERIENCE GOALS

1. The user gets what they need. [3]

The user finds the information they are looking for.

2. Not to make the user think. [3]

The user shouldn't just find the information in the right spot, they should also find it effortlessly.

3. Make users our promoters. [3]

The website should be informative enough and the interface should be easy to use so that users recommend it to their friends and acquaintances who belong to our target group.

USABILITY TESTING

During quarantine, all of us are isolated with people who come under the category of our target user group. Most of them are international students from India. So, we decided to go in for offline usability testing.

Methodology

The target users were first presented with a consent form. This form states that the user is participating willingly in the evaluation and can leave anytime during the process if they wish to. **Appendix A** contains a copy of the consent form used in this evaluation.

Next, they were required to install the programs required for running the prototype. **Appendix B** contains details for installation of programs and using the website.

Further, the users were presented with the following tasks to perform on the prototype:

- 1. Explore the entire website.
- 2. Identify areas from the map which are closest to TRU.
- 3. List the name and contact details of any one property dealer listed on the website.
- 4. Write down the amount charged by Canada's Best Value Inn and Suites for 2 Queen Beds with Kitchenette.
- 5. Look for the price of the cheapest data plan with any phone that you like considering "Chatr" as your service provider.
- 6. Find the bus route from North Shore to Valley View via Downtown.
- 7. Find the type of driving license that you are eligible to apply for after 2 year of driving experience.
- 8. Write down the address of place you can get your SIN number from in Kamloops.
- 9. Write down a question they had before coming to Canada regarding anything covered on the website in the form. Look for the answer to that question on the website.
- 10. Post a question on the website.

Appendix C contains some of the tasks that participants will be requested to perform on the prototype. These tasks will be used to collect different types of quantitative data. This is followed by the first questionnaire **(Appendix D)** that contains a set of open questions that ask the user to describe their experience of using the system.

Lastly, the users were presented with a questionnaire to express their thoughts, feelings, and satisfaction level with the website. **Appendix E** contains a questionnaire for measuring the satisfaction level of the users.

Types of Data to be Collected from Target Users

The tasks mentioned above attempt to collect the following data from the users:

- Time taken by users to complete each of the above-mentioned tasks.
- Number of users who found disturbing elements on the interface.
- Number of users who successfully completed all the tasks with using the manual.
- Number of users who were happy with the interface of the website.
- Number of users who were likely to recommend others to use Canada Go.

Method for Recording Performance

For best results, we chose to observe the users in their natural setting. We chose not to use any recording instruments because users behave differently when their actions are recorded. We will also be using a stopwatch to measure the time the user will be spending on each task. More time taken implies greater difficulty. We will also be noting down the number of times a user had to refer to the manual to perform a given task.

Consent Form

Appendix A contains a copy of the consent form used in this evaluation.

RESULTS

Pilot Studies

For this project, we conducted a pilot study with three of our target users to identify problems in our usability test. Each user was invited to come to an isolated room. The next user was asked to enter the room only after the first one had finished with the test.

First, we asked the user to read the consent form, and told them that we shall conduct the research only if they agree to the terms mentioned in the clause. The first problem that the users faced with the consent form was – being a word document, they found it a little tedious sign online. So, when we drafted the form for the final usability test, we took this into consideration and included a column where the user could either put in their signature, or the initial of their first and last name. The consent form was proceeded with the user manual. We explained to them that this manual wasn't necessary for them to read, however, they could refer to it if they felt stuck anytime. The manual was followed by a list of tasks that the users needed to perform on the high-fidelity prototype. While moving ahead with the task list, the users found it difficult to understand the wording of Task 9.

The original wordings were:

Write down a question you had before coming to Canada – regarding anything covered on the website – in the form. Look for the answer to that question on the website.

So, we updated it to a more clear and understandable form to this:

Think of a question you had about your journey to Canada before you arrived here. Now, search for the answer to that question on the website. Did you find the answer to it?

Another point of obstacle was the first question from Questionnaire I – User Experience, which was:

What are some of the design aspects that you liked the most in the entire website?

The users were answering this question in terms of the information given, rather than in terms of design. So, we decided to bold the word "design" and include example in the question.

