Interview：

About the situation of Algorithm class: Students in Y1 learn the algorithm using functional programming, and they have not been taught the lesson about for and while loop. They were taught everything by recursion.

He showed us the PowerPoint he used for teaching, and it was mainly about recursion programming.

About the correctness of sorting algorithms: His class does not cover the correctness of sorting algorithms, and he only taught about the time complexity and a little bit about Big-O.

About the simple software feedback: Then, we showed some simple software we found, he said that the pseudo-code is not suitable for year one students, and they need to follow what is happening. For instance, giving some promotions like now it comes to condition check, because it does not match the condition, so it will continue to execute. Additionally, his idea is that we should consider the list size, which means let users decide the list size. For example, if the size is 1, it can show the basic case.

About the priority of sorting algorithms: When it comes to the dependency of sorting algorithms, he thinks bubble sort is quick and basic. Also, insert and merge are basic.

About the platform: Finally, He preferred the windows platform.

He said that he would be happy to use our software for teaching sorting algorithms, and he thought visualizing is suitable for displaying sorting algorithms.

Focus Group:

Focus group

p 表示受采访者

Q 表示问题

1.介绍类似软件（

介绍visualgo的功能

介绍visualizer的功能

介绍Brainpop （抛出积木是否需要问题）

2.在学习排序算法中是否遇到问题？怎么解决

p1: 伪代码还好，理解递归比较困难，私下请教老师

p2: 一种算法可以有几种方式实现

p3: 用笔画逻辑，执行一遍后，写出数字会变成样子

p4: 逻辑问题最需要解决，动画展示十分重要

P5: 重点是理解循环最关键的一步

Q:设置断点

大家觉得很重要，可以加

3. correctness

Q：大家有没有在ACE中遇到问题

P1：没想到要用逻辑去解释

p2: 应该给予例子，去解释partial 和total 的 区别

p3: 大一没有接触离散，可能加入软件比较困难

Q：解释correctness的方法

p1：给个错的例子，然后告诉他什么是对的

p2: 认为应该先给对的

p3: 也可以设置动画，错了一直循环

p4：terminate：terminate and truth table

给予多个input，如果不是total，用table证明有些是错的

分别解释？

4. 学习排序算法有没有接触其他软件

动画就很好

5. 加新功能

p1:小黄鸭

p2:看代码比拖积木好

p3:拖积木后生成代码，而不是伪代码

Students in Y1 learn the algorithm using functional programming, and they have not been taught the lesson about for and while loop. Therefore, it is necessary to provide tutorial of basic programming ideas and algorithms.

Tracing pseudo code with animation (like algorithm visualizer) is not a good idea because Y1 student would be confused about the code and distracted. He suggests to simply prompting the job animation is doing like swapping, comparing.

Instead of shuffling a fixed size of list of numbers, he suggested to allow user to set an input size for learning from base case.

A hierarchy of learning process was suggested. Bubble sort, quick sort, insertion sort selection sort, merge sort.

He preferred Windows since it’s what the uni uses.

He ran our questionnaire in a big lecture so we now cover over 110 Y1 students.