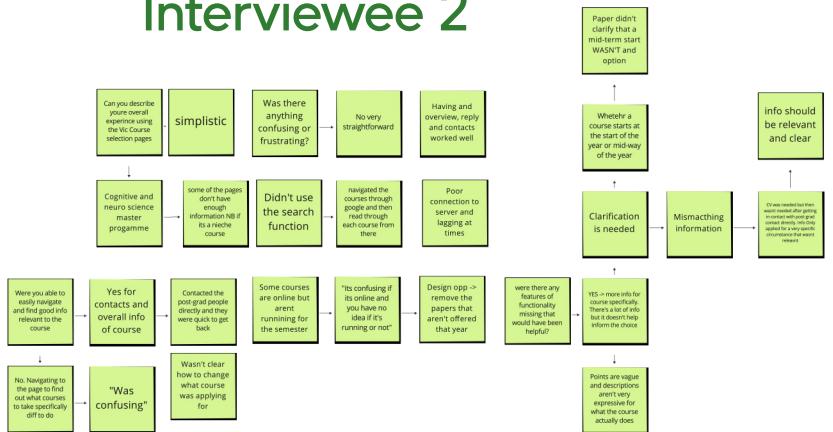


The Victoria University of Wellington course selection and enrolments process is scattered, uninformative, time-consuming, unflexible and fundamentally a distressing process for students to navigate.