What are some of the **design** aspects that you liked the most in the entire website? (Design aspects include aspects such as large images, font style, color combination etc.)

Further, the fourth question from Questionnaire I was:

From the list of tasks given, which task did you find the most difficult to do?

The users were trying to write paragraphs to describe the task. So, we thought it would be helpful to include the following:

From the list of tasks given, which task did you find the most difficult to do? (Write down the task number. Eg. Task 1)

Furthermore, in the fifth question of the same questionnaire was:

Do you think the website will be helpful to somebody looking for information before coming to Kamloops / Thompson Rivers University?

Here, we wanted the users to describe the reasons for saying yes or no, which was perhaps not clear from the question. So, we changed it to:

Do you think the website will be helpful to somebody looking for information before coming to Kamloops / Thompson Rivers University? Why/Why not?

For Questionnaire II, we hadn't included any questions for collecting demographic information earlier. After conducting pilot study, we realized that this information would be helpful for drawing out conclusions. So, we included four questions to collect demographic information.

Yet another flaw in the second questionnaire was missing instructions. The users did not know whether to highlight their choice or write it down again. So, in the final questionnaire, we wrote instructions in a bigger sized bold font to highlight the choice.

After the study, we thanked all participants for their time and valuable feedback on our website.

Qualitative Analysis of Questionnaire I

Questionnaire I presented the user with 10 open-ended questions. These questions were designed to gather the users' experience of using the system. Following are the inferences drawn from the questionnaire:

- Some aspects that users liked about the website include large sized high-resolution pictures, simple and readable font, and easy to use interface.'
- Some users suggested to include videos in the website. They also said that the website should list the vacancy status of private apartments. Additionally, they said the website should include financing option for mobile phones along with their network providers.
 We were also told to include information on student loans for buying a car. Yet another addition suggested was to include information on current jobs available.
- Most of the users said that they liked the light theme for Home Page, Housing, and FAQs, instead of the dark theme for Network Providers, Provincial IDs, and Transportation page.
- Out of the task list, the users found Task 6 to be the most difficult one to find. Some said it was Task 5, while the others said it was Task 7. This was a warning sign for us as the information related to these three tasks was not clear on the website.

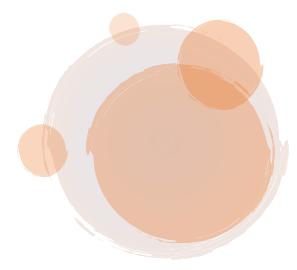
Satisfaction Questions

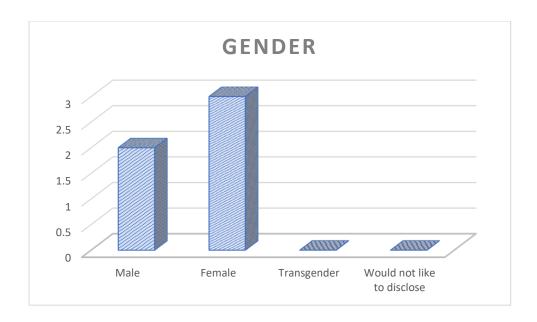
Appendix E contains Questionnaire II whose aim is to measure the satisfaction level of the users. This questionnaire starts by asking some demographic questions (Question 1 to 4), which is followed by user-satisfaction questions (Question 5 to 11).

Quantitative Analysis of Questionnaire II

The following data analysis is for each question in Questionnaire II. The first four questions in this section (Question 1 to 4) were aimed to collect demographic information, while the rest of the questions (Question 5 to 11) were aimed to identify the satisfaction level of the users.

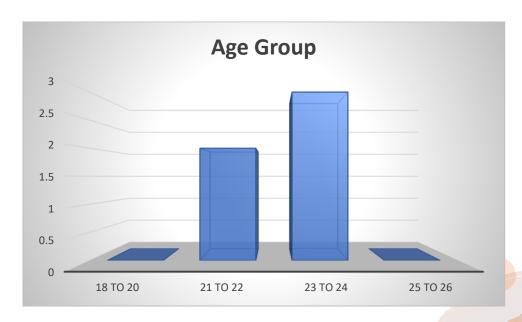
- 1. I identify myself as:
 - a. Male
 - b. Female
 - c. Transgender
 - d. I would not like to disclose





Out of a total of 5 people who participated in the research, 3 were female, and 2 were male.

