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Taking your education to new heights.

INFS 3605 - EdTech Innovation Challenge

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Business Knowledge

Understanding The Problem

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01 Infrequent Timing

UNSW's current MyExperience platform utilises the **once-and-end-of-term model**, coinciding with **peak assessment periods**, **limiting** student **engagement** and **quality participation**

02 Low Participation

Resultantly, **low participation occurs**, providing extremely **limited** and **poor data insights** for analytics, **hindering impactful educational improvements**

03 Lack of Insights

Low participation attributes **poor quality data**, substantially **hindering universities** from implementing **impactful** and **meaningful educational changes**

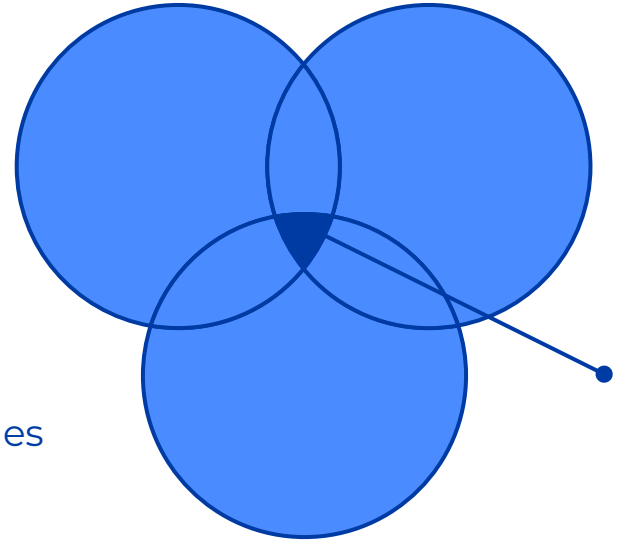
04 Real-time Changes

Lack of real-time educational changes causes students to feel **dissatisfied** and **unmotivated**, preventing them from reaching their **full educational potential**

Fundamental insights gained from conducting independent research

Student Survey Results

Student Interviews



Academic Research Articles

Common Pains and Themes

Business Knowledge

Student Survey

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Survey Results from surveying 64 current Sydney-based University Students

When asked to complete end-of-term surveys, **41%** of students **forget specific feedback content**

Timeliness

Feedback Gap

91% of surveyees indicated they should be able to provide **anonymous feedback after each class**

36% of students **do not complete** end-of-term surveys, and **48%** engage with **“minimal effort”**

Engagement

Survey Insights

Transparency

Only 9% of students believe that their feedback is seriously taken into consideration

64% of students have **immediate suggestions** and **feedback** after tutorials/lectures

Suggestions

Low Frequency

At least 95% of students believe that having **systems to provide frequent feedback** will **enhance their educational quality**

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Student Interview

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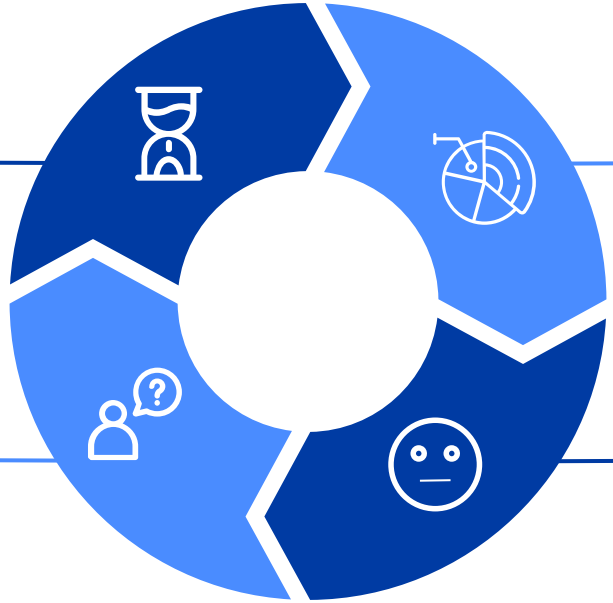
Anonymous interviews with 6 current UNSW students



Poor Timing

"MyExperience surveys at the end of the term feel like **an extra burden**, I'm already swamped with **assignments** and **exam prep**"

Feedback Gap

"I **frequently have suggestions** right after tutorials, but there is **no anonymous** way to provide it each week"

Motivation

"I'd be motivated to give feedback if I knew it would **make an observable difference** and **not just for future students**"

Unengaging

"MyExperience surveys are **dull** and just **boring** to complete, i'm **not even being rewarded** for my time"

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Academic Research Insights

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Student Disconnection

Students often feel **disconnected** when unable to provide **immediate feedback** through **official systems** *(Amicis, 2022)*

Survey Frequency

End-of-term surveys can cause **student disengagement** and **negatively impact academic performance** *(Gratani et al., 2024)*

Actionable Insights

A 2021 study indicated that being able to provide **frequent feedback positively impacted 80% of students** *(Gratani et al., 2024)*

Transparent Changes

Observable feedback-based changes **substantially boosts** student **engagement** and **satisfaction** *(Watson, 2020)*

Educational Impact

Impactful and **timely** feedback systems **associate higher educational satisfaction rates** *(Freire et al., 2020)*

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Common Pains & Themes

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Delayed Feedback

Students do not benefit from providing feedback via end-of-term surveys

Universities struggle to make **real-time changes** based on current system design

Low Participation

The **timing of surveys** and **lack of transparency** cause students to **minimally engage** with surveys

Universities struggle to **incentivize students** to provide quality feedback

Lack of Actionable Data

Students feel that their **feedback isn't valued** to implement meaningful change

Universities struggle to gain **actionable insights** from surveys to drive **educational improvements**

Infrequent Surveys

Students are only provided with **one opportunity per term** to systematically provide feedback

Universities struggle to facilitate educational improvements based on **infrequent feedback collection**

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Evolution of understanding the problem

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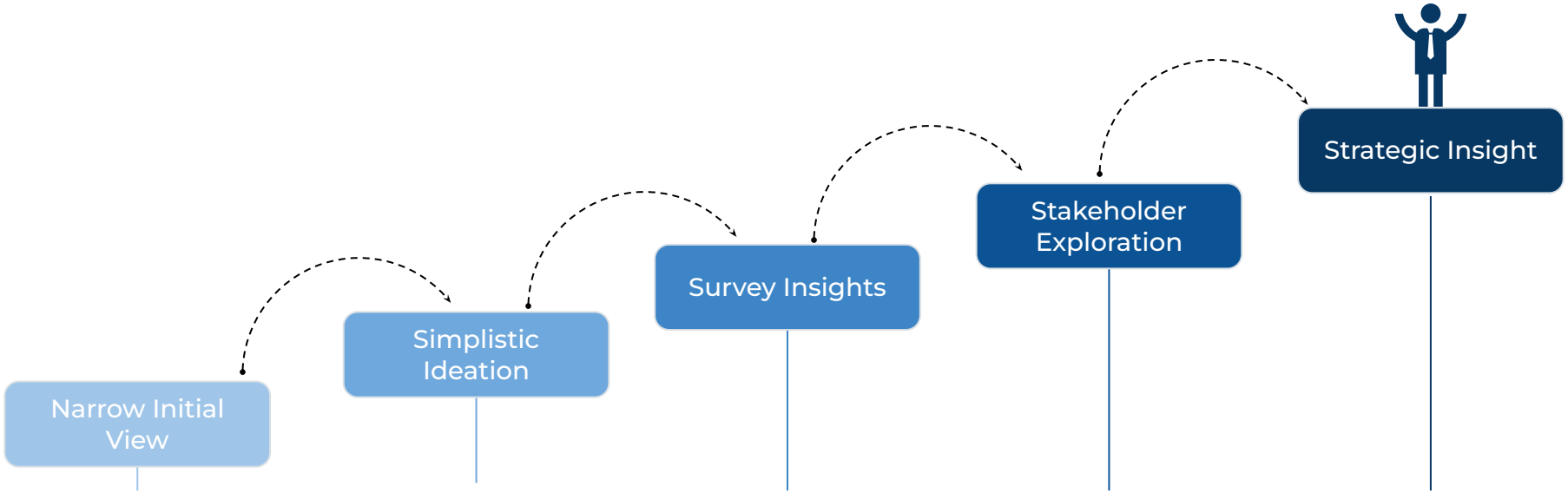