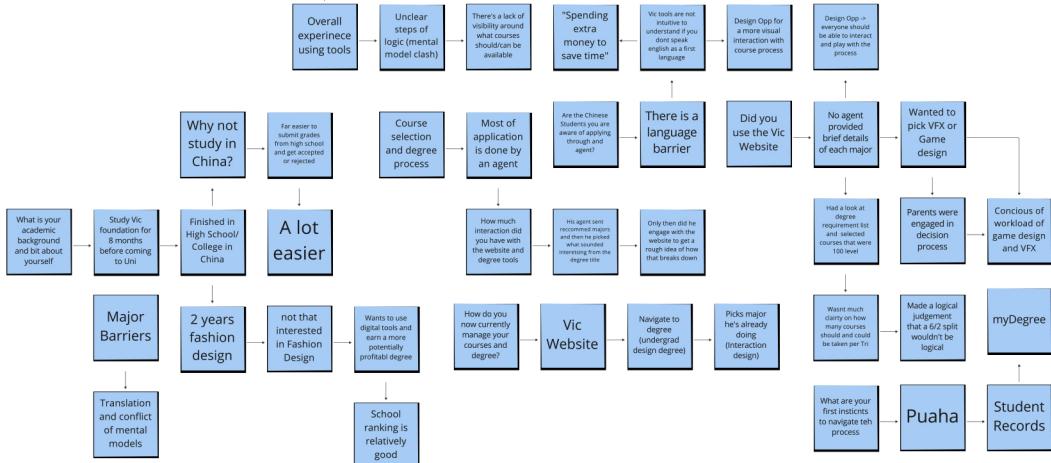
Interviewee 1

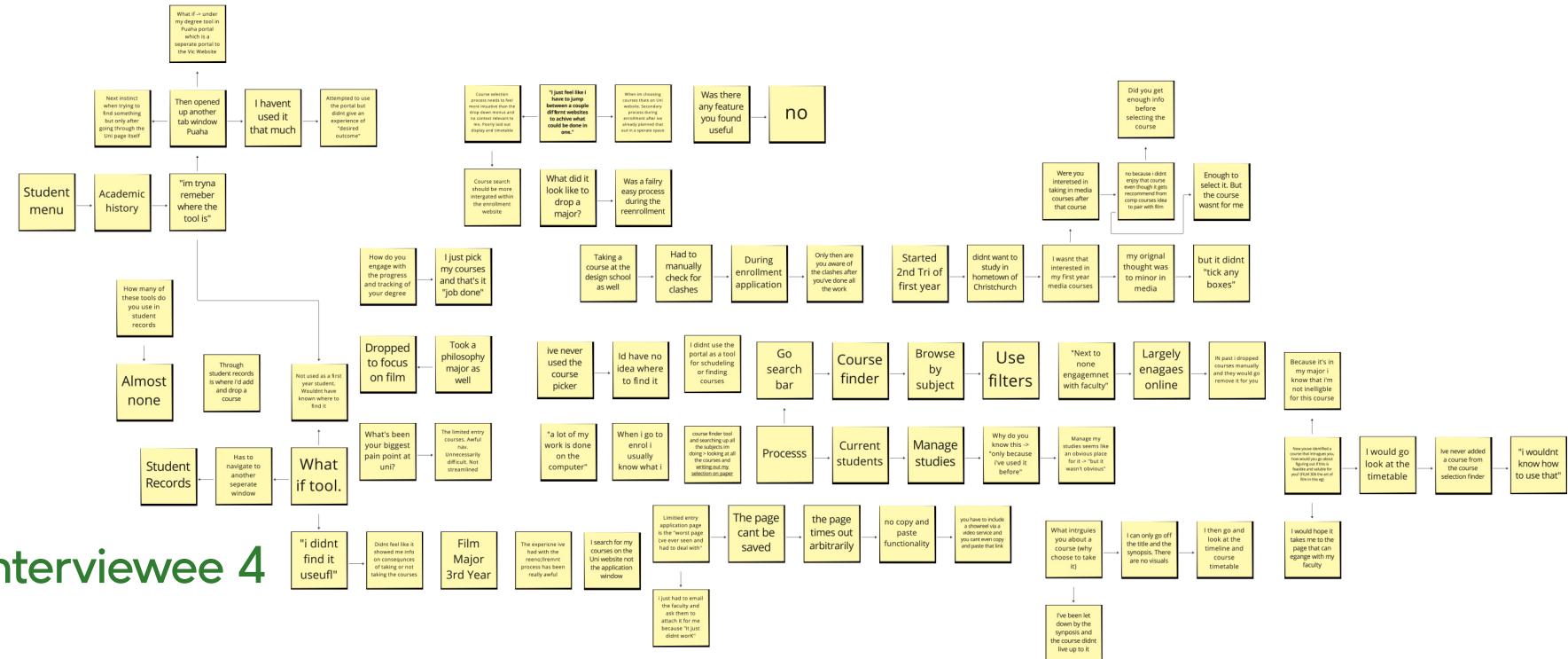


Interviewee 2

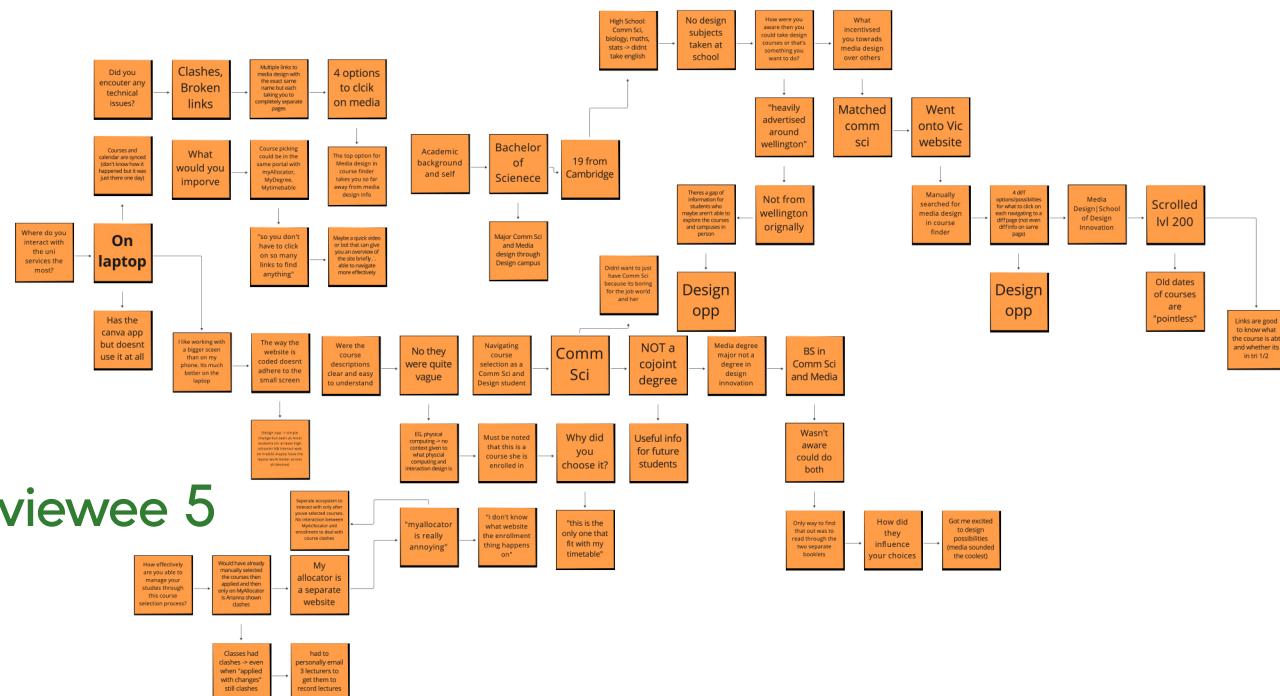


Interviewee 3



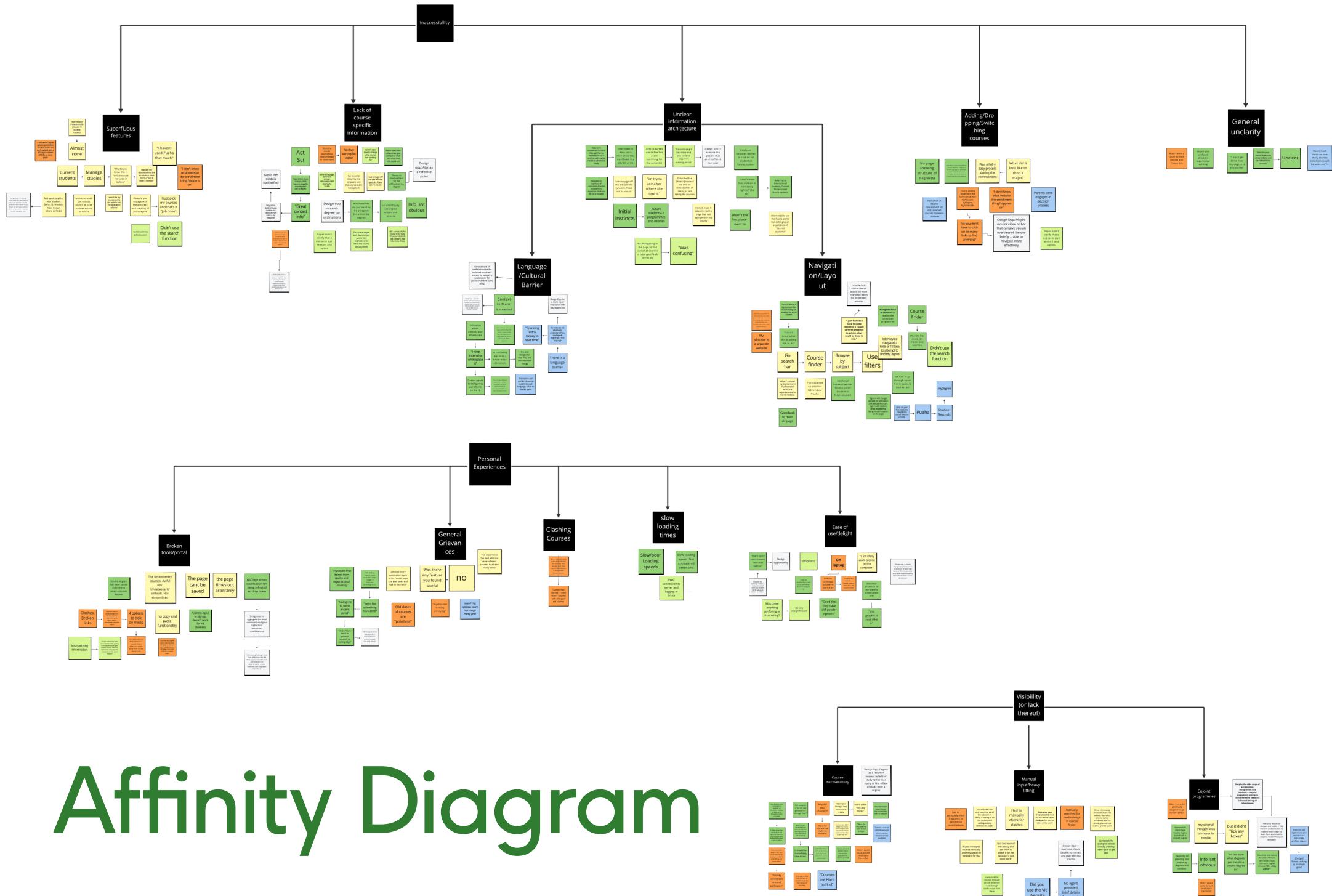


Interviewee 4



Interviewee 5

Affinity Diagram



Primary Research

The interview process highlighted the scattered, chaotic and frustrating system students at Victoria University of Wellington have to persevere through in the course selection process.

The first overarching theme that presented itself was a lack of visibility. “Courses are hard to find” seems a fundamental problem and emphasizes that discoverability needs to be improved. Students commonly expressed “not being aware” of courses available to them either because the current process of course selection didn’t probe them to explore the possible options or because the commonly recommend courses “didn’t tick any boxes.” This results in student apathy as they have to deal with the manually intensive processes to find courses. Despite this, every single interviewee - spanning varying interests, ages, personalities and programs - presented that they were interested in seeking out more courses and expanding beyond their narrow field of their degree. This presents how crucial it is that information and options are immediately visible and clear to the modern student eager to widen their knowledge and skill set to meet the fast paced demands of the workforce.