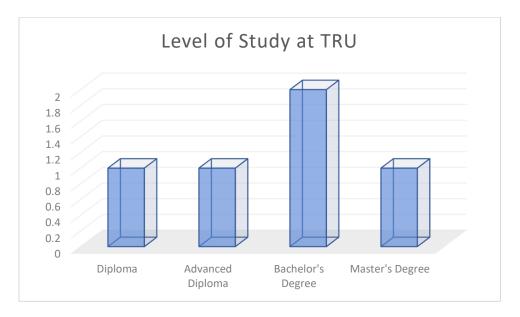
- 2. Which of these age groups do you belong to?
 - a. 18 to 20
 - b. 21 to 22
 - c. 23 to 24
 - d. 25 to 26



3 users were between 23 to 24 years of age and 2 users were between 21 to 22.

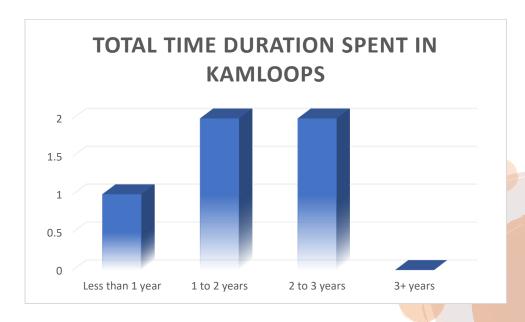
- 3. What is you level of study at TRU?
 - a. Diploma

- b. Advanced Diploma
- c. Bachelor's Degree
- d. Master's Degree



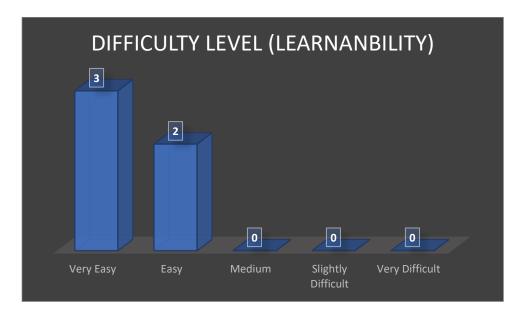
2 users were enrolled in Bachelor's Degree, while number of users enrolled in Diploma, Advanced Diploma, and Master's Degree were one each.

- 4. For how long have you been studying as a full-time student on-campus in TRU?
 - a. Less than 1 year
 - b. 1 to 2 years
 - c. 2 to 3 years
 - d. 3+ years



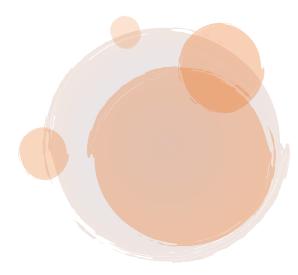
Most of the users who were involved in the research had been living in Kamloops for 1 to 3 years. However, there was one user who had been here since less than a year.

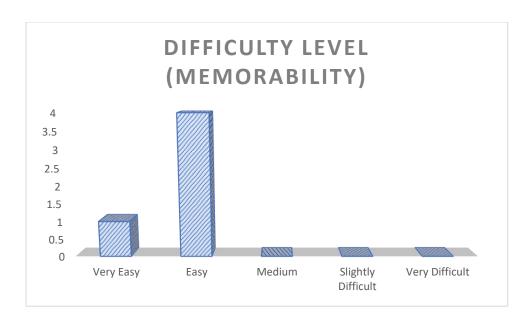
- 5. How difficult was it for you to learn using the interface of the website?
 - a. Very Easy
 - b. Easy
 - c. Medium
 - d. Slightly Difficult
 - e. Very Difficult



3 users found it very easy to learn how to use the website while exploring it. Additionally, 2 users found it easy to learn. From the statistics obtained, it can be inferred that the website satisfies one of our usability goals, which is learnability. It also satisfies our second UX goal, i.e. don't make the user think.

