

Online High School Learning Research Plan

Study 1: Semi-Structured Interview

Keeping high schoolers engaged during Covid-19 times

Background

In the wake of Covid-19, virtually all high school students around the world have been forced to study from home due to the government-imposed lockdowns. Our team is interested in keeping high schoolers engaged in their studies in a fun way by creating a digital product (desktop or mobile app) to allow them to interact with their peers through educational subject/topic-based chatrooms. Since many high schoolers around the world are not going to school at the moment, our platform aims to be easily accessible online 24 hours a day as well as equipped with subject-based chatrooms to make it easy for the student to find the relevant chatroom they are looking for when studying a particular subject.

Research Goal

Our team wants to learn about how high schoolers use digital products to augment their learning experience at school as well as how they engage with popular chat-based applications. We want to determine what opportunities and needs might exist for new educational chat-based products so that we can use these findings to help us shape the direction we take in developing our product.

Research Questions

- [Needs] What is essential for online augmented learning for high schoolers?
 - What are high schoolers' current pain points?
- [Behaviors] How do high schoolers currently augment their studies online?
 - How do they interact with existing digital products?
- Do high schoolers really need another online augmented study product?
 - How do users feel about existing products?

Method

- 30-minute in-person or video semi-structured interview to gather in-depth qualitative data
- The researcher will use the interview script as a guide and ask follow-up questions based on answers from the users

Recruiting

- 5 participants
- High schoolers based at home who:
 - Use digitally augmented learning and/or chat-based products at least once a week
 - Have been using digitally augmented learning and/or chat-based products for at least 3 months
- To recruit participants, we will send emails/texts to local high schoolers who have been forced to study from home due to Covid-19 and are active in the popular high school WhatsApp user groups.

Screening questions

1. What is the primary reason for you to study high school material online?
 - a. To learn about extracurricular material (screened out)
 - b. To help further understand my current subjects
 - c. I don't prefer to study online (screened out)
 - d. Other (screened out)
2. What is your primary way to learn high school material?
 - a. Take in-person, instructor-led courses (screened out)
 - b. Use digital products
 - c. Other (screened out)
 - d. Currently, I am not learning online (screened out)
3. How long have you been using digital products to study high school material?
 - a. Less than 1 months (screened out)
 - b. 1 months to a year
 - c. Over a year
4. How long have you been using high school WhatsApp user groups?
 - a. Less than 1 months (screened out)
 - b. 1 months to a year
 - c. Over a year
5. When was the most recent time you have used these digital products?
 - a. Within a week
 - b. Within a month
 - c. Over a month ago (screened out)
6. How often do you use these high school learning digital products?
 - a. A few times a week
 - b. About once a week
 - c. 2-3 times a month (screened out)
 - d. About once a month (screened out)
 - e. Fewer than once a month (screened out)

Timeline

- Design proposal: May 3—5, 2020
- Recruiting: May 6—8, 2020
- Sessions: May 9—11, 2019
- Readout: May 14, 2019

Script

Introduction

My name is Pemberai. Thank you very much for participating in this study. I am currently working on a project related to high school learning online via chatrooms. I would love to learn more about your experience with high school-learning and/or chat-based digital products. This interview will take about 30 minutes. If you want to leave the session or take a break at any point, please let me know. Do you have any questions before we start?

Do you mind if I record this session for note-taking purposes? The recording won't be shared with anyone outside of our team.

Warm-up Questions: [Build rapport. Start with easy questions to get to know the participant]

1. Could you tell us more about yourself? [To learn more about the participant]
2. Which subjects are you currently learning? [To get an idea of the high school subjects that the participant is engaged in]
3. Which apps or websites are you currently using for high school learning and/or having chats online? Have you tried other apps before? [To learn more about any other apps the participant is using for high school learning and/or having chats online]

Behavioral Questions:

4. How did you get started using digitally augmented learning and/or chat-based products? [Motivation: what did participants hope to achieve?]
 - When did this happen?
 - What was the trigger?
 - How was the learning/chat experience?
 - What was the learning outcome? Did you reach your learning goal?

