

# ZORE

## Collaborative Learning made Easier

### What is ZORE?

ZORE is a versatile, interactive learning tool that can be used by teachers to encourage collaborative learning in students. ZORE will utilise a large, multi-touch, desk-mounted interactive screen to create a fun, interactive classroom activities.

### Our Challenge

Our key design goal will be that the preparation time for ZORE is no more than what is required for a normal lesson of similar complexity.

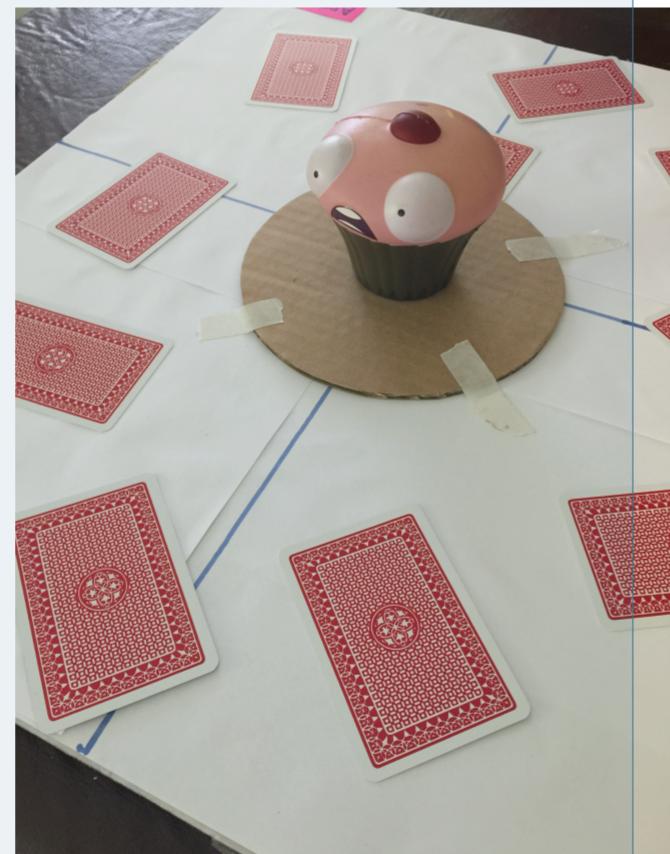
The interface for creating an activity must be simple to use, with clear instructions available for the creation of multimedia answer cards.

The tracking features of the application will hopefully also convince teachers that ZORE is a worthwhile learning tool.

### The Process

#### Paper Prototyping

We designed two games for our users to test, and will observe the outcomes. The first activity is a grammar-based game that involves categorising 'random' words into four groups (adjectives, nouns, verbs, and pronouns). Users are to be instructed to flip over cards and designate the correct section in which to place the cards. A 'button' situated in the middle of the table is intended to be used upon completion of the task.



### The Process

#### User Testing (Paper Prototype)

We visited a Sunday School in Acacia Ridge to conduct our first round of user testing using our paper prototype. We obtained consent from the parents of four children

ranging in ages from six to eleven, and after (very) briefly instructing them on how to use the 'table', we observed their behaviours and interactions. Overall, responses were positive.



### Why choose ZORE?

ZORE aims to solve two dilemmas often faced by teachers in modern day classrooms. Teachers find it difficult to engage students with the content they're presenting, and encouraging students to work together and engage in collective learning can require an immense level of supervision and preparation for teachers.

ZORE solves these dilemmas by providing an innovative, interactive learning tool for teachers that will get students collaboratively solving problems together in the classroom, while it the same time cementing their knowledge on facts from any number of academic disciplines.

### Our Domain

As ZORE is a teaching tool, the primary audience is middle school teachers. Teachers span a broad (but exclusively adult) age group, with an extremely varied level of IT familiarity and free time.

The secondary audience is middle school students from grades 4-7. This age group was chosen because they will likely have developed enough social skills to navigate through the complex group task presented to them by ZORE, while still dealing with concepts that are simple enough to be turned into ZORE activities. It is anticipated that the simple touch interaction of the screens will be appropriate for children in this age group.

Students who are visual or tactile learners will obtain the most benefit out of ZORE.

### Further Testing

User testing on students for engagement in other subject matters, on teachers in order to determine UI and hardware constraints, as well as software refinements are all required within the next iterations.

### The Process

#### User Testing (Software Prototype)

We conducted user testing with a high fidelity software prototype with some children aged between 10-12. From this, it was observed that girls preferred working in a team while boys preferred competitiveness.



The physical hardware was not up to the standard 10-12 year olds would expect - from a touchscreen perspective existing products such as iPads provided better tactile feedback.

Generally kids found it an enjoyable game to play.

### The Process

#### Teacher Surveys

We contacted four teachers, with experience ranging from 1 year to over 25 years, to find out how best to integrate software with their learning environments. Among other questions, we asked them to clarify which subjects they had the most trouble engaging students in, and conducted a feasibility study in the usage of large electronics in the classroom.