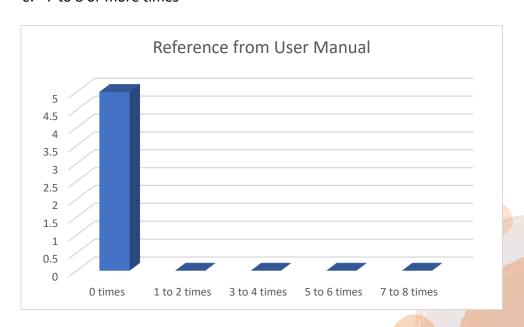
- 6. How difficult was it for you to remember how to use the interface?
 - a. Very Easy
 - b. Easy
 - c. Medium
 - d. Slightly Difficult
 - e. Very Difficult





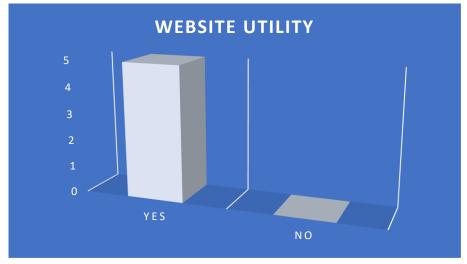
Most of the users (4 on 5) thought it was easy to remember how to use the website once they had learned it previously. Therefore, it would be wise to say that the interface we designed satisfies our second usability goal, which is memorability.

- 7. How many times did you refer to the manual to perform a task?
 - a. 0 times Did not read the manual at all
 - b. 1 to 2 times
 - c. 3 to 4 times
 - d. 5 to 6 times
 - e. 7 to 8 or more times



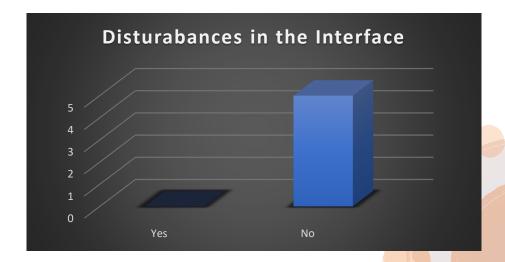
For the above graph, it can be inferred that none of the users referred to the manual even once. This proves that the current generation likes exploring things on their own, rather than having to read documentation.

- 8. Did the website provide an answer to your question?
 - a. Yes
 - b. No



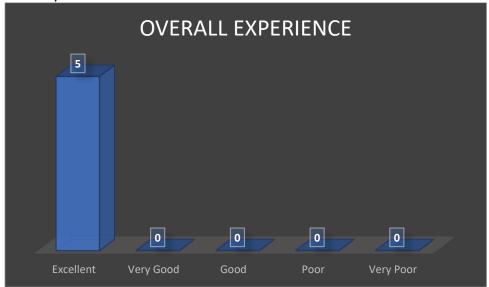
All 5 users found the answer to their question on the website. Therefore, it will be safe to say that the website satisfies our third and final usability goal, and that is Utility. Furthermore, it also satisfies our first UX goal, i.e. giving the users what they need.

- 9. Did you find any aspects in the interface that were disturbing, or anything that caused you to lose your focus?
 - a. Yes
 - b. No



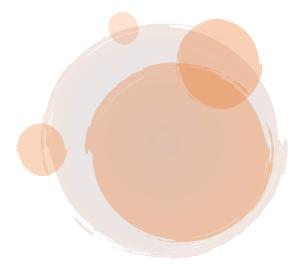
None of the users found any elements in the interface that would distract them from their focus of attention.

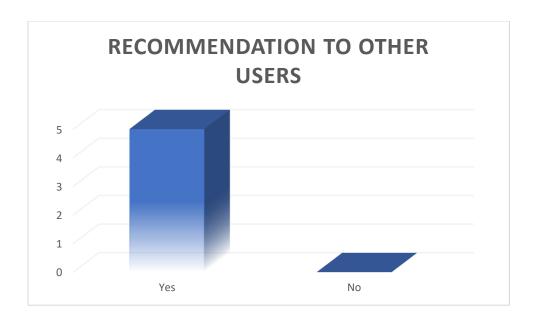
- 10. How was your overall experience with the website?
 - a. Excellent
 - b. Very Good
 - c. Good
 - d. Poor
 - e. Very Poor



All five users say that they had an incredible experience using the website.

