

## INTERVIEW QUESTIONS - Elicitation

**USER 1: [Jeremy Jos-Rolland] - [jeremy.jjr.35@gmail.com]**

- **When and how do you use Kahoot?** I use Kahoot mainly at school for quizzes, as a fun way of studying. I also use Kahoot sometimes with friends, where we play fun quizzes about random topics. I use Kahoot through my laptop, where I join as a player of the quiz.

- **Do you create games or only join as a player?** I usually join the quiz as a player, since I am a student, I use the quizzes as revision, or in class, when the teacher sets them up. I have tried to make a quiz here and there, but I'd rather just join as a player.

- **Do you think Kahoot is missing any functionality or has any problems?** I think Kahoot is pretty good as it is, but it would be nice for it to have some different and more interactive features. I think different types of answers, maybe short answer responses, or a question where you need to click in a pattern or something along these lines. I also find that certain images are not very compatible with the layout of the question when the question includes an image. This means that we sometimes have to zoom into the image, which then means we can no longer see the answers, which is impractical.

- **What prevents you from using Kahoot more often?** When I'm on my own, I cannot play Kahoot as there is no one to join a quiz with. It would be nice if there were online games where randoms can join, like a video game.

**USER 1 - Problem solution:** To address the issue of limited play opportunities alone, Kahoot could introduce a feature allowing users to join random online quizzes, enhancing accessibility and engagement for players.

**USER 2: [Raveen Jayalath] - [raveen084@gmail.com]**

- **When and how do you use Kahoot?**

I only use Kahoot pretty much at uni for whenever a lecturer or tutor decides to do one otherwise not that often.

- **Do you create games or only join as a player?**

Only join as a player.. I mean there is not really many times that we use it and when we do it is usually to join someone's Kahoot.

- **Do you think Kahoot is missing any functionality or has any problems?**

Definitely that you have to view another screen just for the questions?! Why can't it be shown on our device as well.. It would be easier to manage a Kahoot then. Also maybe the ability to type responses to questions and they can be accessed by whoever made the Kahoot. For any problems, I mean like I said again, seeing the questions not just on a screen but somewhere on your device. Maybe even like a popup that you can open and close.

- **What prevents you from using Kahoot more often?**

Not really anything preventing just the lack of need to unless like I said a tutor or lecturer is doing one. Maybe have the ability to have public Kahoots on random topics that anyone can join.

**USER 2 - Problem solution:** For viewing questions on a separate screen, Kahoot could integrate a feature allowing questions to be displayed on users' devices. Introducing public Kahoots on various topics could encourage more frequent use outside of academic settings.

**USER 3: [Amir Khan] - [amidsttheamiable@gmail.com]**

**- When and how do you use Kahoot?**

I use it for my students at my tuition centre. The main purpose of them is to test content related to what we have taught. Always in a quiz manner, the students must answer the multiple choice questions in a given time usually for some incentive or simply for learning.

**- Do you create games or only join as a player?**

I or my teachers usually make these quizzes. The players are always the students in the classes.

**- Do you think Kahoot is missing any functionality or has any problems?**

It needs the ability for students to have access to see the questions on their screens and not only the board. It is difficult for some students to have visible access to the questions being quizzed. It also needs the ability to see old quizzes. I wish for the students to be able to see the questions they answered and what they did incorrectly. Also a system to add specific categories of questions in each quiz. Such as if we were doing a Maths quiz and I tested Volume and Area, I can get a report on how they performed in both categories individually and not just together.

**- What prevents you from using Kahoot more often?**

Nothing prevents me from using it. It is simply used as a tool for students and teachers in class for them to do their class quizzes. If else, additional functionalities can be added then it would be used more often.

**USER 3 - Problem solution:** Kahoot could introduce features allowing students to view questions on their screens during quizzes, access previous quizzes for review, and categorise questions for detailed performance analysis. These enhancements would improve accessibility, learning outcomes, and engagement in classroom settings.

**USER 4: [Alex Jiang] - [alexjiang201507@gmail.com]**

**- When and how do you use Kahoot?**

I am a uni student in my second year and only use Kahoot in classes or lectures. I usually use any device I have like a phone or laptop.

**- Do you create games or only join as a player?**

I'm usually a player in the quiz at class. Most of the time we do the quizzes for testing our knowledge for the info they taught during class or lectures. Sometimes I make Kahoots to test myself and my friends when we revise, but that's pretty rare.

**- Do you think Kahoot is missing any functionality or has any problems?**

Sometimes the timer is too short to answer the questions. Also the website is pretty laggy on the phone and it takes a while to connect and even when we respond to the questions quickly it takes time for it to actually reach the server. There should be a less intensive version of the site so that it can operate more smoothly.

