Public summary Bachelor Assignment Huub Rijnders, s2178249

The goal of this project was to take the next step in developing the interface of a feedback system. This system is to be used in a lesson for learning to teach music. This lesson takes place at the Teacher Academy for Primary Education (Pedagogische Academie Basisonderwijs) or PABO for short. It takes the shape of a simulation, where the professor acts as an observer, one student gets in front of the class and takes the role of a teacher, and the rest of the class acts as a primary school class. During this kind of lesson it is hard for the observer to give feedback without disrupting the lesson. On top of that, it is hard for the class to learn about teaching when the teacher is the only one receiving feedback and without being involved more.

The feedback system is a system that mitigates these problems. It is used as a support during the lesson. It provides each individual user with a screen on their own device that allows them to send and receive feedback while the lesson is going on. In order to aptly develop an interface for this kind of system, taking cognitive load into account is important. Besides that, knowing how to give feedback is necessary for the way the feedback is sent within the system. The system is made to be used in a lesson that is already being taught at the PABO. So, in order to shape the system in a way that it conjoins with the current practices as well, these practices should be brought into view first.

To get a clear picture of the role all of these concepts play within the context of this project, literature research was done and a lot of discussions were held with the client, who has adequate expertise on the subject. Different aspects are relevant for each type of user (Observer, Teacher, Student) and each screen should conjoin with what the user needs and in what way they interact with the interface. For each user, the cognitive load should be kept low, because of the system's supportive nature. The observer's screen is an overview with a lot of information. During the exercise, the class takes the observer's attention, but he gives feedback through his screen, which ends up being not specific enough sometimes. The teachers screen helps to divide the teacher's attention by only turning on when there is feedback to show. The rest of the time it is off, allowing them to keep their full focus on the class. the student's had their feedback options reduced to three focus points, on which they can send a positive or negative remark with one press. This allows for a quick interaction while doing the exercise, with only one press per remark. What is still missing, is for the buttons to show that the remark was successfully sent.

The system should foremost be a *supporting* system. This means it does not explicitly take over any role of the people involved, and the users should learn from it in a way that they can give a lesson without the system as well. This also means it should not take center stage while the lesson is in practice. In order to make it so, the interactions should be short and straightforward, with low cognitive load. In the end the interface for the system was subject to a lot of simplification.

With the preparatory research and considerations done, the concept of the interface can start to take shape. After an ideation process the final concept ended up being tested with a group of students who's skills are comparable to those of PABO students. The test subjects in this project did not have any sense that there were essential elements missing. The observer's screen received constructive feedback considering the load of information displayed at once. the feedback was used to make an updated version of the interface concept. Continuous testing and user experience determination is useful to keep from over-developing the tool. As mentioned before, the tool should remain a supporting system not cloud over the practice of the lesson.

In the end, the system holds potential to grow in many directions. It is like a blank canvas, which can accept many functions, should the developer wish to add them. When taking the next steps to do this, it is recommended to keep testing for user experience with cognitive load, so the idea that the system does not take over can remain intact.