- 11. Will you recommend other people to use Canada Go?
 - a. Yes
 - b. No





All the users think that the website is informative, and they would recommend other people to use it. Therefore, it satisfies our third UX goal, that is to make the users our promoters.

We also noted the time each user spent on each task in the Task List. The table below depicts the time spent by the users:

Task	User A	User B	User C	User D	User E	Average
1	55 sec	30sec	45sec	1min 30sec	1min 15sec	59sec
2	1min 40sec	20sec	20sec	50sec	1min 30sec	56sec
3	30sec	50sec	30sec	45sec	1min	43sec
4	50sec	1min 20sec	50sec	2min 15sec	1min 10sec	1min 15sec
5	45sec	50sec	1min	1min 20sec	1min 45sec	1min 8sec
6	1min 45sec	2min	30min	45sec	1min	1min 12sec
7	1min 20sec	55min	25min	3min 15sec	1min 40sec	1min 31sec
8	50 sec	50sec	1min	2min	50sec	1min 6min

9	6min 50sec	3min	1min 20sec	1min 40sec	1min 50sec	2min
						56sec
10	3min	1min	50 sec	1min 30sec	1min 30sec	1min
						34sec

Summary of Collected Data

- 3/5 participants were female and 2/5 participants were male.
- The participants belonged to the age group of 21 to 24.
- Most of them were pursuing Bachelor's degree.
- Most of them had been living in Kamloops for about 1 to 3 years.
- It was very easy for most participants to learn how to use the interface.
- It was easy for most participants to remember how to use the interface.
- None of the participants referred to user manuals.
- All of the participants found the website useful.
- None of the participants found any disturbances in the interface.
- The overall experience of using the website was excellent for all the users.

Relationship between Demographic Data and Collected Data

From the demographic analysis, it can be inferred that most of the international students are between the age of 21 to 24. From collected data, it can be noted that none of them referred to the user manual even once. Thus, it may be concluded that the newest generation, i.e. Generation Z, would prefer to have easy-to-use interfaces because they would avoid reading long and lengthy manuals. They prefer to explore the interface on their own. Therefore, the interface must be designed in such a way that it is easy to use for them, without having to read any documentation.

Things that Need Improvement in the Website

- Uniform color theme for all the pages in the website either dark or light. As per feedback, people would be more in favor of the light theme with dark text.
- Images should fit properly in their container. They should not be too stretchy or contracted.
- More efficient use of white space for selected webpages.
- More information for Network Providers, Transportation, and Provincial IDs.
- Description of map used in transportation, to include transit routes, their starting and ending points.
- More descriptive comparison charts or ratings for network providers.

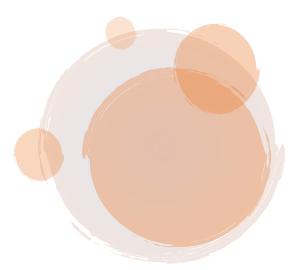
Improvements that have been implemented

- The color scheme is changed from black to different shades of blue to make the website more vibrant.
- Data is more organized and systematically arranged. All important information is easily distinguishable and noticeable by the user thus, making user to grasp main topics easily.
- Size of images has been reset not making them appear stretchy or contracted.
- In this updated version more tables and pop up containers are being used.
- Amount of information has been increased specifically in web pages of Network Providers, Banking, Transportation, Provincial ID's.
- User Reviews has been introduced in Network Provider web page. Data is being collected from different surveys conducted by different agencies.
- Bus routes and transit map is now more highly described making user to have minor and major glimpse of Kamloops city transit system.

PHASE 4 UPDATED

As we implemented these changes in our website, we had to redo Phase 4. Please find the document for the updated version of Phase 4 in the root folder. Also, please find the updated version of the website (Canada Go folder).

Please note that you may have to clear browsing history to see the implementation of the changes in the website.



APPENDIX A

Usability Test Consent Form

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Please	read	and	sign	tnis	torm.