The most significant results presented from the data was the inaccessibility of the course selection process information architecture. Students fundamentally “don’t even know what website the enrollment [process] happens on.” There is a consistent pattern of “mismatching information” between pages. Some navigated courses directly through the search tool on the hero page, others contacted their advisors, some referred to a physical handout that they got given on campus or even still one student admitted to “almost [never]” using a student tool available to them through the website. This is reinforced through a lack of contextually useful information where “points are vague and the descriptions aren’t very expressive for what the course actually does” creates a situation for students to battle against the odds and select a course only to be “let down by the synopsis [because] the course didn’t live up to it.” For international students there are a number of confusing calls to action that could be solved simply by providing context to that action through a brief bracketed description.

Finally the primary research uncovered how despite students best efforts in painstakingly navigating the University’s combative course selection information architecture it was the tiny details that capitulated the University’s complete lack of care in designing this process. For a student looking to reenroll into a limited entry course the fact that there is yet another portal to navigate that doesn’t even support copy and paste functionality and “arbitrarily” logs him out, compounds his frustrations leaving him feeling not one single feature was useful. The tiny details detract from the quality and experience of the University where one interviewee felt it looked like the loading bars that appeared were “taking [him] to some ancient portal from 2010”.

The course selection experience should encourage an exploration of options of students to enrich their learning experience that is tailored to their specific situation. Course information should be presented with the relevant details that allow the student to make the most informed choice. Fundamentally it should be easy and clear to navigate.

Secondary Research

Ma, Lu, Taniguchi, and Konomi's findings point very clearly to the inefficiency of current University course selection models and highlight a path for a system that provides user control and support for "exploration and explanation" that filter into a multi-personalized recommendation system (Ma et al., 2021). This interaction should ideally be a way for the student to engage in the future of their academic success by being able to visually manipulate their own inputs using a "visual interactive hybrid recommender system" (Bostandjiev et al., 2012). In short "the more about the student is known, the more useful recommendations can be made" (Ma et al., 2020). Even the best University course selection models like the one used at Australia National University that utilizes an interactive lineage tree process to filter a relevant stream of courses based from a students initial interests rather than their preference of a degree, fail to give a "visually balanced" stream of information for specific courses. The solution is to utilize a Genetic Algorithm that uses students ratings, competencies and subject areas to offer informative graphics of courses that can be used in the course selection process dynamically for the "all-around, grade-oriented, learning-oriented [or] socially-oriented" student to make the most informed decision (Esteban et al., 2018, Marshall, 2016, Ma et al., 2020).