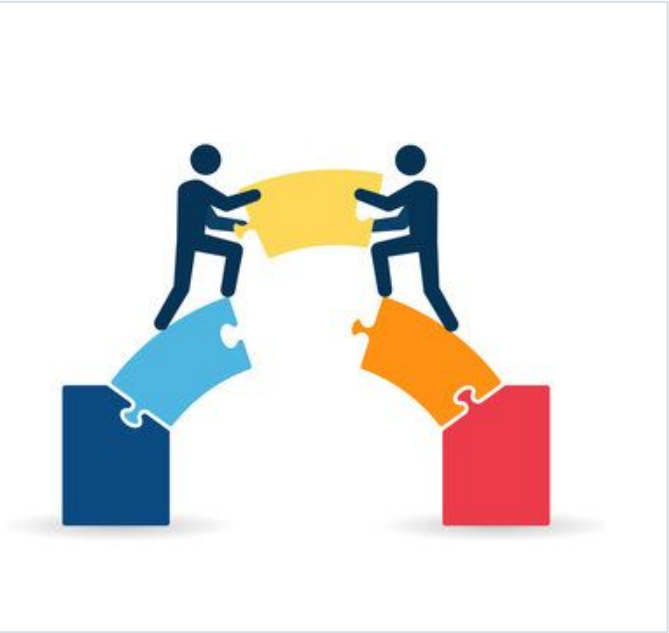
Initially, we perceived this problem to be **UNSW-specific**, not realizing how **widespread** and **global** this issue is.

We believed that **student-based incentives** could remedy the problem, not considering **cost** and **ethical challenges**.

Student surveys revealed **common frustrations** such as lack of transparency, **identifying themes separate** to **poor survey timing**.

Students are not the only problem owners as **universities** and **teaching teams** are **equally involved** and **impacted**.

Problem requires a **strategic**, **multi-stakeholder solution** that promotes **frequent feedback systems** for students, providing **actionable insights** for universities.



How Might we Statement

How might we **bridge the gap** between **students' real-time feedback needs** and **educators ability** to facilitate **effective** and **timely educational improvements**, by designing a **gamified AI-powered feedback system**, providing continuous, **actionable insights** whilst maintaining student **motivation** and **engagement**.

Problem Solving

Research Approach to designing solution (1)

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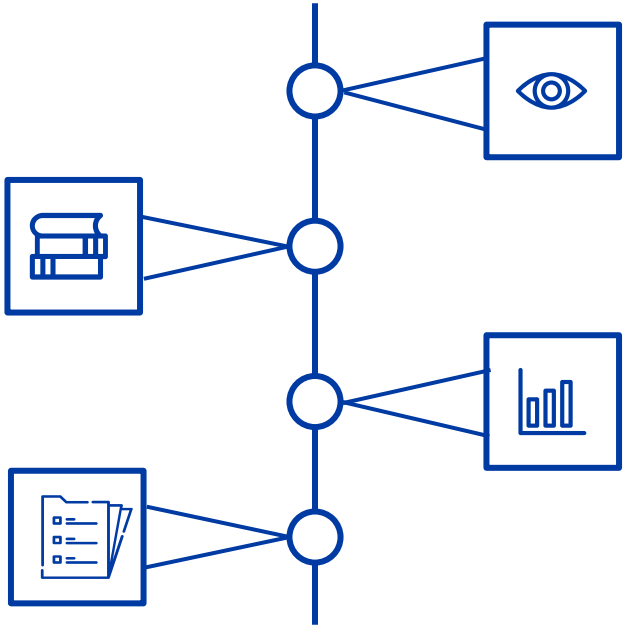
Conceptualization & Ideation

- Facilitated **brainstorming sessions** to identify constraints
- We utilised the **SCAMPER technique** to refine and identify alternative approaches in ideation workshops
- Applied **design thinking** approaches empathise with **users**

Market & Literature Research

- Performed **competitor analysis** to analyse their features, UI, & UE
- We evaluated the **current & emerging technology trends** that could be integrated into our solution **(AI, blockchain, & IoT)**
- Researched **academic articles** on survey trends, student engagement, and feedback methods
- Utilised university reports and documents to assess the importance of **timely feedback data**



Needs Assessment & Stakeholder Analysis

- Identified **pains, gains, and jobs** of stakeholders
- Collected **68 responses** from students across **multiple Australian universities** using questionnaire **surveys**
- Hosted **in-depth interviews** with 5 **UNSW students** (focus groups) to analyse diverse perspectives
- Created a **problem statement**

Data Collection

- Identified **design flaws** and discussed **usability improvements**
- Validated the solution concept with **expert insights**
- Identified **key factors** previously overlooked in the design process, particularly regarding **user engagement** and **survey completion barrier**s

Problem Solving

Research Approach to designing solution (2)

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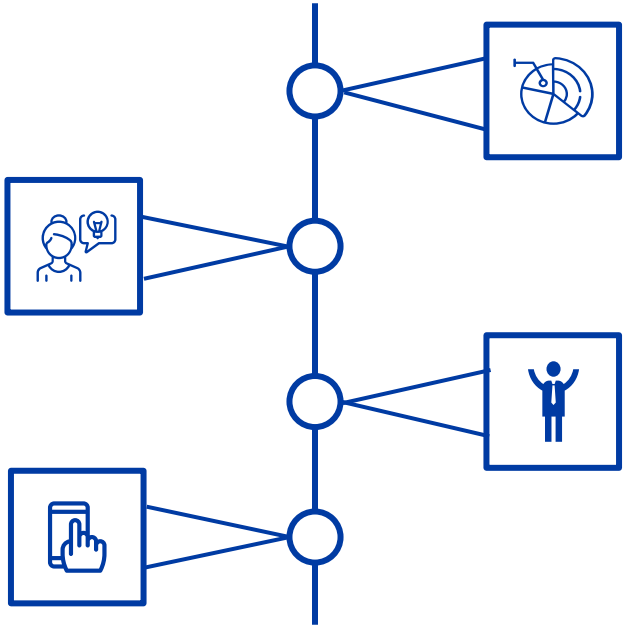
Stakeholder Consultation

- Engaged with the **relevant stakeholders** to gain **insights** and **recommendations**
- Identified **areas for improvement** related to the **feasibility** of the solution
- Performed academic research to i**dentify mitigations for risks**

Testing

- Performed **comprehensive user acceptance testing (UAT)** to confirm that the solution meets its **functional** and **business requirements**
- Performed **final usability testing** in **iterative focus group** workshops