In this usability test:

- You will be asked to perform certain tasks on a computer. You can use the manual for help any time.
- After completing of the tasks, you will be asked to fill a questionnaire regarding the tasks you performed. You will also be required to share your experience of using the website in this section. This questionnaire will be used to collect qualitative data.
- Further, you will be presented with another questionnaire to express your thoughts, feelings, and satisfaction level with the website. This questionnaire will be used to collect quantitative data.
- We will record the time you spend on different tasks using a stopwatch.
- You may have to give us an interview, if needed.

Participation in this usability study is voluntary. All information will remain strictly confidential. The descriptions and findings may be used to help improve our website — Canada Go. However, at no time will your name or any other identification be used. You can withdraw your consent to the experiment and stop participation at any time.

If you have any questions after today, please contact either one of the following:

• Saloni Saluja: Email - saloni.compsc@gmail.com

Anandpreet Singh: Email –
 Preet Kamal Singh: Email -

I have read and understood the information on this form and had all my questions answered.

Subject's Name	Subject's Signature
Researcher's Signature	Date

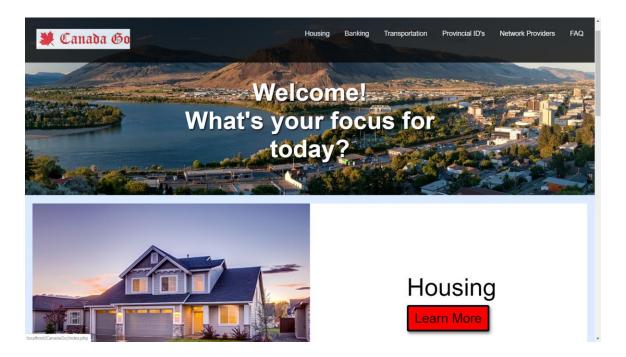
APPENDIX B

User Manual

HOW TO USE CANADA GO WEBSITE

We have tried our best to keep the interface of the website as simple as possible. Thus, we did not make a huge website as it may confuse the users. After conducting surveys with our users, we concluded that users want to have a lot of information, but when presented with many choices, they tend to not choose any. So, we have tried to limit the number of options on our navigation bar, but present as much content as we can precisely under these headings.

HOME PAGE



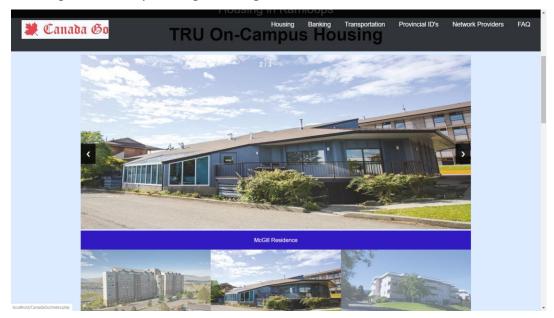
The home page aims to present you with a warm welcome by asking their focus for the day. You must enter an answer to this question on the website. However, this question probes you to think about what you are looking for, your aim of visiting this website. You can navigate through using the scrollbar on the right-hand side. As you scroll down, you are presented with several options to choose from. Let's suppose that you wish to learn

more about housing in Kamloops. To proceed with the selection, click on "Learn More". After clicking, you will be redirected to the housing page.

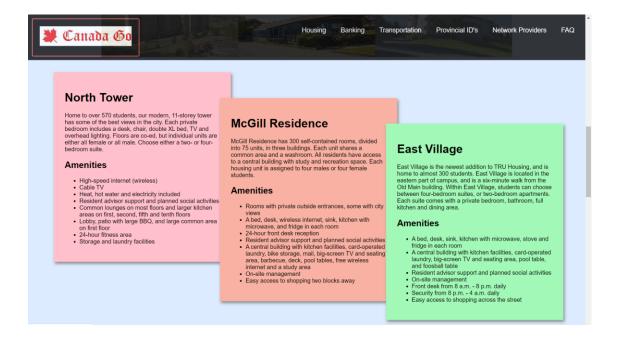
HOUSING

Next comes the housing page. As you scroll down, you will be presented with the TRU on-campus housing options. A slider shows images of the three alternatives available to TRU students – North Tower, McGill Residence, and East Village.