Visual Reccomender System



Clear calls to action for anyone



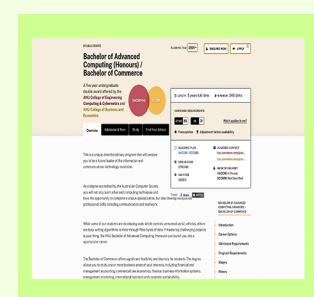
Visual interest first approach



Visual Drop down of degrees



Graphical descriptions of degrees



Stunning conjoint support

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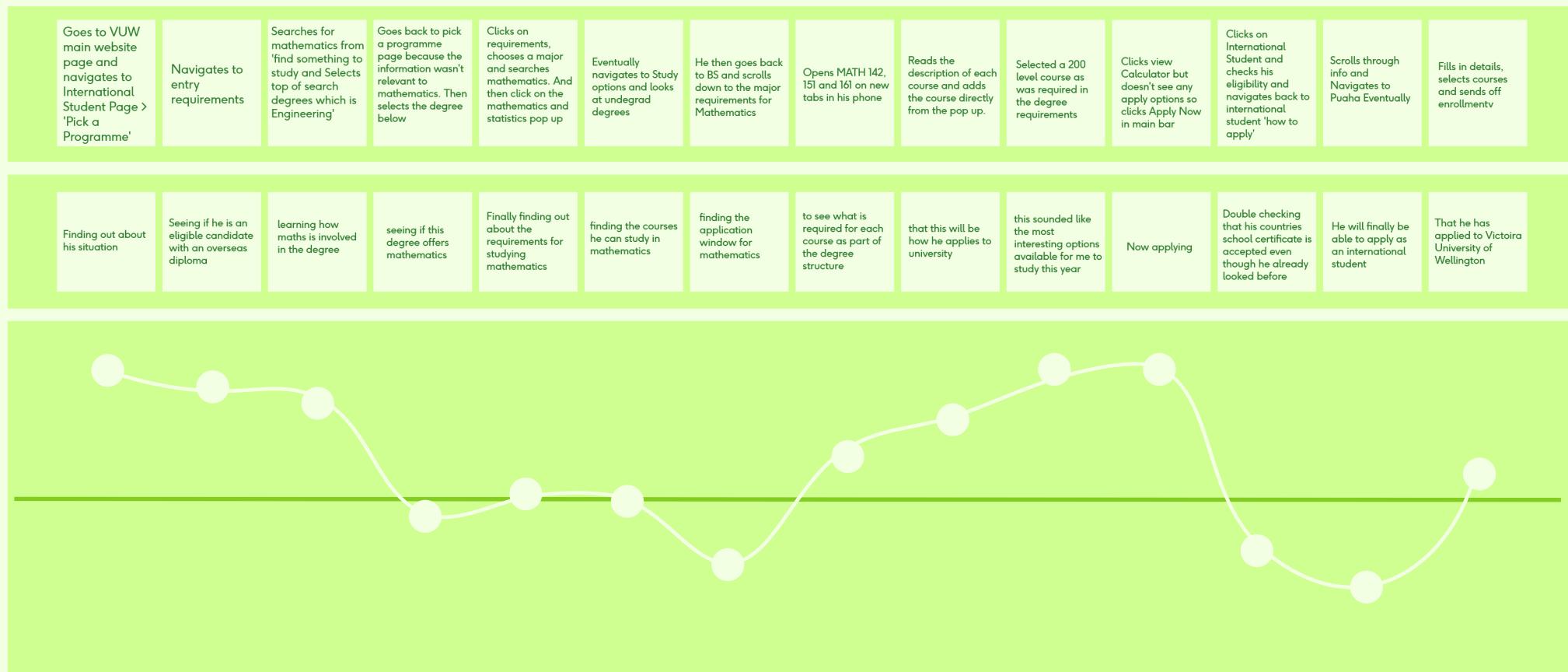
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Alejandro is diligent and mathematically minded. He attends a high school in an international country but is excited by the idea of studying in New Zealand and learning more about this cool nations culture. He wants to study Mathematics with a particular focus on calculus and computing.