Prototyping & Feasibility Analysis

- Developed **wireframes** to illustrate the **key interfaces** and **user flows**
- Created a **mid** to **high-fidelity** prototype to mimic the the final product
- Conducted usability testing sessions with university students to **observe** and **identify usability issues** and **areas for improvement**

Iterative Development

- Utilised an **agile development cycle** to facilitate **rapid prototyping, testing, feedback,** and **iteration**
- Incorporated **user** and **stakeholder feedback** into final refinements

Problem Solving

Aha Moments during design process

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Initial Thoughts

Perceived MyExperience Survey as the only way to provide feedback. In week 2, a lecture involving a cumbersome attendance-tracking process highlighted the need for a more Immediate Feedback mechanism to allow for a timely adjustment during the term

Surveys & Interviews

Surprisingly, the results revealed that many students across universities share frustration with end-of-term surveys. With key concerns including the inability to provide or receive timely feedback, feeling unheard, and viewing the process tedious and only benefiting future students rather than themselves

Week 7 Incubator Session

Industry experts encouraged the idea to focus on gamification as a core feature. While an EdTech Industry experted flagged 3 critical vulnerabilities that sharpened our solution:

1. Privacy Concern: Incentivising students with rewards requires collecting personal data, which may discourage honest feedback due to privacy concerns. To address this, we decided our platform would collect data, analyse the data and anonymize, then sending the data towards the university, preserving student privacy.
2. Incentive Abuse Risk: Incentive abuse was never been considered, this point out from the expert provided insights on rewards could be extremely risky, as students might prioritise quantity over quality of their feedback. To address this, a Speed trap is introduced to prevent students going too fast for qualitative responses, while integrating AI to detect and reject incomplete or irrelevant submission, ensuring rewards are only given towards meaningful input
3. Integration: The assumption that the platform would seamlessly integrate with all learning management systems, Moodle for example, needs to be re-evaluated. The experts highlighted the importance of verifying compatibility rather than making assumptions, prompting to a shift in focus utilising API's to ensure seamless integration with all platforms among different universities.

Week 2 Incubator

Discovered UNSW's key challenges in achieving a 80% participation rate in student surveys. Many student responseare often incomplete and filled with slang, significantly hinders the university's ability to gather useful, actionable insights for improvement

Research insights

Research from both academic and industry sources confirms that poor survey engagement and low-quality responses are global challenges to universities. While finding that integrating tangible incentives is the current best practice t0 boost participation and quality of the response (Chevalier, Dolton & Luhrmann 2018)

Problem Solving

Incubator Feedback (1)

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01

Problem Scope

Feedback regarding our targeted problem prior to initial ideation

How do you view the **effectiveness** of the **current feedback system?** Does it adequately serve the needs of both students and educators?

What **strategies** and/or **features** would encourage you to take a more **active role** in the feedback process?

What kinds of **incentives** would motivate you to consistently provide honest feedback?

How crucial is it for you to **witness immediate educational improvements** stemming from your feedback? What changes would you prioritize?

What are your views on **incorporating academic rewards** into the feedback system? How should these rewards be structured to ensure fairness and effectiveness?

How can we create the feedback process to be **engaging** and **meaningful**, rather than **"just another task to check off?"**.

When would be the **most suitable time** for you to complete these surveys to ensure that your feedback is thoughtful and valuable?

02

Initial POV Feedback

Initial feedback pertaining towards our first POV solution

How can we make **data presentation** simpler to avoid overwhelming teaching staff with raw data?

What features would you like to see included in **AI-driven recommendations** for processing feedback?

What measures should we put in place to **protect academics** from **inappropriate comments** in feedback?

How effective do you believe **linking myBComm points** to the myExperience feedback system would be?

What strategies or tools would you suggest for **automating the creation of survey content** to streamline the process?

What methods or tools should we utilize to analyze feedback data for **actionable insights?**

How **frequently** would you prefer to receive **updates** regarding adjustments made to your course based on feedback?

Problem Solving

Incubator Feedback (2)

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03

Risk Management

What are the risks associated with our ideated solution?

How can we **protect student data** considering the extensive collection involved in the feedback system?

How can we **facilitate complete student confidentiality** through our solution, ensuring constant **anonymity**.

What important factors should UNSW consider when working with **external companies** for providing **professional certification validation**?

How can we adjust the point-based reward system to effectively **motivate** students whilst **maintaining financial sustainability** for UNSW?

Which **server hosting option** (AWS, S3, EC2) do you think would provide the best combination of **reliability, scalability, and cost-effectiveness** for our feedback system?

What measures should we take to ensure our feedback system adheres to 'My Experience' **survey policies** and **complies** with **UNSW's data protection regulations**?

04

Stakeholder Feedback

Comprehensive feedback from W7 stakeholder groups

What specific **time-saving features** do you find most beneficial in the proposed feedback system?

How should we structure the feedback system to **effectively ensure** and **maintain student anonymity?**

Can you **identify any jargon in the current system explanations**, and how can we simplify this language for all users?

What key considerations are essential for successfully integrating our feedback system into other **Learning Management Systems (LMS)**?

What **format** and **structure of insights** would be most actionable and easy for academics to implement quickly?

Implement a **waiting period for gamified questions**, to reduce the rate of ingenuine responses.

How should points be allocated within the incentive system to ensure **fairness** and **motivation** while **maintaining academic integrity?**

Problem Solving

Changes made from feedbacks (1)

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Design and User Experience	Implemented a consistent purple and white color design scheme to evoke emotions associated with **tranquility** and **neutrality**, driving superior user experience by **excluding "assessment-like" platform designs.**
Incentives for Participation	Students can easily **earn points by completing surveys,** and redeem them for exclusive discounts off **academic resources** (professional certifications) and/or **on-campus food-and-beverage discounts. Clear communication** of feedback-based educational changes to students, promoting **transparency** whilst demonstrating that their feedback is being **incorporated immediately**.
Data Privacy and Management	**AI-based technology** will conduct **comprehensive data analytics,** providing **sophisticated** and **actionable insights** for academic staff, whilst **omitting vague, offensive or insincere responses.** Incomplete responses will also be automatically detected and removed to ensure data integrity.
Solution Hosting Services	**Amazon Web Services (AWS) S3** will be used to host the proposed solution, offering **extremely reliable and scalable cloud storage solutions**. Based on varying amounts of computational demand across UNSW's schools, AWS S3 ensures that the solution is **cost effective** whilst **facilitating superior operational efficiency.**
Enhanced Feedback for Academics	AI-based data analytics **provide academic staff with actionable insights** from student feedback. Resultantly, **clear**, **practical** and **impactful recommendations** can be leveraged to facilitate meaningful educational changes. Furthermore, AI will create **content-based survey questions** based on specific course material, **reducing academics manual workloads** whilst enhancing the relevance of the feedback

Problem Solving

Changes made from feedbacks (2)

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Frequency of survey collection	Students are provided with the opportunity to complete surveys after each respective tutorial, workshop and/or lecture via Moodle. However, it is the **academic staffs volition** on **how** and **when** they wish to **implement educational changes** stemming from this feedback. This can be done in periods such as flex-week to ensure timely educational adjustments..
Leveraging current AI models	Utilising current AI-Models such as **"SAS Viya"**, as a comprehensive data analytics AI-model allows for superior analysis to occur, ultimately **improving the quality of insights** gained from student feedback. Furthermore, this **reduces** the **costs** and **risks** associated with in-house AI development, providing **scalability** whilst **maximising processing efficiency**.
Ensuring cross-platform integration	To ensure that the solution is compatible with a range of Learning Management Systems (LMS) across various tertiary education institutions, it is **crucial to incorporate the AWS API.** Based on hosting the solution through AWS S3, the AWS API will efficiently facilitate the **functionality** and **reliability** of our solution through different LMS's, ultimately **enhancing the user experience**.
Investigating Associated Costs	Associated costs revolve around **front/back-end development**, ensuring reliable integration with UNSW's Moodle system. If utilising SAS Viya as the selected AI-analytics model, there will be no direct development costs associated. However, depending on the computational demand, pricing starts at **$10,000 annually** for extensive computational resources. There will be **costs ranging from $50,000 - $150,000** pertaining towards **testing, training, maintenance and compliance**, ensuring that the system is fully functional whilst providing extensive training to academic staff and student users.

