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The focus of any design should be to pinpoint an issue within a broader system and focus on delivering a specific solution.

The current state of the Victoria University of Wellington course selection process is laborious, unintuitive, and confusing. The selection system can be divided into course information, course discoverability, course guidance, interrelated course relationships, and course application.

Currently, the course selection has an insufficient and irrelevant course information hierarchy that makes it difficult for future students who hope to gauge more visually graphically represented information. Course discoverability is not automatic or suggestive of what the student might like or could take in combination. The course guidance is spread around several resources,

making it difficult and overwhelming to assess the current and future states of the degree.

Courses, relationships, and interconnectedness are not available. Finally, the course application portal is in a separate stream of information architecture from the previously navigated systems and mental models. Fundamentally no information is saved, and the student must act as the archive, organizer, timetable, and counselor.

This is a poorly managed system and, in its current state, lowers the quality of the reception towards the university and disengages students within the learning process. Through research, however, Ma, Lu, Taniguchi, and Konomi suggest that the inefficiencies of current University course selection models highlight a path for a system that provides user control and support for “exploration and explanation” that filters into a multi-personalized recommendation system

(Ma et al., 2021)—one where the course selection process feels like magic and excitement rather than a daunting and laborious process. Adapting the VIC Website system through this interaction should ideally be a way for the student to engage in the future of their academics. Currently, the model regresses the students’ participation and enthusiasm for courses; however, by flipping the paradigm and allowing students visually manipulate their inputs using a “visual interactive hybrid recommender system,” their mental model relating to course selection changes (Bostandjiev et al., 2012). Fundamentally Vic’s processes are far behind even the outdated models of popular University interactions. As such, there is a massive opportunity to create a revolutionary system of course selection that engages students from the first year onwards) in their course,

combos and uses algorithmic filtering to give options best tailored to the student's situation (Ma et al., 2020).

My chosen stakeholder is a first-year student who needs to be made aware of what they want to study. This stakeholder has to use the university website as their primary portal for navigating potential degrees, current interests, information related to requirements for application, clashes in timetables, financing options, and major and minor requirements. The stakeholder is unfamiliar with university tools and portals and is currently still in or has just left high school. Additionally, they are applying from a foreign country, speaking a foreign language, and using the university tools over their mobile as they cannot access a computer.

Focusing on this stakeholder highlights the particular issues rooted within the current information architecture that plagues the Vic course selection process. Taking the vantage point of the stakeholder, the first call to action needs to be more explicit, calling on them to decide between being a future student or an international student, potentially causing them to get lost inside the system. If the stakeholder were to navigate to the International student portal, there would be no obvious information regarding what courses one could potentially take, what degrees are offered, or even how they could be supported within the program. This creates a suffocating experience and forces the user to return to the hero homepage.

The stakeholder must navigate the website's information architecture, which can be overwhelming due to the need for more visibility and discoverability. Their mental model is that they are eager to widen their knowledge and skill set to meet the fast-paced demands of the workforce, and they expect the university website to provide them with the relevant and useful information they need to make an informed decision about their future.

There are several clashes in the logical architecture of the systems between the user's mental models and the structure of the University website. This makes the courses hard to find, and the information regarding the course selection process is inaccessible. The

stakeholder's observations of the information architecture reveal a lack of contextually useful information where points about the courses are vague and uninformative regarding real past student experiences. The stakeholder somehow has to gauge off the limited information about the course, whichever sounds most interesting, potentially leading to unhelpful and unnecessary classes that can be taken. This problem could be resolved with contextually richer graphics that give a greater sense of the scope and skill development of any one course.

The stakeholder represents a selection of the whole in that they are an outlier applying from a foreign country, speaking a foreign language, and using the university tools over their mobile as they do not have access to a computer. Therefore, the system's design should focus on providing contextually useful information, emphasizing discoverability, and tailoring the course information to the specific situation of the stakeholder. Ultimately, the course selection experience should encourage the exploration of options for students to enrich their learning experience, and the system should be easy and clear to navigate for all students, including those unfamiliar with university tools and portals.

The first overarching theme that presented itself was a need for more visibility. Courses are hard to find, meaning the focus should first be on emphasizing discoverability to engage students with the active potential options and steps ahead. This presents how crucial it is that information and options are immediately visible and apparent to the modern student eager to widen their knowledge and skill set to meet the fast-paced demands of the workforce. From this respect, the design should reflect my value of being **output driven and focused**, a means of moving the student from having nothing selected and using their perceived mental models to having them freely navigate to their courses. This would be a first for student design, finally empowering and incentivizing the University to meet the demands and flexibility of the user rather than the other way around. This would achieve an engaged, captivated user, a first in the traditional education sector as a new form of **iconic** interaction design that blends student personality with education for a tailored experience that can deliver real-world value to all stakeholders.

Fundamentally the course selection process information architecture is inaccessible. Students have to stretch well beyond the boundaries of their computer screen to find

information that is not even available through the Uni Website. What makes this worse is that much of this information is housed between advisors, and handouts are only available on campus, making the course selection process even more difficult for an international student.

In addition, there is a consistent pattern of mismatching information between pages. Some may choose to navigate courses directly through the search tool on the hero page, and others contact advisors. Some are forced to refer to a physical handout given on campus or even never use an online tool offered by the University. A lack of contextually useful information reinforces this. The design has to feel **tangible** students should be able to feel like they are interacting with the most prominent and useful course pages rather than being forced down a stream of smoke and mirrors to select a course they had no interest in taking to begin with.

In particular, for international students, several confusing calls to action could be solved simply by providing context to that action through a brief bracketed description. The course selection experience should **encourage** the

exploration of options for students to enrich their learning experience tailored to their specific situation. Course information should be presented with the relevant details that allow the student to make the most informed choice, and by informing the student with the suitable toolkits to make the decisions that best suit them, you create a **timeless** design that lives on in the investment the individual is willing to pour into each assignment. Fundamentally it should be easy and clear to navigate.

Based on my critical thinking around the topic, I plan to design a solution to address the issues highlighted. The desired state of the system is to incorporate a personalized recommendation system that considers multiple criteria to provide students with a range of course options, each with more straightforward explanations. To achieve this, I will gather consenting information from the students using a gamified selection design based on ANU's lineage tree design, providing a visually interactive way of exploring the data.

To ensure that visibility is never an issue, I will use a graphically balanced display that centralizes the information hierarchy, making it easy for students from different backgrounds to navigate the system. Additionally, I will simplify calls to action, making them more straightforward and noticeable.

I plan to incorporate a genetic algorithm in the backend to enhance the system's recommendation capabilities. This algorithm will tailor recommendations to each student's best interests and learning style, providing a personalized experience that feels like magic.

Overall, the system's desired state is to create a user-friendly, visually appealing, and highly personalized recommendation system that helps students explore their course options in a way that best suits their needs and interests.

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