

Youth in Action with H365: Exploring perspectives from within the Community - Youths from SUTD

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Health
Promotion
Board

Health Promotion Board (HPB), established under Ministry of Health, Singapore, leads the health education, promotion, and prevention programmes to empower Singaporeans to attain optimal health, increasing the quality and years of healthy life.



1 PROBLEM

Healthy365 (H365) is a mobile app that motivates users to maintain a healthy and active lifestyle through gamification and rewards. It also serves as a tool for HPB to monitor Singaporeans' health. However, **it is either unknown or unfavoured by Singaporean youth**, with only a small percentage of registered users remaining active on the app.

01. Engage How can we encourage youths to join the app?

02. Retain How can we ensure active users stay on the app?

03. Revive How can we re-activate inactive users?

2 METHODOLOGY

1 CLIENT SURVEY

Read through HPB's survey responses to **craft our own survey questions** about the usage of H365.

2 SUTD SURVEY

Survey on awareness of H365, user satisfaction, and lifestyle habits **targeted to youths** aged between 17 and 24 (inclusive), shared to SUTD group chats.

3 DATA PROCESSING AND ANALYSIS

Create **binary encoding** for open-ended responses using Python. Analyse trends and relationships by Tableau **visualisations**.

4 SOLUTIONS

Artificial Neural Networks prediction model in R, trained with client data with **85% accuracy** and tested with SUTD data. **Interface prototype** for improved H365 app using Python and Figma.

3 SURVEY DEMOGRAPHIC

In our survey, we defined the following:

- Active users use H365 at least once a month.
- Inactive users have downloaded H365 before but no longer use it.
- Non-users have never heard of / downloaded H365.

	Female	Male
Active users	9	9
Inactive users	6	4
Non-users	19	9

Fig 1a: Client survey demographic

	Female	Male
Active users	6	8
Inactive users	3	6
Non-users	4	18

Fig 1b: SUTD survey demographic

5 SOLUTIONS

5a. GENERAL SOLUTIONS

Greater range of incentives

Fitness related vouchers (e.g. Spotify, Shopee, MyProtein)

Youth-centric events / classes

- Friendly sports matches
- Spin, weightlifting, dance classes
- Virtual classes

Fitness challenges

- Join fitness challenges with friends
- Bonus points if whole group participates and succeeds.

5b. PREDICTION MODEL

Artificial Neural Networks (ANN) model
Predicts if users will stay or leave the app, with 80% accuracy.

Webpage

Collects users opinions about the app, runs it through the model, and predicts if the user will stay or leave.