Problem Solving

Design Key Feature (1)

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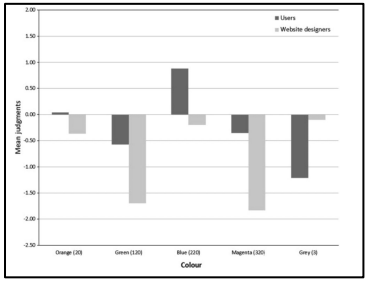
Impact Analysis

Gamified Engagement | **Design** | **Incentives** | **Enhanced Feedback** | **Data Privacy**

"The feedback process is so long and boring. I just want something quick and easy to fill out." - Group Feedback Survey

This finding highlights the need for a quick and engaging survey format which is crucial to **foster user interaction and commitment to a platform**. By integrating game-like elements, users experience a more intuitive interface that naturally guides interaction, **making complex tasks more accessible and enjoyable**. Consequently, this approach leads to increased user retention as satisfied and engaged users are more likely to return and continue using the service, affirming the strategic value of gamification in user experience design



"**Website colours** are associated with a specific physical layout, they can **affect users' behaviours** and **cognitive processes**." *(Bonnardel, Piolat and Le Bigot, 2011)*

Magenta receives high praise from both users and web designers, highlighting its strong visual appeal and effectiveness in web design. The preference for magenta among designers **indicates** that it **improves aesthetic quality** and **user interfac**e, which can lead to **greater user interaction** and **satisfaction**. With it's positive reception and the psychological links of magenta to creativity and uniqueness, it stands out as a fantastic choice for platforms aiming to **boost user engagement** and **foster innovation**.

Problem Solving

Design Key Feature (2)

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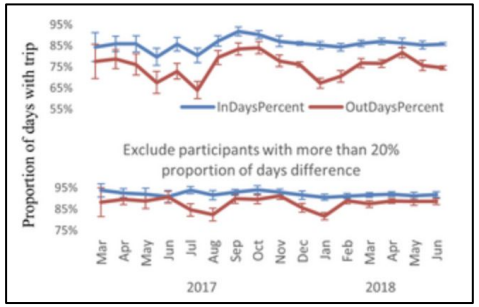
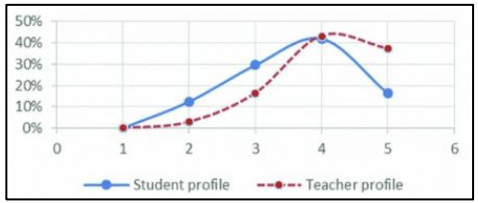
To incorporate incentives in the proposed solution, a study by Institute of Education Sciences found the advantages of obtaining an industry-based-certification (IBC) The credentials validated by external organisations *(Hartman, 2019)*. The study indicated students generally **view IBCs as valuable**, despite perceived benefits differ on whether the students has already obtained an IBC. Most importantly, both students who have and have not earned IBCs **were found to recommend introducing courses incorporating an IBC**. This further highlights the effectiveness of implementing the industry certifications incentive program.



The top panel indicates that there were notably more days with recorded trips during the challenge period. This suggests that some participants might deactivate SMART when there isn't a challenge. This reinforces the assumption that implementing **incentives** to **increase participation** will be **feasible**.



Teachers who provide prompt feedback rate interactivity **highly (4.1)**, while students receiving delayed feedback rate it **lower (3.6)**, reducing interest and engagement. Both agree that **faster feedback, creative activities, and more encouragement** are needed to support student development.

Problem Solving

Solution Overview

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The solution aims to refresh the current 'My Experience' survey system at the University of New South Wales (UNSW) by integrating a gamified, AI-driven weekly feedback mechanism into Moodle. This innovative approach tackles the current shortcomings by promoting regular engagement and simplifying the feedback process

Weekly Feedback Collection

- Integrates a structured weekly survey system directly into Moodle to enhance regular interaction and eliminate the disjointed feel of end-of-term surveys
- Surveys are accessible throughout the week, offering flexibility and reducing time pressure on students

Gamified Survey Interface

- Tinder-inspired mechanics where students swipe left (No) or right (Yes) for quick binary questions, enhancing engagement and simplifying the feedback process.
- Opportunity to participate in an extended survey to earn more points
- Interactive sliders and quiz-style progressions to maintain high engagement levels

Problem Solving

Proposed Solution

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Features	Benefits	Impacts
Timely Feedback Collection	Integrating gamified surveys after each class into Moodle provides students with a consistent method to provide anonymous feedback throughout the teaching period	**Immediate Application:** Educators can use feedbacks immediately to improve student educational experience **Student Engagement:** Increase in student engagement, thus survey participation, enabling students to feel valued with their inputs
Gamification	The gamified features, includes a Tinder-like swiping interface, badges, and tangible rewards, transform the feedback process into a more enjoyable and intuitive experience for students	**Reduce Survey Fatigue:** The engaging and interactive design shortens feedback process avoiding survey fatigue **Student Motivation**: The rewards system encourages students to actively participate in surveys, earning points to redeem academic resources
Actionable Insights for Educators	This AI-driven method automatically categorises feedback provided by students from surveys into common themes, while eliminating all outliers such as slangs or incomplete responses, providing real-time actionable insights that is coherent to educators	**Data-Driven Adjustments:** Educators can swiftly pinpoint issues and successes in their teaching methods and course content, enabling timely improvement based on student feedback
Transparency and Continuous Improvement	Promotes a culture of transparency and and continuous improvement by sharing feedback results with students, along with the actions taken in response. This open communication fosters trust and demonstrates that student inputs drives meaningful change	**Student Trust and Engagement:** When students observe that their feedback results in real changes, they are more inclined to trust the system and feel a greater sense of ownership in their educational experience

Problem Solving

Solution Alignment with EdTech Roadmap

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Alignment with EdTech Roadmap Priorities

Embrace user-centric approach to educational technology

Offers a user friendly and gamified survey interface, integrated into moodle, ensuring feedback is accessible and engaging for both student and educator perspective

By prioritising the needs of users, our design supports a human-centred approach that places students and staff at the forefront, fostering a more connected and responsive learning environment.

Streamline UNSW's educational technology landscape

Integrating weekly survey access through moodle, centralised the feedback process with single platform which reduces the redundant complexity.

The goal of the solution is to simplify student survey experiences and to created a structured survey system that can be used university wide, eliminating the need for redundant platforms.

Utilise data analytics to enhance the student and staff experience

Leveraging advanced analytics tools to process student feedback data in real time, providing educators with actionable insights to make immediate adjustment.

Utilising data visualisation enables a responsive teaching adjustments catering for students needs, enhancing learning experience

Innovate and leverage AI in educational context

Integrate AI within the platform to assist dynamic survey question generation, filter out inappropriate response, and facilitate digital literacy.

