Designing for Children
- With focus on ‘Play + Learn’

tinqüe- Electronic equipment for education relief

Subtitle: A new proposal to alphabetization.

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Abstract: The present short paper relate as the industrial/product design can help children with dyslexia and not dyslexia at the alphabetic phase (first class). It meet some design stages process, together with the project “tinqüe” – mobile game that relief at the education. The project based in the teaching multissensorial, giveing provides inclusion social through the use of technology existing in the market; it also being considerated as a tool work education and health all through at the dyslexia’s treatment – that it is a hereditary syndrome, a bewilderment and e this isn’t a sick.

Key words: product design, dyslexic, education, technology, inclusion social.

1. Introduction

The dyslexic is one of many learn disturbance (at specific of language of begin constituency, characterized for the difficult to code simple and to show an insufficiency at the phonologic process. The child can go at conventional instruction (school), because this child is smart as another child, they must participate of develop the sociocultural, because it doesn’t have cognition disturbance and sensorial fundament; what this child has difficult to code the words that it is not hope to child with this age.

The child has problem to read, to write and to spell these are the reason to wrongs during language learning process. It is also the reason the child needs almost double of time to learn than another child that it’s not dyslexic. Other thing important it happens and existence because the system education that there is at schools as privet as public they don’t know how this syndrome, then at schools don’t have

capacity professionals to help and to understand better how these children thinks because they are different.

And first of all it's very important to know how that dyslexic isn't a disease, but yes a syndrome hereditary that cause despair and there isn't curb just there is adaptation with help of capacity professionals to oriental. They are psychology, psycho pedagogic, phonologic and other that help the children during the treatment sessions. A treatment session normally has a limit time, that it has duration one hour a week. The games that these professionals are using during the treatment are: secret word, batch of the let, face to face and another. These games help well the dyslexic child, but they wasn't development to it, other thing when a product is development to a person with special necessity other people can use. For this reason the objective is develop a product architecture to put in technologies and software necessary to criate news games with the focus at the multisensory education.

2. Dyslexic, multisensory education and game

The best education to a dyslexic child is inside a normal room, with children that doesn't have dyslexic and with a teacher able to know how your problem to organize a classroom. This organization has to help others professionals can be give when is necessary, the best is that the teacher must use a program of language very structured with all channels sensory as at the write as at the read.

The bigger of children have a system sensory motor (the vision, the audition, the speech and the kinesthticmotor) especially adjusted to make and development the speech and write language. In the dyslexic children yours channels sensory motors don't work together, it to make the inability and disorientation to happen a stimulus to a automatic answer when they're reading, as on the silence as on the speak loud. The disorientation is because of the no pay attention, no organize, anxious, low self-esteem, poor reader, bad comprehension of texts among other.

The multisensory education works together with of the use of the eyes, ears, speech organs, fingers and muscles, it all is responsible to discover the information until in the brain. The vantage of this method is that a dyslexic child is able to use power area and same time at that exercise and strengthens area weaker.

The objective is making as that the child can strengthen automatic answer lasting (the names, the sounds and characteristic of all phoneme) and development the skill

to sequence it right in the words. The know how will become so safe that the child is able produce any way the symbol when necessary, can be on the reading, on the writing and on the spelling.

The games enable to work with a lot of moving form, the question that there are inside it stimulate to search the multiple answer, that it can happen into of the group, possible to give experience as things that happen during the live with example very differences. One example is the difficult get up when the child is playing that it can be discuss, it strengthens the education process. For the game is a important tool to the development of the analysis criticizes of the reality and to see theirs with subject, and that they need other subject to can intervene and transform, so they will become a 'product' of this society.

3. Proposal

Before bibliographic search, field search and together market search decided the concept, where the basic question to be explore are the speech, the write and the read with the analysis of evaluation and of the into of new technology, to chose systems and technology there is already, it normally is cheaper day by day because of the production process. So that the mini-game (name is tinqüe) can be manufactured and marketed, this reason it is not just more one concept .

So it was put in the product a keyboard, to that the child can write looking a screen more than one of 3", through of one mini-projector can create a screen of 20" between a distance of 5m, and also more people will play on the same time and at the same place.

With the command of voice smart the child can listen and can see the words on the screen or on the projection; same time that the words are creating the child can make the correlation between the phonetic and the write. It results that the proposal of project of project is do with that the child interact with its tinqüe; reading/speaking on high voice what is give/ask during the game. And when it has a question, how write or as is on the grammar the child can access a software of dictionary grammar and of vocabulary there is in the product.

The use of technologic touch screen has how objective the reduction of bottom, though this is a tendency of electronic product currently. The final aesthetic based

on the tendency of the TOY ART. At the picture 1 until 6 can observance the architecture and features.