5. How long have you been using digitally augmented learning and/or chat-based products?
 - Where did you take your very first lesson?
 - (If not digital) Why did you decide to switch to using digital products? [Which needs did digital products meet that other types of learning failed to meet?]
6. How often do you use digitally augmented high school learning and/or chat-based products? What motivates you to continue to use digitally augmented learning and/or chat-based products on a daily/weekly/etc. basis? [There might be internal motivation “I want to cover as much of the syllabus as possible” and external motivation “I want to be top of my class”.]
 - What are your major achievements?
 - How do you track your progress?
7. How do you decide which subjects to study? Why? [Which needs did digital products meet that other types of learning failed to meet?]
 - Do you set up learning goals? [Do participants set up learning goals in the app?]
8. Would you be interested in mentoring other students? Why? [Is there a potential of the participant helping other students succeed by having mentorship services?]
 - How many students can you mentor at a time? [Do participants have any limits to the number of students they can mentor?]
 - Would you also be open to being a mentee?
9. What do you use to learn high school subjects now?
 - Have you used other products/tools?
 - What was the very first product you were using? Why did you switch to other products? [Pain points]
 - (If you are using more than 1 product concurrently) What do you use each product for? [Needs]
10. You mentioned you are currently using Khan Academy, what time of day and where do you usually use Khan Academy? [Does participant have a daily routine? Is it spontaneous?]
 - Do you use it in the morning or afternoon every day? [To get an idea about the context when they use it]
 - Do you use it during your lunch break?
 - Do you use the app during certain times of the day? What times?

11. When was the last time you opened up Khan Academy? Could you walk me through how you were using this app? [How do high schoolers interact with existing tools. Better to ask participants to show than tell]
Observation & follow-up questions:
- What do you like or dislike about each feature,
 - Why do you like/dislike each feature.
 - Which features do you not use and why?
 - What's on your wishlist for the app?
 - If you have any frustrations while using the app, please tell us why and how you currently workaround them [Unmet needs]
12. You mentioned you are currently using WhatsApp high school user groups, what time of day and where do you usually use your user groups? [Does participant have a daily routine? Is it spontaneous?]
- Do you use it in the morning or afternoon every day? [To get an idea about the context when they use it]
 - Do you use it during your lunch break?
 - Do you use the app during certain times of the day? What times?
13. When was the last time you opened up any WhatsApp high school user groups? Could you walk me through how you were using this user group?
Observation & follow-up questions:
- What do you like or dislike about each feature?
 - Why do you like/dislike each feature?
 - Which features do you not use and why?
 - What's on your wishlist for the user group?
 - If you have any frustrations while using the user group, please tell us why and how you currently workaround them [Unmet needs]
14. When you get stuck on a problem, how do you get help? [How does the participant get assistance when stuck]
- Do you text your friends for assistance?
 - Do you google the answer?
 - Do you use the textbooks?
 - Other sources besides the above?

Wrap-up

Thank you so much for sharing your experience and insights. Your answers will help our team build a better product. If you have any additional thoughts and comments, I would love to hear about them at any time. I can be reached at pembeweb@yahoo.com. Hope you have a wonderful day.

Study 2: Survey

How to build high school based chatrooms?

Background

In our previous study, we learned that home based high school students like to engage in online learning during mornings and afternoons as well as participate in WhatsApp high school user groups throughout the day. This is a promising opportunity we may be able to target with our product, but more data is needed to better understand the needs and whether they generalize to the larger population of high school learners online.

Research Goal

This study focuses on better understanding high schoolers' needs related to online learning and education-based chat groups, as well as better measuring the extent to which these needs are held by the majority of high school learners online.

Research Questions

- How can digital products best support high schoolers studying online in engaging in education based chat groups, particularly during mornings and afternoons?
 - Which features/functions are useful?