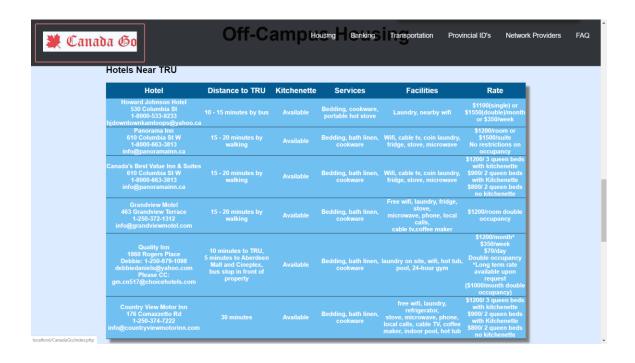
The fraction on the top of the slider tells you which image you are currently viewing. You can scroll through the images in the slider using the left and right arrows. Another alternative for scrolling would be by clicking the image modals down below.



Further, we have some description of the three on-campus housing options, along with the amenities provided by each of them. They are placed side-by-side so that it is easier to have a comparative study between the three and decide which one is best suited for you.



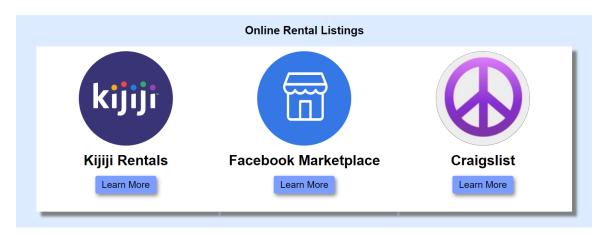
Further on, we move to off-campus housing, searching for which is one of the biggest concerns faced by international students as most of them cannot afford to live on-campus. So, here, we present you with two tables. The first table tells you about some of the hotels that reside near TRU. You can book them for a day, a week, a month, for as long as you like. The table lists the transit time taken starting from one of these hotels as the source and up to TRU. Further, it lists the services and facilities provided. Lastly, we have the charges of each of them for single occupancy, double occupancy, and triple occupancy.



In addition to this, if you doesn't wish to live in a hotel for long, we have also listed the names of some of the property agents in Kamloops, along with their contact information.

Pr	ivate Apartments	
Apartment Complex	Address in Kamloops	Manager/Contact
Columbia Manor	1336 Columbia St	Dave Marshall +1 (250)-299-8740
Hillsview Apartments	Arrowstone Dr	Shawn Curtis +1 (250)-819-3691
Kelson Manor Apartments	465 & 481 Greenstone Drive	Adam +1 (250)-682-0450
Stetson Place & Dufferin Terrace	595 Dalgeish Drive	Rose Lemieux +1 (250)-374-7907
Summit Village Residences	1415 Summit Dr	+1 (250)-320-0538
Columbia Property Management	Office: #101-388 First Avenue	+1 (250)-851-9310

Moving ahead, we have listed some of the websites which are used by people to post rental adverts such as Kijiji, Facebook Marketplace, and Craigslist. If you wish to view some of the rental posting for Kamloops on the websites, you can click on "Learn More".



Lastly, we have a map that shows some of the locations near TRU in which a person should look for a rental. It depicts all the neigbourhood areas such as Sahali, Downtown, Aberdeen, etc.



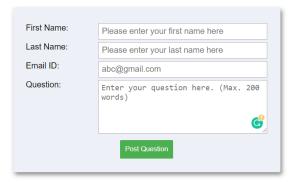
FAQ PAGE

We understand this fully well that a user may have a lot of questions while surfing for information on our website. Keeping this in mind, we created a page for the most frequently asked question. This page can only be accessed from the navigation bar.



As you scroll down through the FAQ page, you come across the heart of the website. If you have any questions related to your journey to Canada, you are just a single click away. You can enter your name and email id, along with your question, and we will get back to you with an answer through email. Your details, along with the questions, are stored safely and securely with us in our database.