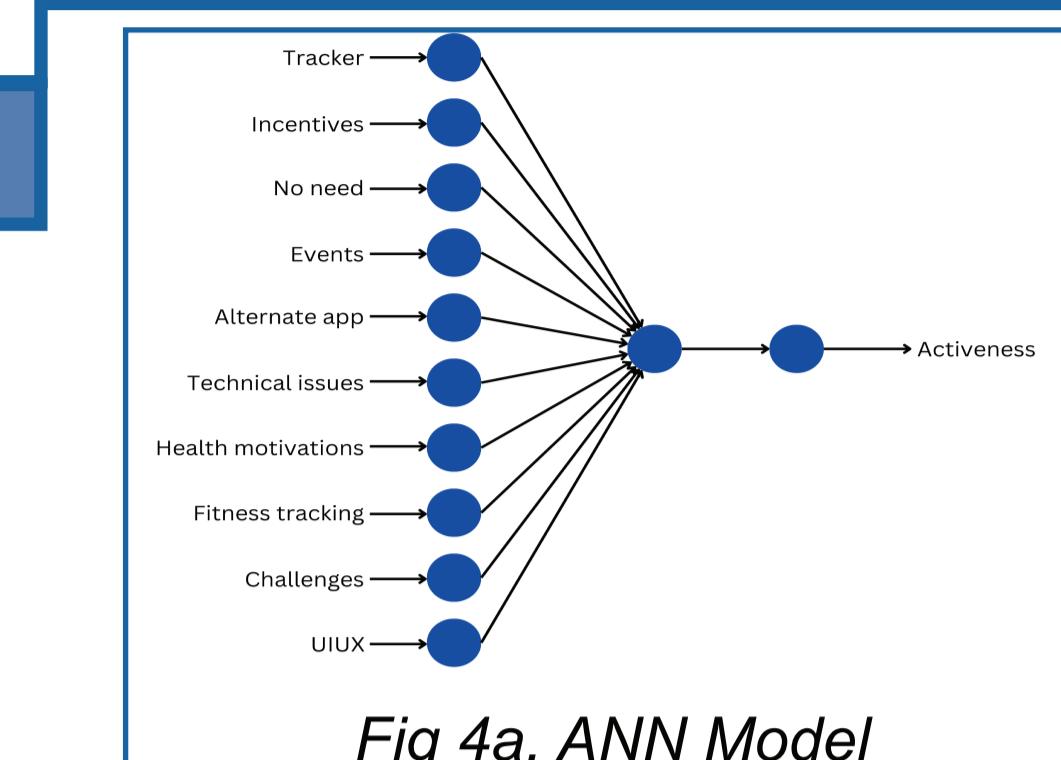


Fig 4a. ANN Model

H365 User experience

Results	[1] "Stay"
Reset	
Q1: I like having the tracker watch	
<input checked="" type="radio"/> Yes	<input type="radio"/> No
Q2: I like the incentives provided by using the H365 app.	
<input checked="" type="radio"/> Yes	<input type="radio"/> No

Fig 4b. Snippet of Webpage

Significance

- Evaluate effectiveness of solutions
- HPB may send out a similar survey to users after implementing certain improvements, gaining insights on user retention.

4 FINDINGS, ANALYSIS

4. ENGAGE

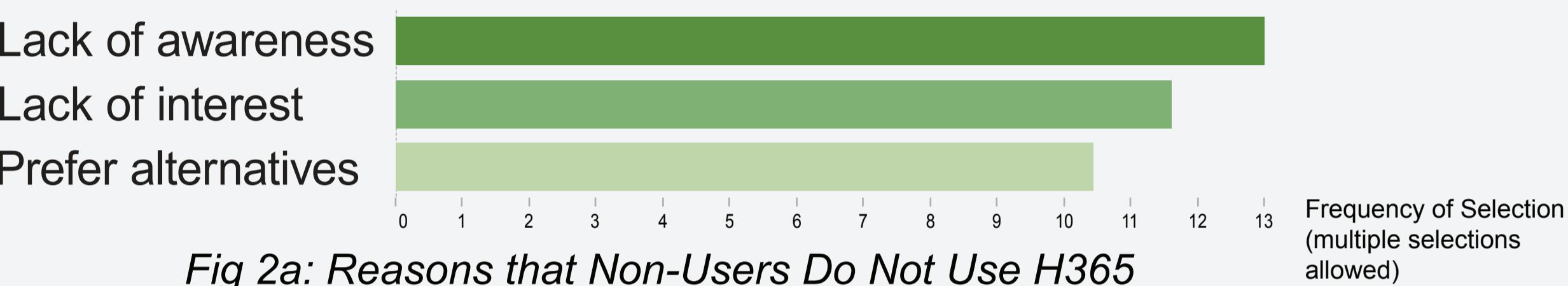


Fig 2a: Reasons that Non-Users Do Not Use H365

Targeting Lack of Awareness

Reference how most current users knew H365 (**friends and family**) as it indicates successful marketing, and we can reuse that strategy.

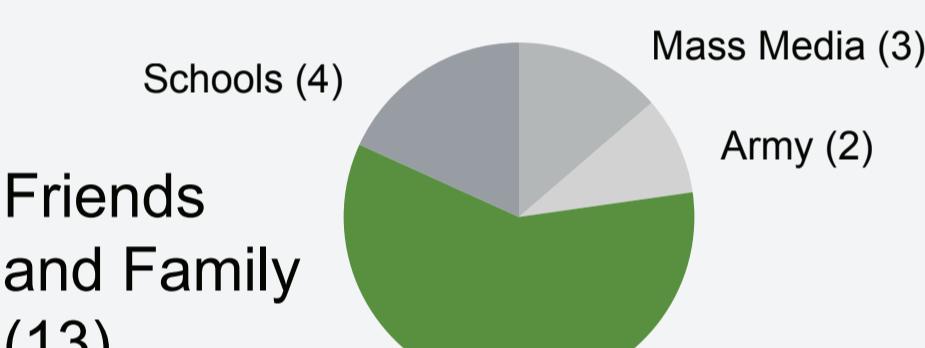


Fig 2b: How did Users Know H365

Targeting Lack of Interest

Wider spread of fitness levels for non-users. Youths who are not physically active do not see the appeal or necessity of H365.