**- What prevents you from using Kahoot more often?**

It needs to have more interesting things on there than only being a quiz website. Maybe some interactive international quizzes or competitions of some sort, just so that you don't always have to rely on someone making a quiz for you to join or you just making it yourself.

**USER 4 - Problem solution:** Kahoot could optimise its platform for smoother performance on mobile devices, particularly reducing lag and improving response time. Introducing

interactive international quizzes or competitions could enhance engagement and provide users with more diverse and compelling content beyond traditional quizzes.

**USER 5: [Tiffany Marum] - [tiffany.marum@gmail.com]**

**- When and how do you use Kahoot?**

I am a doctor so I use Kahoot to train my medical students. I usually test them when we are doing seminar sessions and they join using the code on screen and answer the questions.

**- Do you create games or only join as a player?**

I usually create games. Sometimes I play but mainly I just make the quizzes for my students.

**- Do you think Kahoot is missing any functionality or has any problems?**

I am not able to send the results to students or have them practise on their own. This is a needed functionality so that the students can properly assess their performance and find out what to improve on. Another problem is that I cannot view the answers on my phone directly too.

**- What prevents you from using Kahoot more often?**

I do not have time to make quizzes because I am too busy. There should be an ability to allow students to look at the quizzes they participated in, this would increase Kahoot's audience in the education sector.

**USER 5 - Problem solution:** Kahoot could introduce features allowing instructors to send quiz results to students for self-assessment and practice, enhancing learning outcomes. Also enabling instructors to view quiz answers directly on mobile devices would improve convenience, improving user experience.

## USER STORIES - Analysis & Specification - Use Cases

Once the user stories have been documented, generate at least ONE use case that attempts to describe a solution that satisfies some of or all the elicited requirements. You can generate a visual diagram or a more written-recipe style, as per lectures.

### **[Jeremy Jos-Rolland]:**

As a student, I want to be able to express answers in text box format, so that I can express my answers and be more specific in my responses.

#### User Acceptance Criteria:

- Allow quiz creators to insert answer format 'text box'
- Bonus marks dependent on keywords but awarded by teacher
- Players with no answers awarded no points
- User cannot type more than 50 words

### **[Amir Khan]:**

As a business owner, I want to be able to access the students' results in a more representable manner, so that I can examine the results students get in the tuition classes more accurately.

#### User Acceptance Criteria:

- Allow quiz creators to label questions with categories
- Create a performance analysis for players based on these categories
- Have a user screen additional to the quiz screen
- Let students/players see previous quizzes
- Present a table with players who got it wrong

### **[Tiffany Marum]:**

As an educator, I want to provide my students with a copy of our quizzes to use as flashcards, so that they can test themselves conveniently.

- Allow users to enter 'flashcard mode' with autostart as 1 user
- Change the order of the answer position and colours
- Give feedback on incorrect answers in results screen
- Shuffle the question order before every quiz run
- Enable flagging questions that quiz owner can see to assess what topic needs to be reinforced

## Use Case List: Accessing Detailed Quiz Performance Analysis

### [AMIR KHAN]

**Goal in Context:** Enable tuition centre owners, like Amir Khan, to access students' quiz results in a more organised and detailed manner for evaluation purposes.

**Scope:** Kahoot system (backend functionality and user interface)

**Preconditions:** Tuition centre owners have created quizzes using Kahoot. Quizzes contain labelled questions with categories. Students have participated in quizzes.

**Success End Condition:** Tuition centre owners successfully access a performance analysis dashboard displaying students' quiz results categorised by question types for thorough evaluation.

**Failed End Condition:** Tuition centre owners are unable to access organised performance analysis, leading to continued reliance on less comprehensive evaluation methods. E.g simply a leaderboard of students who participated in the quiz.

**Primary Actor:** Tuition centre owner (Amir Khan)

**Trigger:** Tuition centre owner initiates quiz and at the end gains access to the performance analysis for the quiz within the Kahoot system.