Enabling AI into aligns with UNSW's goal of responsible use of AI, allowing both staffs and students access to advanced technology within educational setting.

Engabling governance and sustainable Practices

Our solution leverages seamless integration with educational technology to enhance governance by adhering to a systematic and consistent feedback procedure.

We encourage long-term sustainability by aligning solutions with data integrity, transparency, student privacy, and the elimination of selection bias.

Problem Solving

Testing & Refinement Process

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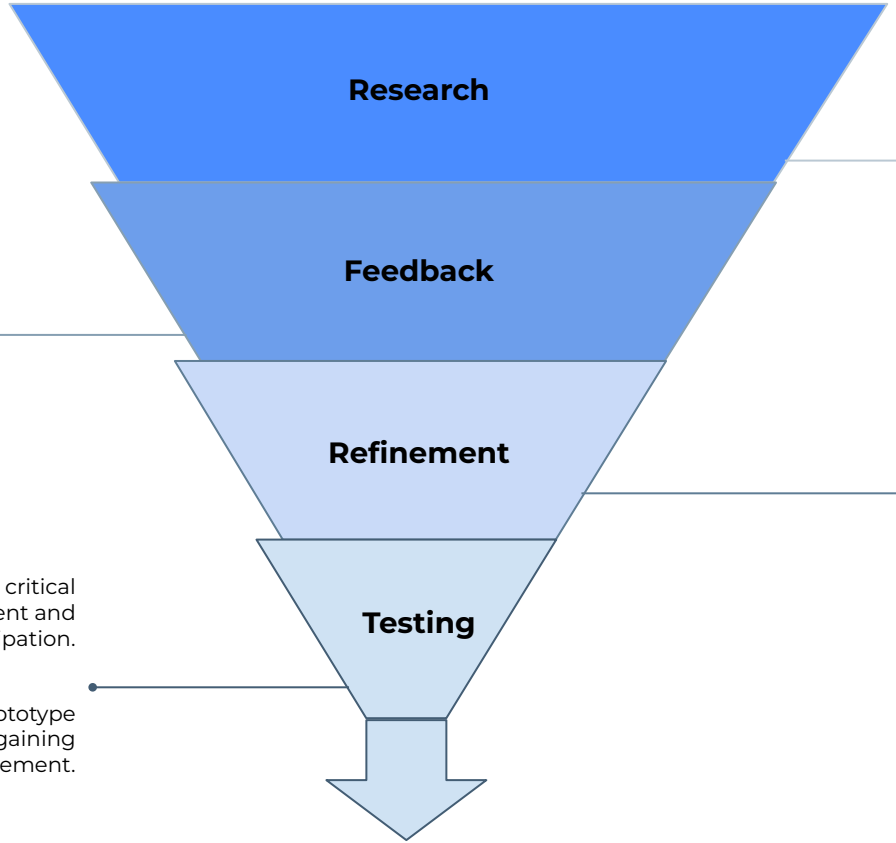

Conducted anonymous surveys with 64 current sydney-based university students and 4 interviews.

Gained comprehensive insights into current pain points revolving around surveys & UNSW's MyExperience platform..

Consistent and iterative feedback from incubator sessions and industry experts.

Leveraged feedback to refine incentives, transparency, design and confidentiality ideation.

Incorporated research and feedback-based adjustments, innovating gamified interactions and AI driven data analytics.

Refined point-based incentive system, offering discounted professional certifications to further drive educational improvements.

Held usability workshops to collect critical data associated with user engagement and participation.

Presented "Elevator Pitch" prototype walkthrough to industry experts, gaining further advice for refinement.

Developed a gamified, time effective and impactful feedback system for students, simultaneously empowering educators with AI-Driven actionable insights, facilitating continuous and impact educational improvements

Problem Solving

Key Features for educators (1)

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Feature Walkthrough

The feature walkthrough focuses on the pains and gains of the personas,(p.28) ensuring our features address their key focus and concerns

Educators

Pains	Features	How the Feature addresses their Pain Points
Limited data from students	**Real-time Insights**	Key feature to address this is providing educators with real-time feedback insights through the empowerment of AI enabling educators richer data to evaluate throughout the term
Difficulty identifying course structure	**AI Analysis**	Furthermore AI analysis will also identify actionable insights to adapting the course structure simplifying the decision making for educators
Determining how to improve content	**Categorical and Actionable Feedback**	Educators are provided with clear feedback that is categorized on how to improve content through suggestions that the system provides improving teaching effectiveness

Problem Solving

Key Features for educators (2)

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Students

Pains	Features	How the Feature addresses their Pain Points	Quotes from Usability Workshop
Tedious survey process	**Gamification**	Introducing the feature of gamified surveys to ensure feedback is engaging and doesn't feel monotonous.This flexible design caters to student availability and reduction in survey fatigue.	"I like the swipe feature, which makes me curious to see the next questions that come up." **Mikail Hussein (UNSW PostGrad Student)**
End of Term timing	**Weekly Feedback Routine**	Having weekly feedback options spreads the load of end of term surveys and allows for their feedback to be incorporated, enabling students to observe change and benefit from ongoing improvements.	"It's so much better sharing my thoughts weekly instead of trying to remember everything at the end of term." **Shane Ali (MaqU Student)**
Lack of Motivation	**Tangible Incentives**	Points & Reward system incentives students to actively participate, benefiting both the university and the students.	"It's nice that my feedback is valued with rewards, makes me motivated to participate more." **Ethan Alvaro (UTS Student)**
Lack of personalization	**Real-time Changes**	Ensuring the feedback is relevant and allows for students to experience real-time improvements.	"I'm excited about the fact the system can update me on when the feedback has actually been integrated. It makes me feel eager to pay attention." **Mark Angelo (UTS Student)**
Outdated survey design	**Gamified Interface Design**	The gamified interface and game like mechanics (e.g. swipe left and right) ensures a visually appealing system that is interactive and increases retention.	"I enjoyed a game like design. It made the process fun and I didn't feel like I was wasting time giving feedback." **Hamza Khan (UNSW Student)**

Problem Solving

Design Process - Use Cases

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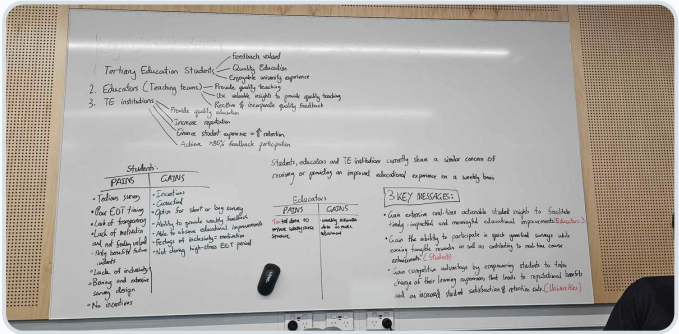
Week 8 Workshop Session



In the Week 8 Workshop, we refined stakeholder pain points, needs, and the three key messages of our solution based on expert feedback. This input guided the team in reconstructing 3 use cases for the solution POV and creating the primary and secondary persona to illustrate target users

1

Use Case 1

A student receives a prompt immediately after each class to start a quick gamified survey. They engage with the survey using interactive elements, such as swiping left or right for response, and are shown with a clear estimated time for completion

2

Use Case 2

Upon completion the quick or extended survey, students have the option to redeem these points or continue with an extended survey to earn additional points. These points can be easily claimed through HeliSolutions website or built-in application