Alerjandro doesn't have access to his schools computers while researching what to study at Vic so he uses his Samsung Galaxy A32 5G to research and select courses for Uni while lying in bed at night.

Customer Journey Map 1



Using a phone only makes this process more difficult for Alejandro. The pages constantly open in different tabs and the calls to action seem to conflict with his own mental models of what he would expect. The process isn't informative for what courses he can actually take and he ends up making a mistake that will only become obvious once he gets his application back by selecting a level 200 course. He isn't given any suggestions for expanding his interests and is forced to take a degree first approach without even knowing what degree would be best suited to him.



Hannah is going into third year for a cojoint degree in BCOM and BS. Her majors are Business management and Computer Science. She is driven and sociable so she values being able to balance her Uni/personal life. She also works in retail and loves fashion and digital design.

Hannah is currently firming up her course selection for next year. She is superstitious about getting into courses so she sits in the same spot at the Kelburn campus to apply and research for her courses on her Macbook Pro 2020 every year.

Customer Journey Map 2



Goes to VUW main website page and Types in computer science directly into search bar	Clicks on courses and then filters by level 300 and is given 511 results	Opens up myDegree by typing it in a separate tab in the browser	Checks from list of drop down courses what is available in year 3	Refers back to each physical handbook on each Major	Navigates back to VUW hero page	Types in each course code and opens each possible course in a new tab	Reads through each course and deletes the tabs that don't sound interesting	Clicks on apply now and navigates to Apply now for the new academic year	Inputs each course code manually cross checking the courses that she wrote down on paper for this process	Navigates back to Puaha, opens myDegree to double check if there are clashes.	Not the desired outcome, goes back to VUW mainpage and looks through each course code again and laboriously reads through the timetable to see if there are any clashes	Happy with decision, clicks back onto the application tab but has to refresh the unresponsive page	Reselects each course and sends off enrollment
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Checking courses for next year that will enrich her career prospects	Has now found this is the only effective way to semi-constructively navigate finding courses	Getting clarification on what she can study because the course finder had an inaccessible amount of unspecific information	Finally seeing tailored information on what courses are possible to be taken next year	Getting clarification on how each course fits together or maybe seeing if there are courses that aren't listed on the myDegree portal (Knowledge from past)	Restarting the process to try and figure out more information about timetables and course information	Finding out as much about each course as possible to make the best decision for her future	Trying to understand what information is relevant to her career and study skills as there isn't any cross connection between course information	Selecting her courses that she liked the sound of but is hoping to gain some clarification on whether the departments clash	Being a diligent student and making sure that she is first pick for those courses	Checking for clashes that weren't obvious despite being very diligent and focused on researching courses	Squashing doubts that she's made a mistake as a result of spreading mental resources	Finally getting to renenroll in selected course	Getting the application off and not trying to delay the process any further through unnecessary and confusing navigation
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Despite Hannah's familiarity with the course selection process there is still a large degree of friction involved. She doesn't understand whether information is available on the website, the myDegree portal or in physical handouts. She has to do a lot of cross correction herself and uses a pen and paper to attempt to grapple with what courses may or may not clash. Interestingly her confidence and trust in the system started out noticeably lower than Alejandro and her final submission left her frustrated more than anything else.

Design Brief

To address the problems highlighted I will design a solution that incorporates a multi-criteria personalized recommendation system that allows for the student to explore different options for courses with clearer explanations. This will be done by gathering consenting information about the student through a gamified selection design that elevates ANU's lineage tree design.

I will design a way of visually interacting with the information in a graphically balanced display so that visibility is never an issue.

Calls to action will be simplified and there will be a noticeable focus on centralizing the information hierarchy so that it is obvious for students from different backgrounds to recognize where they should navigate.

Finally incorporating a genetic algorithm in the backend will give students recommendations that feels like magic and is tailored to their best interests to help them develop whatever learner type they are.