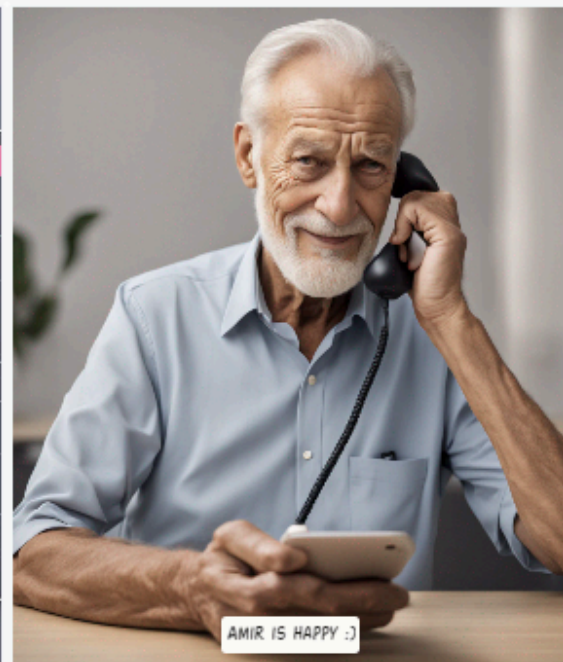
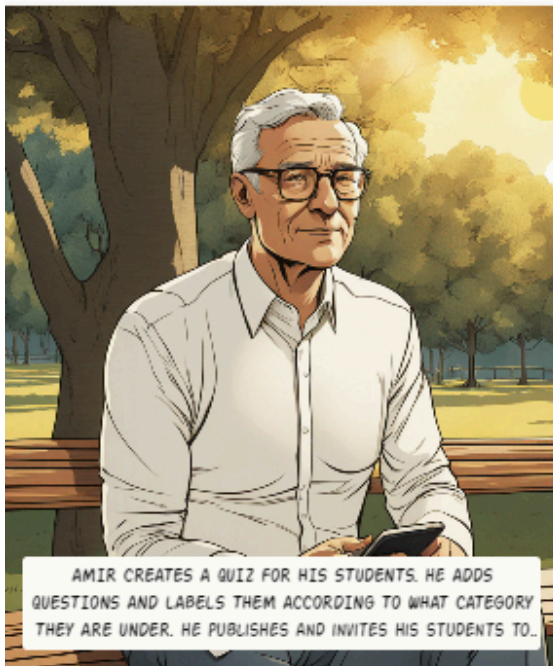
#### **Steps:**

1. Tuition centre owner logs into the Kahoot system.
2. Owner navigates and creates an educational quiz.
3. Creates questions in quiz and labels them with specific categories, e.g Volume, Area.
4. Invites students to quiz to participate.
5. Students complete the given quiz.
6. System generates and presents leaderboard and performance analysis.
7. Owner reviews the dashboard, examining student performance categorised by question types. For example, he sees that one user got 6/10 overall; 3/4 in volume and 3/6 in area and another user got 9/10 overall; 4/4 in volume and 5/6 in area.
8. Owner identifies areas of strengths and weaknesses for individual students and overall class performance.

## Use Case Diagrams

Image by Midjourney.

Text written in comic by us!



## Feedback about Use Cases - Validation

### **[Tiffany Marum]:**

“This does look like a great way to give students extra practice, flash cards, especially digital flashcards are super handy and convenient. The built-in feature would be spot on, it really gives a quick insight into what areas I'm not covering well or students are having trouble interpreting, I really like that as a feature in flashcard mode! Shuffle mode, super super important. Most flashcards, if they aren't shuffled or randomised or something, don't even require any reading just click click click. That's probably the most important part of the flash card system.

I can already imagine my students using it as active recall throughout the term and just to have something to read off, maybe on the train, at the convenience of their phones.”

### **[Jeremy Jos-Rolland]:**

“Having a text box feature in a quiz game would help almost like a forum. It sure would be a lot of reading for the teacher but I guess that's where the 50 word limit comes in. But I think as a once or twice question to change the pace, the text box would be really good especially to allow other students to read, almost like shared feedback.

It would also be pretty sick if we could add some additional quizzes just to participate in and compete with other players worldwide. The quizzes could be made by users and published on like any topic so that anyone could decide and see if they would be interested in doing so. ”

### **[Amir Khan]:**

“Having the ability to access my students' performance would be a big improvement to the site. I can create quizzes with more strenuous testing for students' performance. I like having the idea that students as well as quiz owners can see how they performed with more depth.