3

Use Case 3

A tutor or lecturer can log into the platform, access a dashboard with analysed survey results based on Year/Term/Week/Course, and upload relevant weekly materials on selected course and key words to dynamically generate questions using AI

Problem Solving

Primary Persona

Student

Brian Lin

19|UNSW
Gender : Male
Year: 2nd Year
Degree: Commerce & Information System

User Story

"As a student, I want to quickly complete weekly surveys and see tangible improvements in my classes based on my feedback so I feel my inputs are valued, while claiming rewards for my contribution"

Scenario & Attitudes

Brain, a second-year student, often feels constantly overwhelmed by his coursework. He's frustrated with his tutor's teaching style, which packs excessive content into slides, making the material difficult to grasp. Although Brain knows he can submit feedback through MyExperience survey at the end of the term, he's discouraged because he realises it mostly benefits future students rather than addressing his immediate needs. With the intense workload and stress typical at the end of each term, Brain feels unmotivated to participate in these surveys, as they don't seem impactful for his current experience

Goals

- Making the most out of university by aiming for HD
- Enjoying every university class as possible
- Improved understanding of course material
- Easily expressing concerns with tutors/lectures on a weekly basis

Needs

- A real-time feedback mechanism
- Concise and engaging survey style
- Evidence of action taken

Pain Points

- Lack of immediate benefit from feedback
- Lack of engaging feedback process and the timeliness of feedback opportunity
- Doubt about feedback being actioned
- Feedbacks only benefiting future students

Problem Solving

Secondary Persona

Tutor

Emma Okuta

29|UNSW
Gender : Female
Degree: INFS3700 & INFS3703 tutor

User Story

"As a tutor, I want to quickly create and publish relevant survey questions from each class, so I can gather actionable feedback from students that will directly improve their experiences"

Scenario & Attitudes

After W3 tutorial, emma sees students disengaged and struggling, feels increasingly stressed due to the lack of real-time feedback. Without timely insights, she struggles to address misunderstandings and improve her teaching strategies to support her students, leading to frustration for both herself and her students

Goals

- Improve teaching quality
- Improve student learning experience
- Recognition of effective teaching
- Increased student engagement in feedback

Needs

- A real-time feedback mechanism
- Specific and actionable insights
- Simplified and categorised feedback responses

Pain Points

- Lack of quality feedback from students
- Difficulty gauging teaching effectiveness
- Pressure to meet diverse student needs

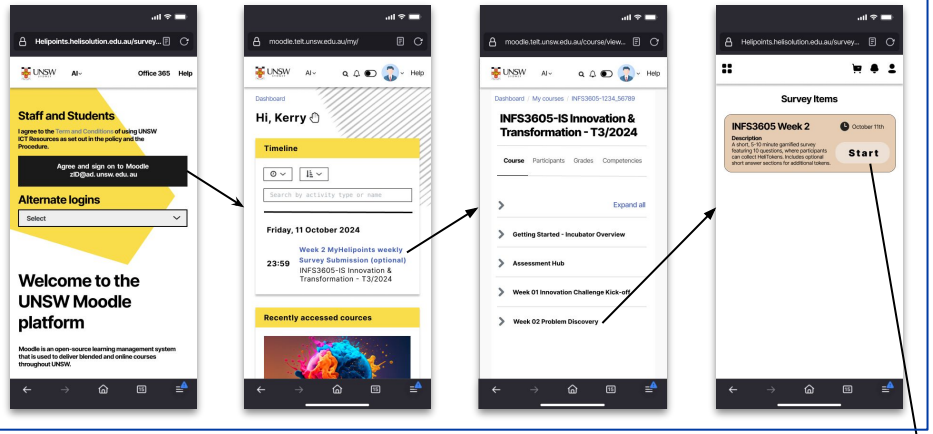
Problem Solving

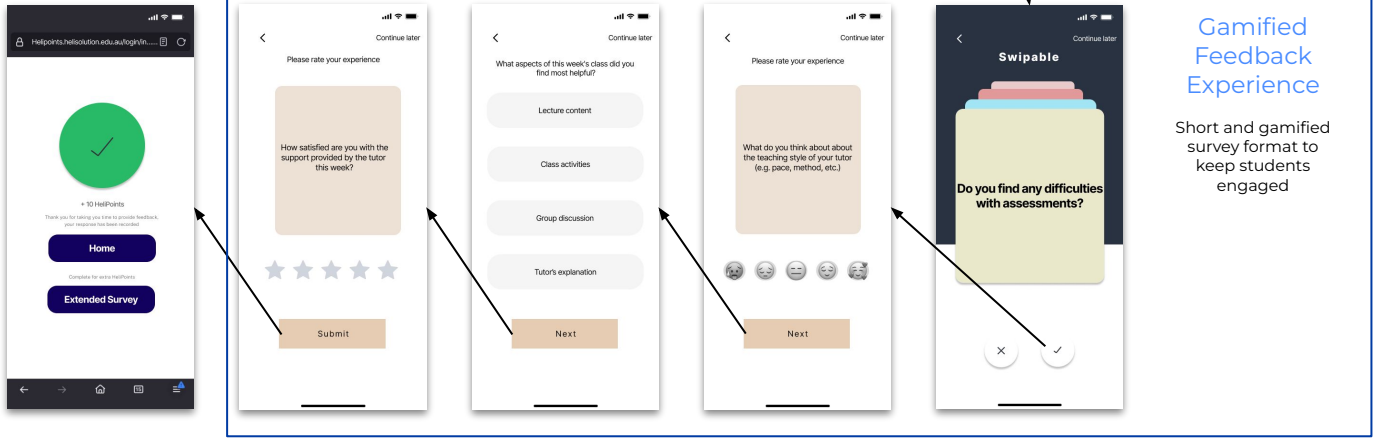
Key Feature Showcase - Wireflow (1)