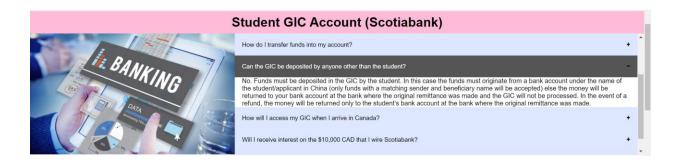
We would love to hear from you! Please post your question here.



In the further sections, we have some of the most frequently asked questions regarding various subjects that have been covered in our website. The most interesting thing about these sections is that now you see two scrollbars to your right. The outer scroll bar is for the webpage, and the inner scroll bar is for the section. This makes it easy to navigate through the questions, without having to scroll a long webpage up and down again and again.



To view the answer to a question, you simply need to click on the small "+" sign flushed in the right. This expands the question to display the answer. Another way to perform the same operation is by clicking on the question.



To close the answer, simply click on the question again. Alternatively, you will notice that the "+" sign has now changed to a "-" sign. You can click this sign to close the section

APPENDIX C

Task List

- 11. Explore the entire website.
- 12. Identify areas from the map which are closest to TRU.
- 13. List the name and contact details of any one property dealer listed on the website.
- 14. Write down the amount charged by Canada's Best Value Inn and Suites for 2 Queen Beds with Kitchenette.
- 15. Look for the price of the cheapest data plan with any phone that you like considering "Chatr" as your service provider.
- 16. Find the bus route from North Shore to Valley View via Downtown.
- 17. Find the type of driving license that you are eligible to apply for after 2 year of driving experience.
- 18. Write down the address of place you can get your SIN number from in Kamloops.
- 19. Think of a question you had about your journey to Canada before you arrived here.

 Now, search for the answer to that question on the website. Did you find the answer to it?
- 20. Post a question on the website.

APPENDIX D

Questionnaire I: User Experience

1.	What are some of the design aspects that you liked the most in the entire website? (Design aspects include aspects such as large images, font style, color combination etc.)
2.	In your opinion, what are some of the pages that need improvement? Can you suggest some of the design improvements that you would like to see in those webpages?
3.	What is your opinion on the color scheme used in the website?
4.	From the list of tasks given, which task did you find the most difficult to do? (Write down the task number. Eg. Task 1)
5.	Do you think the website will be helpful to somebody looking for information before coming to Kamloops / Thompson Rivers University? Why/Why not?

APPENDIX E

Questionnaire II: Satisfaction Level

Please highlight your choice.

- 12. I identify myself as:
 - a. Male
 - b. Female
 - c. Transgender
 - d. I would not like to disclose
- 13. Which of these age groups do you belong to?
 - a. 18 to 20
 - b. 21 to 22
 - c. 23 to 24
 - d. 25 to 26
- 14. What is you level of study at TRU?
 - a. Diploma
 - b. Advanced Diploma
 - c. Bachelor's Degree
 - d. Master's Degree
- 15. For how long have you been studying as a full-time student on-campus in TRU?
 - a. Less than 1 year
 - b. 1 to 2 years
 - c. 2 to 3 years
 - d. 3+ years
- 16. How difficult was it for you to learn using the interface of the website?
 - f. Very Easy
 - g. Easy
 - h. Medium
 - i. Slightly Difficult
 - j. Very Difficult
- 17. How difficult was it for you to remember how to use the interface?
 - f. Very Easy

	g.	Easy
	h.	Medium
	i.	Slightly Difficult
	j.	Very Difficult
10 How	manı	w times did you refer to the manual to perform a task?
10. HUW		y times did you refer to the manual to perform a task? O times - Did not read the manual at all
		1 to 2 times
	_	3 to 4 times
		5 to 6 times
	J.	7 to 8 or more times
19. Did t	ne w	ebsite provide an answer to your question?
	c.	Yes
	d.	No
20. Did y	ou fii	nd any aspects in the interface that were disturbing, or anything that caused you
to los	e yo	ur focus?
	c.	Yes
	d.	No
21 How	พลรา	your overall experience with the website?
21.110	f.	•
		Very Good
	_	Good
		Poor
		Very Poor
	J.	very i doi
22. Will y	ou re	ecommend other people to use Canada Go?
	c.	Yes
	d.	No

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