**Initial Discussion**

Date: 2018-04-21

Attendees: Junaid

The focus is on the Home market (Parent subscriptions), rather than the School subscriptions.

Primary business – School subscriptions, school buy licences and then distribute to students

Secondary business – Parent subscriptions, or home market business, e-commence model, parents buy the product. Home business has great potential

Potential reason why home market business is not strong: Adobe Flash - HTML 5.

Monday – Thursday in Whizz, 3 days a week at least

Two types of users: Monthly users, annual users

Cost effective for annual subscription, 150 per year, 20 per month

**Events table** – attempt of taking lessons

(complete lesson table & incomplete lesson tables)

stactDepth: measure of extent of struggling

outcome: pass (move forward), fail (regression), static (will come back after some other topics)

lesson\_type: tutor\_ex (exercies), tutor\_pb (test)

**Subscription table** –

Pupilid – student id

Each row represents one subscription

Lesson consists of exercise and test, exercise contains the teaching session

**Potential predicators:**

Too easy? Too hard? 🡪 Measured by the number of pass or fail

Record of incomplete lessons and complete lessons

Maths age too lower than expectation (real age)? Get offended

**Learning Datasets**

Date: 2018-04-25

Attendees: Chun

Per my request, Chun will revise data tables and provide more data.

More explanations about the lesson history tables.

Two tables: complete and incomplete lesson history

Complete lesson history sample

lesson\_type: there are 3 types 🡪 tutor\_ex, tutor\_pb, replay:

1. Progression mode: tutor\_ex, tutor\_pb
2. Replay mode: replay

outcome: there are 3 outcomes for tutor\_ex 🡪 p (pass), f (fail), s (static)

outcome: there are 2 outcomes for tutor\_pb 🡪 p (pass) , s (static)

|  |  |  |  |
| --- | --- | --- | --- |
| Lesson Type | Description | Potential Outcome | Consequences |
| Exercise | Tutorial lesson is followed by an exercise | Pass (>=70%) | Proceed to the corresponding test if available, or proceed to the next exercise |
| Fail (<30%) | StackDepth is increased by 1;  The student will have to redo the same exercise |
| Static (otherwise) | The student will have to redo the same exercise |
| Paper-Based Test | Test follows the exercise as a way examine the study outcome | Pass | Proceed to the next exercise |
| Static | The student will have to redo the same test |
| Replay | **???** | 0 | N.A. |

StackDepth: initial value is 1, and maximum allowed value is 3, is a rough measure of how the student is struggling on the exercise

exerciseId: in order to increase the topic age (by a quarter), the student has to pass a set of exercises and tests (call it progression set). The exerciseId labels individual exercise/test within the progression set associated with the topic age.

Incomplete lesson history sample



The table contains info for not only incomplete lessons but also complete lessons.

The table records the breaks that students take during a lesson, regardless of if the student eventually completes the lesson (i.e. has an outcome of the exercise or test)

The maximum score for an exercise/test equal the total number of questions assigned in that exercise/test.

Cancellation Policies

Date: 2018-04-26

Attendees: Ray

# Renew and cancellation policy

# check if the date is consistent, for cancellation

# best based on the payment date, rather than the subscription is live

# the subcription will be automatically rolled into next subscription, so cancellation is an active action

# Hanna - refund policy for cancellation

# look at the cancellation rights policy on Whizz education

# compute the number of new joiners

# Ray will give me the spreadsheet of payment information, he said Susan prepared for the data

Weekly Meeting

Date: 2018-04-27

Attendees: Andy, Junaid

Period: Jan 1st, 2014 - present

Get incomplete lesson history as far as it goes back

Defining dependent variables – Cancellations:

Need to take into account “natural cancellation”, where students have no need to continue enrolment, i.e. they’ve already or almost completed the whole curriculum.

Date of birth of the students 🡪 real age

How to define the students who do not cancel? 🡪 who has subscribed for a specific period

Align the date frame of subscribers

Defining Features:

Activity features & Progress features

Subscription level & Subscriber level

**Potential predicators:**

Too easy? Too hard? 🡪 Measured by the number of pass or fail

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Maths age too lower than expectation (real age)? Get offended

Compute the retention rate, month-to-month subscription length change rate to verify the first-order Markov Chain property.

Compute progression before cancellation: final age – initial age assigned by the assessment

Key of lessons: 0500AAx0200

0500 is the math age

AA is the topic ID

X indicates the lesson type

0200 is the exercise ID

Weekly Meeting

Date: 2018-04-30

Attendees: Andy, Junaid

Questions:

1. Activity features & Progress features

Systematic way of defining features?

Literatures? Case Study?

1. Defining the two types of customers
2. Individual level and aggregation level?