Refer to appendix for Figma Links

Integrated Feedback System

Centralised platform for students to access survey



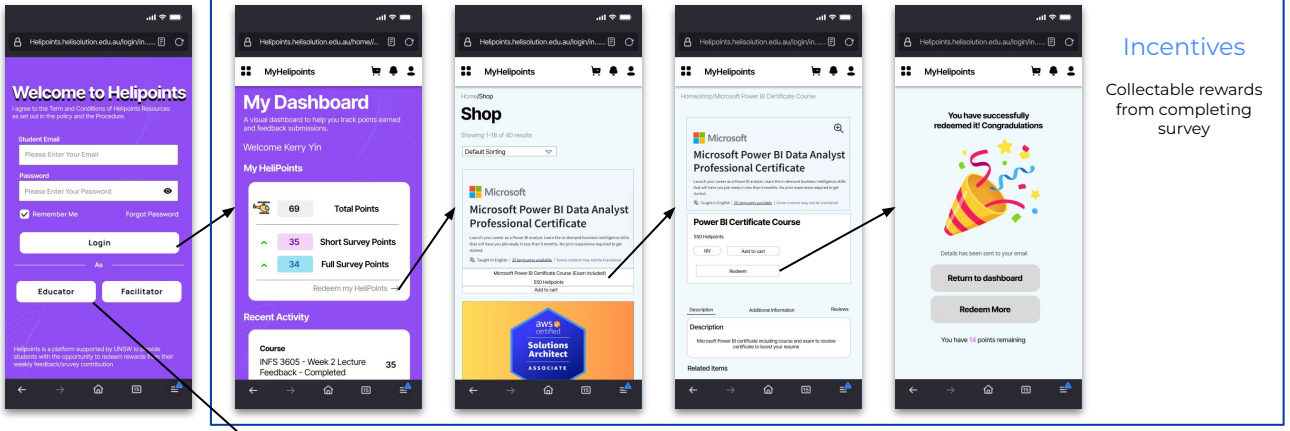


Gamified Feedback Experience

Short and gamified survey format to keep students engaged

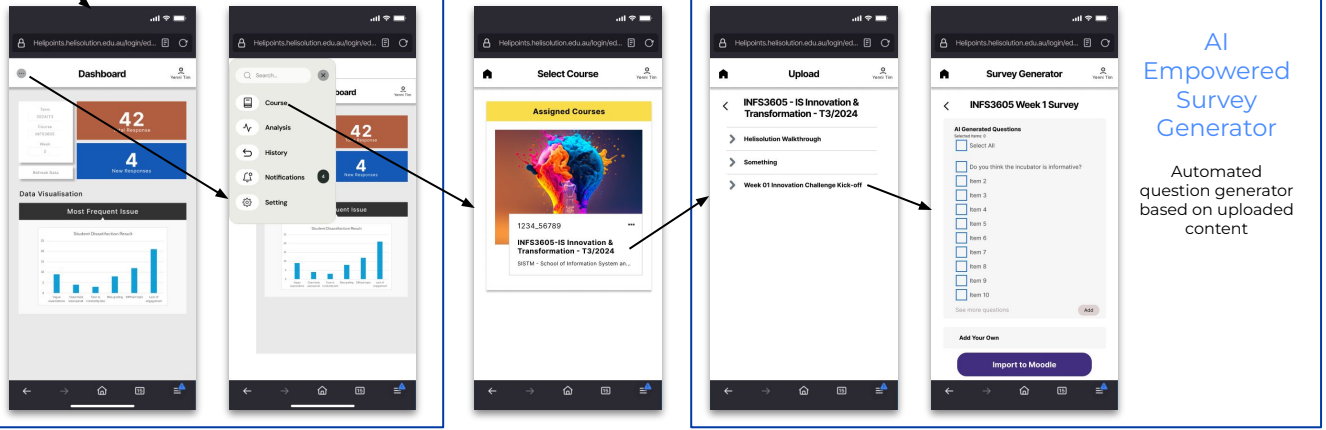
Problem Solving

Key Feature Showcase - Wireflow(2)



Incentives

Collectable rewards from completing survey



Real-Time Survey Dashboard

Interactive and adjustable survey information for educators

AI Empowered Survey Generator

Automated question generator based on uploaded content

Problem Solving

Impacts (1)

HeliSolutions

Enhancing Engagement

Quick and interactive elements in surveys facilitates **more enjoyable feedback process**

Rewards (Certification, courses, discounts on campus shops) driving student motivation to achieve **UNSW's goal of 80%** survey participation

Empowering students to provide g**enuine, high quality** response

Building Trust and Transparency

Quick and interactive elements in surveys facilitates **more enjoyable feedback process**

Showcasing university's **accountability** and mission to **improve student educational quality,** while creating a cycle of continuous improvement on academic stuffs

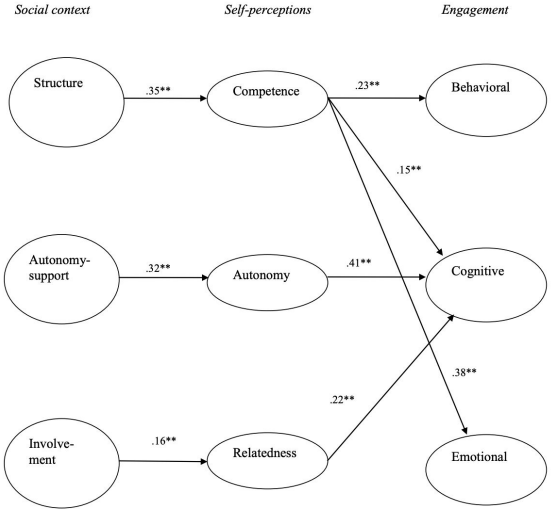
Scalability and broader impact

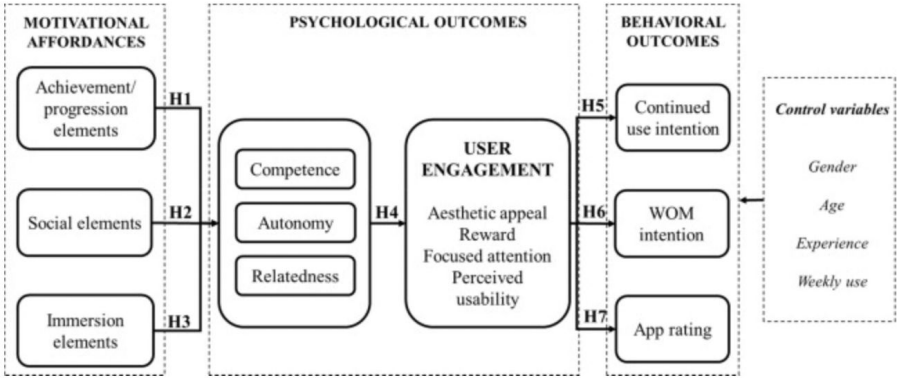
Platform is **easily scalable**, enable other institutions to adopt the solution in ease

Back-end AI streamlines feedback collection process, **encrypting student personal information ensuring confidentiality**

Problem Solving

Impacts (2)





Based on the SSMMD and the gamification framework proposed by *Koivisto and Hamari (2019)*, the model suggests that the motivational affordances present in a gamified system—such as elements focused on achievement and progression, social interaction, and immersion—contribute to psychological outcomes. These outcomes include fulfilling the needs for competence, autonomy, and relatedness, as well as enhancing user engagement and other behavioral results.

This study shows how user engagement with mobile apps positively influence marketing outcomes and highlights the mediating role of user engagement in the connection between interaction with game elements and these outcomes. Specifically, users who are more engaged are likely to have stronger intentions to keep using the gamified mobile app, recommend it to others, speak positively about it, and provide favorable evaluations of the app.

Problem Solving

How incubator session impacted our solution

HeliSolutions

Insights from industry experts in W7 Incubator highlighted 4 key vulnerabilities within the proposed solution

01

Integrated seamlessly with all LMS

The first vulnerability in our solution arises from the need to collect student data for incentives, which could discourage open feedback due to privacy concerns. To address this, we redefined our approach: our platform will act as the primary data collector, analyzing responses and forwarding only anonymized feedback to the university. This ensures student privacy, fostering confidence in providing honest and constructive feedback

02

Risks of reward misuse

The second vulnerability is that incentivizing students could encourage them to prioritize quantity over quality to earn points, potentially increasing costs. To mitigate this, we added a time requirement for completing surveys, encouraging thoughtful responses. Additionally, AI will detect incomplete or irrelevant answers, which will not qualify for rewards

03

Student Confidentiality

The third vulnerability lies within the assumption that the platform will integrate seamlessly with all learning management systems (e.g., Moodle). This needs to be considered as a requirement rather than an assumption

04

Academic POV of the system

The last vulnerability involves ensuring educators can view categorized and analyzed survey data efficiently. From the educator's perspective, accessing structured, actionable insights is crucial. To address this, we applied agile methodology, quickly discussing this requirement during a weekly standup and then developing a prototype focused on the educator's point of view

Business Communication

Intended Audience and Key Takeaways

HeliSolutions

Students

Participate in quick, gamified surveys and get rewarded for your time whilst being empowered to take charge of your educational experience.