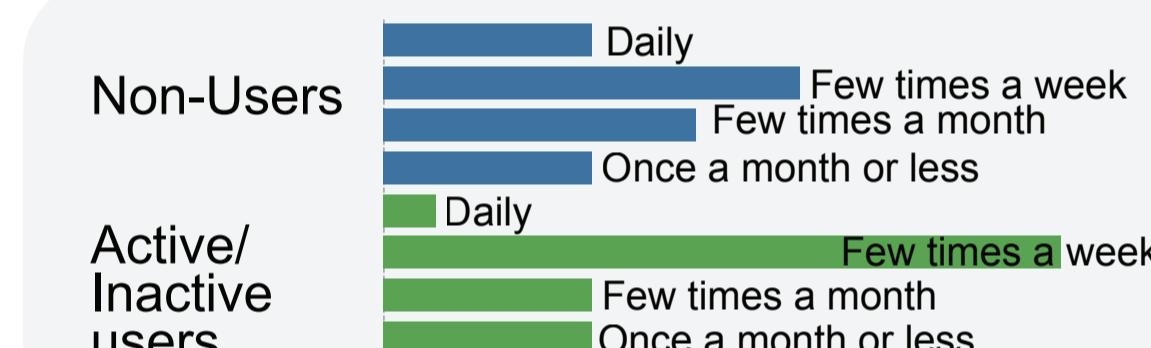


Fig 2c: Exercise Frequency

4b. RETAIN + REVIVE

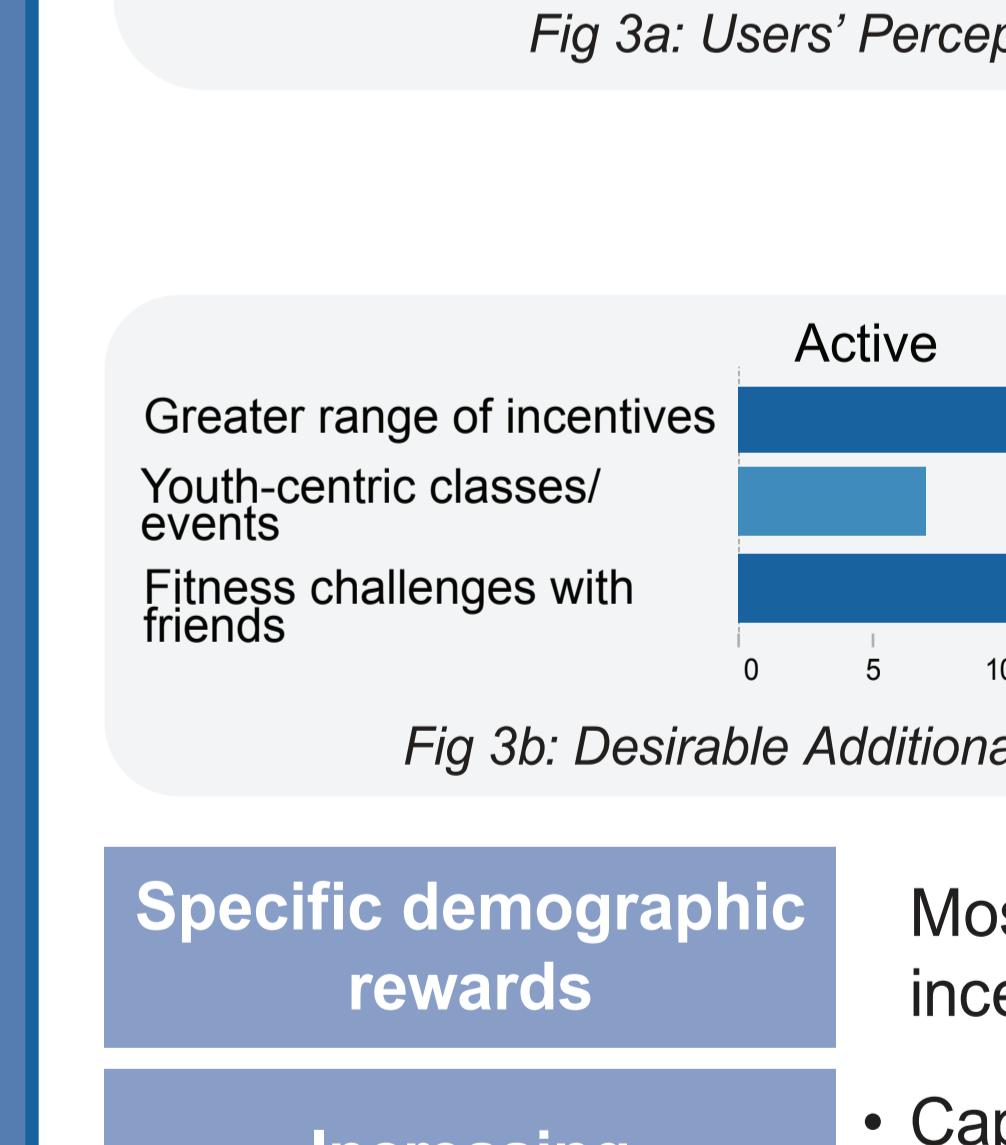


Fig 3a: Users' Perception of Most Important Feature in a Health App

Cause of Low User Retention

Compare all graphs between active and inactive users

Most apparent difference: Tips & Encouragements
App lacks a motivational factor that encourages users to stay, resulting in users leaving the app.