Method & Recruiting

- Test survey questions with 5 volunteers recruited from our engineering team
- Send surveys to local WhatsApp high school user groups whose answers in our screener meet our recruiting criteria:
 - Use mobile high school learning product(s) at least once a week
 - Have been using digital language learning products and/or WhatsApp high school user groups for at least 1 months

Survey Questions

Questions

1. Which subject do you enjoy studying online? (If you are studying more than one language, select the one you spend more time on.) [Assumption: students might use different approaches when learning different subjects]
 - a. Maths
 - b. Science
 - c. Spanish
 - d. English
 - e. History
 - f. Biology
 - g. Chemistry
 - h. Music
 - i. Other (Specify____)
2. Which subject do you need help studying online? (If you need help studying more than one language, select the one you need the most help in.) [Assumption: students might need more help when learning different subjects]
 - a. Maths
 - b. Science
 - c. Spanish
 - d. English
 - e. History
 - f. Biology
 - g. Chemistry
 - h. Music
 - i. Other (Specify____)
3. In the past month, how did you study high school subjects online? (Select all that apply.) [learning method]
 - a. Use mobile device(s)
 - b. Use desktop(s)
 - c. Other digital devices (e.g., Kindle, tablet)
 - d. Physical products (e.g., books, printouts, physical flashcards)
 - e. In an instructor-led class
 - f. WhatsApp study group
4. In the past month, which types of mobile products did you use? (select all that apply) [current tools]
 - a. Education-learning app(s) (e.g., KhanAcademy, IXL)
 - b. Udemy
 - c. Podcasts
 - d. Video platforms (e.g., YouTube)
 - e. E-books
 - f. Websites in my mobile browser
 - g. Other (Specify____)

5. In the past week, how often did you use a mobile app to study high school subjects?
[Frequency]
- A few times per day
 - About once per day
 - Over 7 times a week
 - 4-6 times per week
 - 2-3 times per week
 - Once per week
 - I didn't study high school subjects online last week
6. In the past week, how often did you use a WhatsApp high school user group?
[Frequency]
- A few times per day
 - About once per day
 - Over 7 times a week
 - 4-6 times per week
 - 2-3 times per week
 - Once per week
 - I didn't use a WhatsApp high school user group last week
7. Which of the following best describes when you study high school subjects? [Do participants have a routine?]
- I study high school subjects online when I have a block of time to do so
 - I set aside time for studying high school subjects online
 - The online learning app reminds me when to study
 - Other (Specify__)
8. In the past week, how long was your typical study session? [How much content should be fit into each session]
- Less than 15 minutes
 - 15 to 30 minutes
 - 31 minutes to 1 hour
 - Longer than 1 hour
9. In the past week, how many high school subjects did you plan to learn online? [Do learners have specific learning goals?]
- 1–2 words
 - 2–5 words
 - Above 5
 - I didn't make any plans
10. In the past week, each time when you studied high school subjects online, approximately how new topics did you study in each learning session? [What is the amount of new words learners can digest in each session?]
- 1–2 topics
 - 2–5 topics
 - Above 5
 - I didn't learn any new topics last week

11. In the past month, which of the following best describes how you review topics you have already learned? [Review habits]

- a. Every time I use the mobile learning product, I reviewed old learning material
- b. I sometimes review old learning material
- c. I didn't review

12. In Based on your experience with the learning app(s) you are using, how essential were the following features? [What types of achievements/milestones do learners care about?]

	Not necessary	Nice to have	Must have	Does not apply
Track the number of new topics I have learned in the past week				
Show the total number of topics completed in my progress indicator				
Show my learning progress against requirements of the syllabus				
Show my competency level (e.g., through online tests)				

Demographic Questions

13. In What is your age? [Assumption: People in different age groups might have different learning styles.]

- a. Under 7
- b. 8–10
- c. 11–13
- d. 14–16
- e. 17–18
- f. Above 18

14. What is your grade? [Assumption: Education grade affects learning style.]

- a. 1
- b. 2
- c. 3
- d. 4
- e. 5
- f. 6
- g. 7
- h. 8
- i. 9
- j. 10
- k. 11
- l. 12