The students will be able to see how they did with an overall score as well as scores for how they performed in each category of the subject being tested. For example, if students could see that in a Kahoot quiz of 15 questions with topics of Probability, Vectors and Calculus, they can see their performance for each individual topic. And how great would it be for the quiz owners to see all their students' results. With these features we can give more stylised and concentrated feedback as per performance for the students. This would most definitely improve user experience for educators on this site. ”



## Feedback about Use Cases - Interface Design

*Owner checks the current session, returns the players results against the topic specific questions:*

```
# categorising each question into larger topics so students can view and copy

/v1/admin/{quizid}/session/{sessionid}:

post:

  summary: Owner reviews student performance by sub question categories

  description: Get student performance categorised by question categories

  tags:

    # - "By Topic: Players in session"

    - "Iteration 3 (New)"

  parameters:

    - $ref: '#/components/path/SessionId'

    - $ref: '#/components/path/QuizId'

    - $ref: '#/components/path/QuestionTopic'

    - $ref: '#/components/path/PlayerId'

  responses:

    200:

      description: OK

      schema:

        $ref: '#/components/return/adminSessionTopicStats'

    401:

      description: Token is empty or invalid (does not refer to valid logged in user session).

      schema:

        $ref: '#/components/return/Error'

    403:

      description: Valid token is provided, but user is not an owner of this quiz

      schema:

        $ref: '#/components/return/Error'

    400:

      description: |
```



If any of the following are true:

- Session Id does not refer to a valid session within this quiz
- Session is not in FINAL\_RESULTS state
- admin does not own the code .

schema:

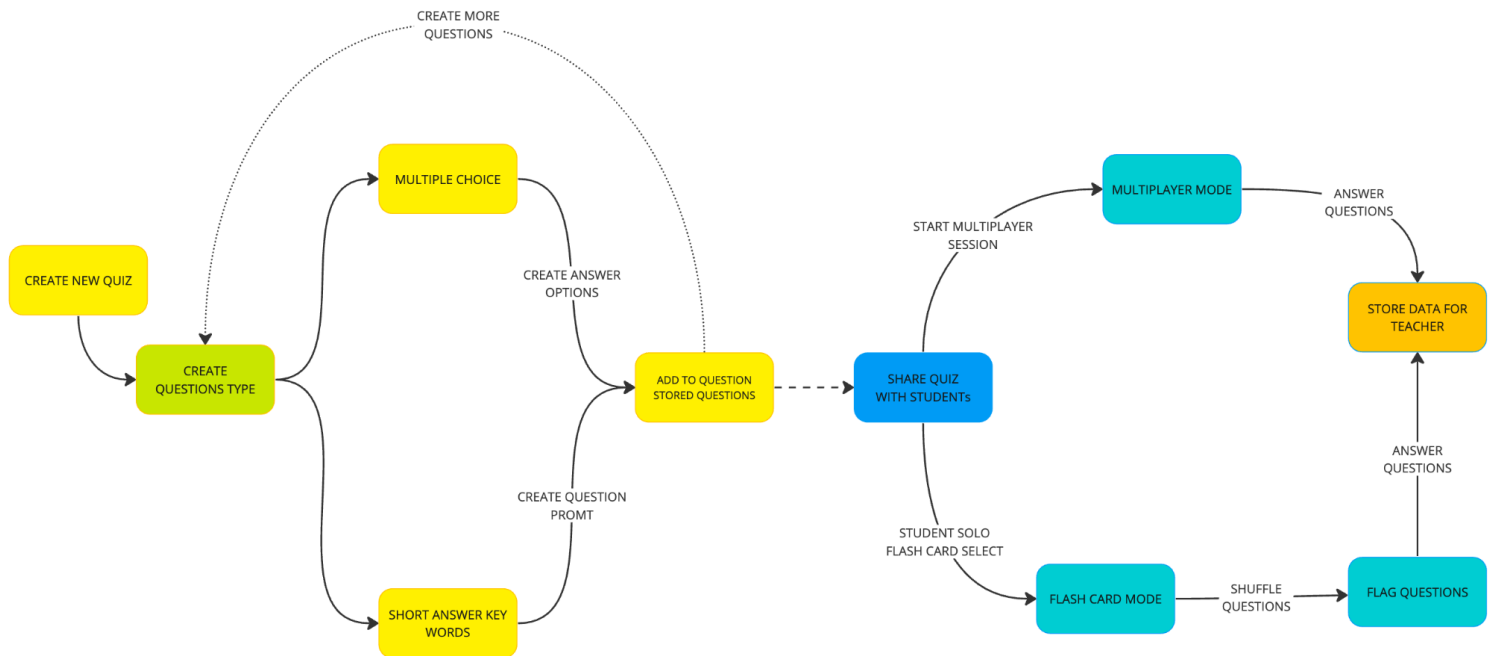
\$ref: '#/components/return/Error'

security:

- Iteration 3 Token Authentication: []

## Conceptual Modelling - State Diagrams

## Status Diagram for creating a quiz with Gamemode implementation



## Status Diagram for viewing quiz with performance analysis