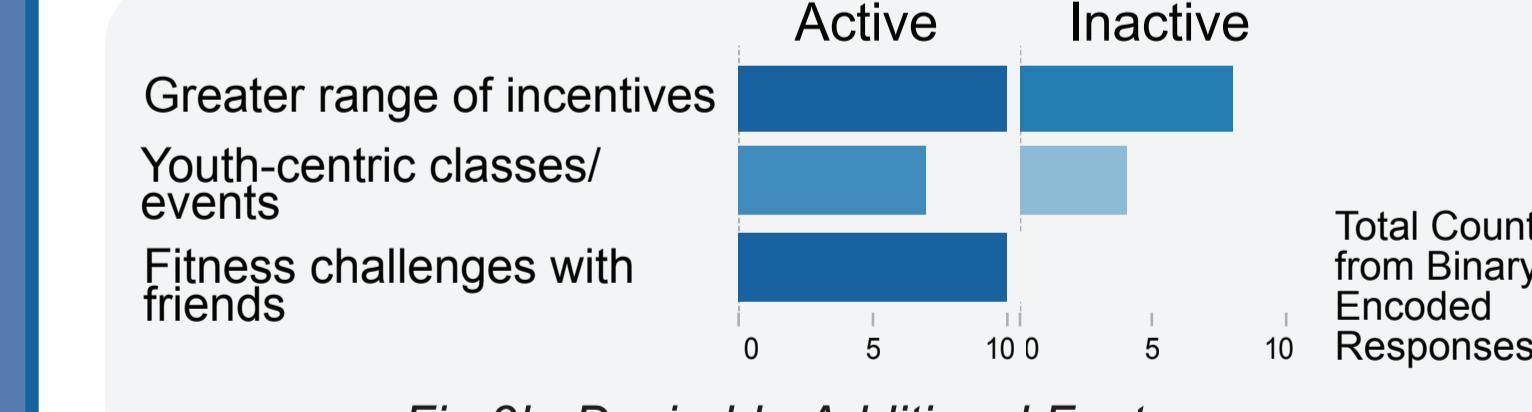


Fig 3b: Desirable Additional Features

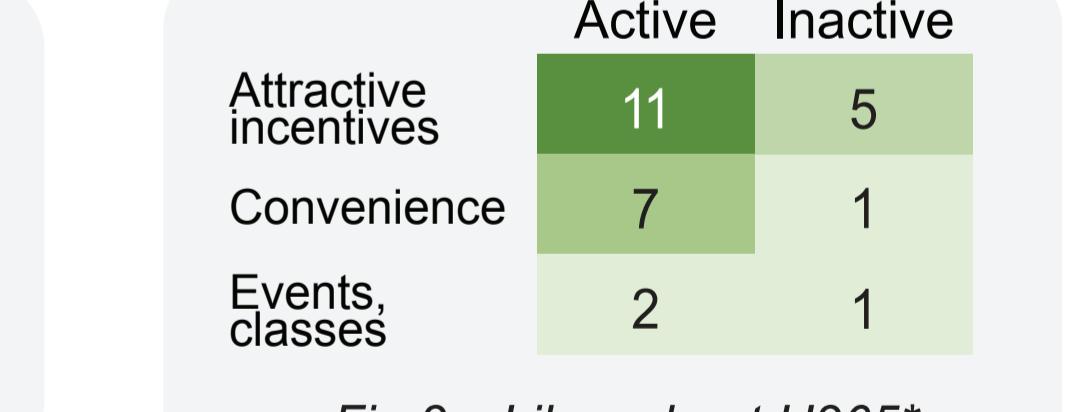


Fig 3c: Likes about H365*

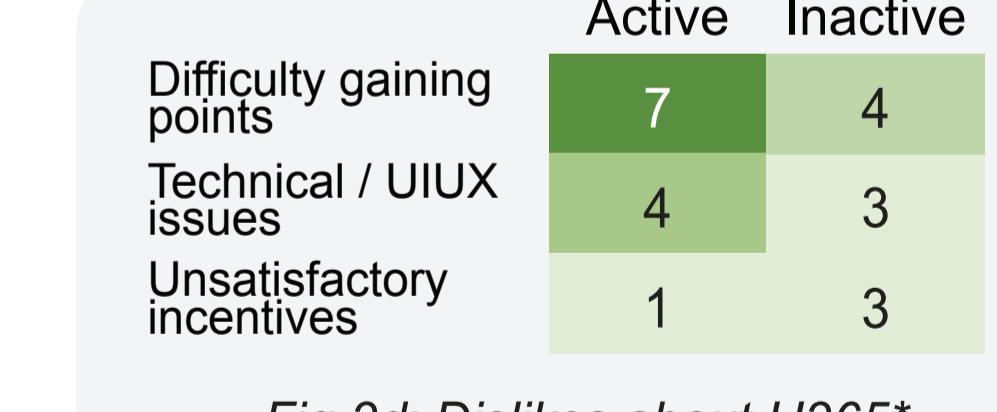


Fig 3d: Dislikes about H365*

Specific demographic rewards

Most popular feature is incentives (Fig 3c) but it is too difficult to obtain them (Fig 3d). Hence, make incentives **easier to obtain for active users and returning users**.

Increasing competitiveness

- Capitalise on **unique selling point of H365 - incentives** (Fig 3c).
- Add a unique **competitive fitness aspect** (Fig 3b), likely to be popular as most users discovered H365 through friends and family (Fig 2b).
- Increase personalization through fitness goal setting to enhance **user experience** (Fig 3a) and **convenience of personal tracking** (Fig 3c).

Customizability

* For Fig 3c and 3d: Numbers represent Frequency of Selection (multiple selections allowed)

6 LIMITATIONS, ASSUMPTIONS

- Too small of **sample size** to reflect the actual youth user demographics of H365.
- **Majority are male respondents**, resulting in overrepresentation of male opinions. However, we found that there is not much difference in opinion between genders for this particular survey and will assume the same for the general youth.
- Limited size of H365's database (28 respondents) used to train the ANN model results in a final model of only 80% accuracy.
- In the ANN model, **equal weightage is assumed among all the factors** if a respondent indicates multiple factors as part of their open-ended response in HPB's / SUTD's survey.

7 CONCLUSION

- Proposed ideas will enhance youths' interest and perception of the app, as well as their user experience.
- With the predictive model, HPB can monitor youth user engagement, expected to be significant and sustained over time, effectively resolving the three goals of this project.