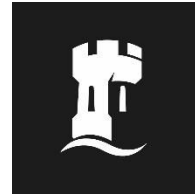


# STUDY OUTLINE



University of  
**Nottingham**  
UK | CHINA | MALAYSIA

**Date:** 12/11/2018

**Project:** Investigation of how students interact with AI assistant Alexa when using it to learn

**This study aims to investigate how using AI assistants could aid the maths learning process in education. This aims to break down the interaction between Amazon Alexa and the participant to see what happens when learning activities are completed.**

**The target number of participants is 30-60 to complete the following activities.**

## **Part 1**

This part of the study which will consist of 5-10 minutes. The first five minutes will be aided by me, talking them through playing 1-2-3 Math, Quick Maths and Maths Mania. They will then have five to ten minutes to play whichever they want.

## **Part 2**

This is a paper questionnaire, asking a few questions that the participant can complete:

This is made up of questions of the nature:

Have you ever used Alexa before?

:I have an alexa at home, I don't have an Alexa but have used one before, I have never used an Alexa before.

How much do you like maths?

1-5 (1-do not like maths at all, 5- like maths very much)

What do you think of Alexa?

How easy did you find it to use Alexa?

1-5 (1- very easy, 5-very hard)

### **Part 3**

This will then be a more informal interview that can introduce specific targeted questions to the participant. For example, if they did money over addition and multiplication, I would ask why they did this and if they normally enjoy doing money questions in maths or if it was due to Alexa.

### **Resources**

The resources needed for this are:

- An environment for data collection and activities to be done in.
  - This will be a quiet room in a space appropriate for data collection. If the participants are over 18 it will be a booked room in the University or if it with a child I know then it will be a room in the child's house with the parent also present in the room.
- Alexa
  - This will be done using my Amazon Alexa
- Voice recording equipment
  - This will be done using my Mac and iPhone

### **Types of data taken**

-Part 1 will be taken by recording audio for the duration of it.

-Part 2 will be taken using paper forms.

-Part 3 will be taken by recording audio for the duration of it.

The transcript of their interaction provided by Amazon will also be used.

### **Approval**

Approval will be gained by:

1. I will give all participants and all participant's legal guardians if they are under the age of 18 the 'Information Sheet', the 'Privacy Notice' to read and will explain the experiment verbally.
2. I will then gain consent from the participant if they are over the age of 18 with them signing the 'Consent Form'. If the participant is under the age of 18, they will give their consent verbally and their parent will give their consent using the 'Consent Form Parent'.