Instead of providing feedback during high-stress end of term assessment periods, be rewarded for your time on a weekly basis.

Academic Staff

Gain real-time actionable insights derived from AI-driven analytics, reducing manual data processing and providing data-based educational recommendations.

Leverage integrated AI-models to automatically create impactful surveys for students based on your teaching content.

Tertiary Institutions

Ultimately contributes to strategic organizational goals of providing superior educational experiences to students.

Boosts student satisfaction and retention rates, whilst delivering superior education, contributing to competitive advantage.

Business Communication

How Incubator session shaped our experience

HeliSolutions

“Feedback from incubator sessions helped us transform our communication to be clearer, more engaging, and user-focused.”

Simplified Language for Clarity

Initially, we used technical terms around gamification, AI-driven feedback, and platform integration. However, in Week 7, an industry expert in the Incubator session emphasized the importance of avoiding jargon. Their feedback showed that using simpler language effectively engaged non-technical stakeholders and improved communication

User Centric Approach

Initially, our focus was on system features, but feedback from incubator sessions led us to adopt a user-centered approach. Our emphasis now is direct benefits: real-time course adjustments for students, actionable insights for educators, and alignment with strategic goals for administrators.

Business Communication

How Incubator session shaped our experience - Agile Methodology

HeliSolutions

Feedback Loop Implementation

The incubator sessions highlighted the value of proactive, ongoing communication with industry stakeholders. They appreciated being included throughout the development process and having their feedback promptly addressed, which fostered a collaborative atmosphere and ensured that our solution stayed aligned with real-world expectations and needs

Application

- Established a proactive feedback loop with industry experts in each incubator session.
- Used the given 5-minute intervals effectively to communicate solutions and identify challenges
- Ensured all stakeholder feedback was addressed promptly, fostering an environment of collaboration and trust

Adopting Agile Methodology

To communicate our ideas clearly and respond effectively to feedback, we implemented an agile approach within our team. This methodology centers on daily stand-ups and weekly iterations to keep everyone aligned and adapt our project continuously

Application

- Scrum master will facilitated weekly stand-ups and iteration sessions, ensuring the team stayed on track while incorporating all feedbacks
- Product owner collects and prioritises given feedbacks to be discussed during weekly iteration sessions
- Business analysts test and refine new features in cycles, adapting the solution to address both technical and alignment with EdTech Roadmap

Understanding Audience Needs

The incubator sessions highlighted the importance of gathering real end-user insights from individuals who had previously experienced challenges in our problem space. This prompted us to shift our approach, actively engaging peers, communicating our ideas in getting feedbacks to validate and refine our ideas.

Application

- Interview with peers from problem-discovery phase, and solution designing phase
- Created user personas to represent real end-users, integrating the unique challenges and expectations shared by participants during discussions
- Embedded peer input into weekly iteration sessions, ensuring each feature development stage reflected real user feedback and staying aligned with evolving user expectations

HeliSolutions

References

- Amicis, A.D. (2022) The importance of just-in-time student feedback through continuous assessment. Available at: https://www.turnitin.com.au/blog/the-importance-of-just-in-time-student-feedback-through-continuous-assessment (Accessed: 15 October 2024).
- Australia, U., 2022. Higher education facts and figures. Universities Australia.
- Barboza, E.J.S. and da Silva, M.T. (2016). The Importance of Timely Feedback to Interactivity in Online Education. IFIP Advances in Information and Communication Technology, 488, pp.307–314. doi:https://doi.org/10.1007/978-3-319-51133-7_37.
- Bitrián, P., Buil, I. and Catalán, S., 2021. Enhancing user engagement: The role of gamification in mobile apps. Journal of Business Research, 132, pp.170-185.
- Bonnardel, N., Piolat, A. and Le Bigot, L., 2011. The impact of colour on Website appeal and users' cognitive processes. Displays, 32(2), pp.69-80.
- Chaudhuri, A. and Adhya, D., 2019. A study to assess the effects of continuous weekly assessment along with providing feedback on the final performance in examination of first MBBS students in physiology. International Journal of Research and Review, 6(1), pp.176-182.
- Dale, L.P., White, L., Mitchell, M. and Faulkner, G., 2019. Smartphone app uses loyalty point incentives and push notifications to encourage influenza vaccine uptake. Vaccine, 37(32), pp.4594-4600.
- Dupont, S., Galand, B., Nils, F. and Hospel, V., 2014. Social context, self-perceptions and student engagement: A SEM investigation of the self-system model of motivational development (SSMMD).
- Education & Student Experience - UNSW Sydney. (2021). Student satisfaction with teaching at an all-time high despite the impact of lockdown. [online] Available at: https://www.education.unsw.edu.au/news-events/news/student-satisfaction-with-teaching-all-time-high-despite-impact-lockdown.
- Freire, C. et al. (2020) 'Coping strategies and self-efficacy in university students: A person-centered approach', Frontiers in Psychology, 11. doi:10.3389/fpsyg.2020.00841.
- Flodén, J., 2017. The impact of student feedback on teaching in higher education. Assessment & Evaluation in Higher Education, 42(7), pp.1054-1068.
- Gratani, F. et al. (2024) 'Personalized feedback in university contexts: Exploring the potential of ai-based techniques', Communications in Computer and Information Science, pp. 440–454. doi:10.1007/978-3-031-67351-1_30.
- Hartman, K.B. and Andzulis, J., 2019. Industry-Based Certificates: Student Perceptions of Benefits. Research in Higher Education Journal, 36.
- Huang, B., Thomas, T., Groenewolt, B., Claasen, Y. and van Berkum, E., 2021. Effectiveness of incentives offered by mobile phone app to encourage cycling: A long-term study. IET Intelligent Transport Systems, 15(3), pp.406-422.
- Maisonmeta.io. (2023). MIT Study Shows 50% Productivity gain due to AI – Maison Meta | Worldwide First Generative AI Agency | AI Fashion. [online] Available at: https://maisonmeta.io/mit-study-shows-50-productivity-gain-due-to-ai/.
- Pereira, D., Flores, M.A., Simão, A.M.V. and Barros, A., 2016. Effectiveness and relevance of feedback in Higher Education: A study of undergraduate students. Studies in Educational Evaluation, 49, pp.7-14.
- Watson, A. (2020) 'sooner or later': What's the best timing for feedback?, Education Conferences. Available at: https://www.learningandthebrain.com/blog/sooner-or-later-whats-the-best-timing-for-feedback/ (Accessed: 15 October 2024).
- Widagdo, P., Wibawanto, W. and Sugiarto, E., 2024. The Impact of Gamification in User Interfaces on User Experience and Retention: An Empirical Study. Catharsis, 13(1), pp.1-8.

Appendix

Appendix 1 - Figma Dev Model Link:

https://www.figma.com/design/dP6SQf7jyaGigyZpFhQec4/INFS3605-Prototype?node-id=0-1&m=dev&t=pItFGoFheVf68LfT-1

Use the above link to see all frames developed.

Appendix 2 - Figma Prototype Link:
https://www.figma.com/proto/dP6SQf7jyaGigyZpFhQec4/INFS3605-Prototype?node-id=6-3&t=pItFGoFheVf68LfT-1

Note that by selecting any page from appendix 1, pressing play on the top right of the screen enables interaction with specific page of the prototype.