

12. Application

Senso

A toy for children with Autism Spectrum Disorder to encourage social interaction and group play



User Interviews

I have conducted informal interviews with different stakeholders in the autism field in the local area. My most interesting interviews took place with the children at Buddies Clubs and Services. It is quite difficult to collect meaningful data from them however by conducting informal interviews individually and in small groups I have managed to extract some useful insights which I have applied to my design.

Iterative Testing and Co-operative Design Approach

Throughout my design process so far I have consulted with my stakeholder contacts at every stage, firstly conducting interviews to gain a better understanding of Autism Spectrum Disorder - something I knew very little about before the start of this project. When I had extracted all my insights from the information gathered, I drew up a list of user and design requirements which I sent to all of my contacts, asking which they felt was more important and if there was anything I had missed out.

Once my requirements were verified with my contacts, I then went on and started to develop concepts. Once I had a number of ideas and drawings, I met with them to discuss my thinking and see what they thought of my ideas. From these discussions I gained further insights and was able to adapt the design to better suit the user.

Most recently I have built a simple prototype to test the children's response to visual and tactile sensory feedback. I took this to the children at Buddies and conducted a test where as they placed their hands on the hemisphere in different positions they created different colours and it vibrated. I got extremely good feedback from this exercise and it really entertained the children. My next step is to do a more prolonged test over a series of days to see if it can hold their interest once it is not 'new' to them.

Response to Tactile Stimuli Focus Group

I aim to cover the outer shell of my toy with different surfaces to allow for different tactile preferences -- for example someone who is hyper-sensitive tactilely will like soft surfaces such as fur whereas hypo-sensitive like the feel of rough surfaces.

I held a small focus group with the children at Buddies where I gave them a mixture of materials and objects to touch and feel and tell me which was their favourite and why. Whilst the children's answers were generally 'because it feels nice' and I didn't get much information from what they said, what I witnessed was extremely interesting. I have been told by many people that the simplest of sensory feedback really excites these children however I wasn't entirely convinced until I witnessed them totally fascinated with old off cuts of material and general household objects.

This has highlighted to me the importance of observational/ethnographic research within this project as I feel it is extremely difficult to get any meaningful data from talking with the children, but by watching what they do, how they interact with one another and how they play I can gain so many more insights. I have been attending groups at Buddies once a week for about 2 months, sometimes in an observational way, sometimes interacting with the children.

Anthropometrics

Whilst the size of the ball will partially depend on the size of the electronics inside and their shock resistance and heat dissipation, I will also need to consider anthropometric data looking at children's handspan and their grip strength. I also need to look at the average strength of a child to estimate the maximum loading which will be applied to the ball and choose materials which can withstand it.