Figure.1 tinqüe on the TOY ART I

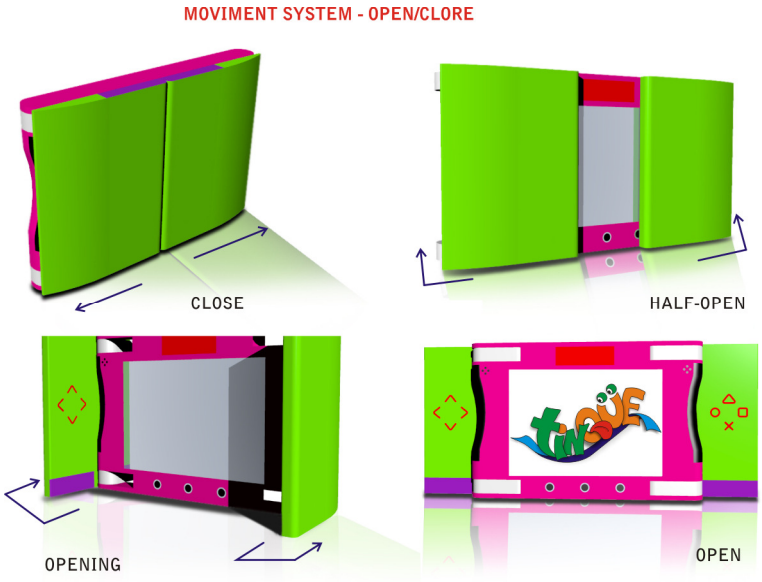


Figure.2 system to open

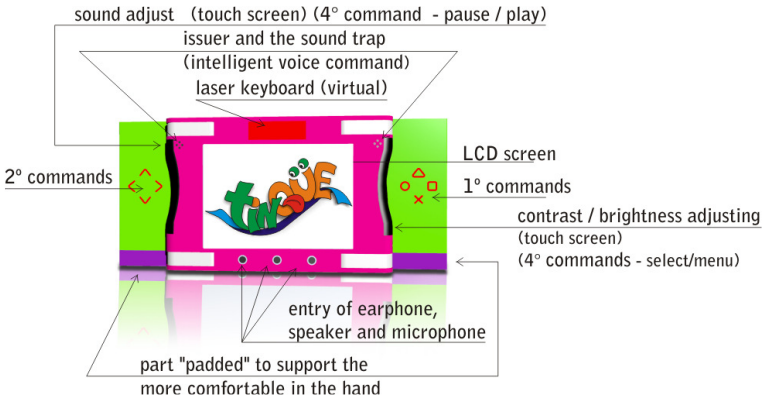


Figure.3 explain part of the front

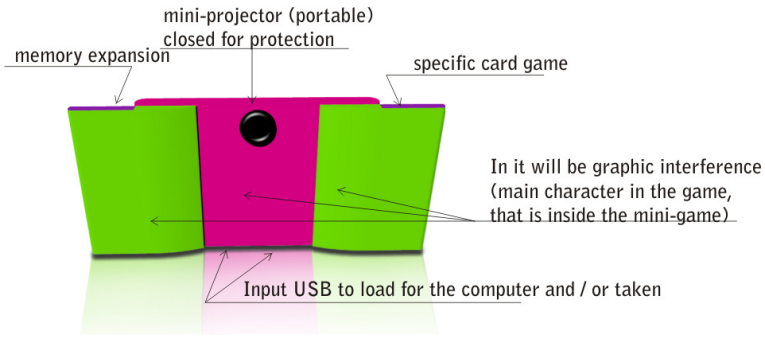
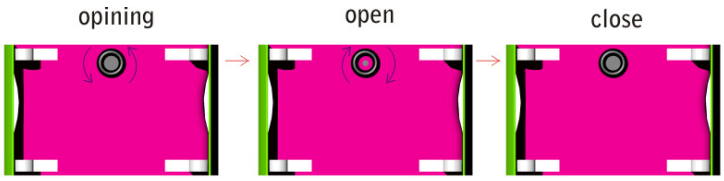


Figure.4 explain part of behind



FOREIGN SLEEVE:
POLYAMIDE - NAYLON 6 (Pa6)
NEOPRENO LATEX

INTERNAL COMPONENTS:
KEYBOARD LASER (Virtual Keyboard)
PROJECTOR FOR LAPTOP (MINI PROJECTOR)
BLUETOOTH
CHIP WITH FLASHMAMORY
DISPLAY - LCD
BUTTON TOUCHSCREEN
LITHIUM BATTERY
MEMORY CARD

CONSTRUCTION:
MAKING FOR FINISHING THE JET THAT POSSIBILITY OF
PRODUCE WITH ONE SAME MODEL SAME MATRIX MORE OF
A MODEL INCLUDING WITH SKIN APPLICATION (ex. TOY ART)

DIMENSIONS:
OPEN: 150 X 67 X 15 mm
CLOSED: 100 X 67 X 15 mm

Figure.5 explain open/close system of min projector

Figure.6 tinqüe on the TOY ART II

4. Final regard

The tinqüe has a big prospect market, because it was explored technologic already know how and there is at market. Another prospect is the education innovation/evolution, because the child always will have with it one mini-game of pedagogic help, because there is one mini-dictionary and grammar tips of it language, the games that there are inside stimulates to use them. All technologic puts in have the objective of the interaction between product and user though of concept of multisensory education, it does with that benefits the dyslexic children and no dyslexic children.

To the professionals, there are memory cards with specific games to dyslexic use during the treatment. Also it can explore the information technologic, for the internet – site – there is others games to download. Then, children, parents can access and customize them tinqüe with games preferred or necessary. The same there is a system of Bluetooth, keyboard and mini-project, it enable the interaction of the child together other players, expanding the field of know how and commutation.

The tinqüe doesn't take the place of professionals of the area of the health and of the education, however the product and its games can be use at very moment and locals, with at school, in offices, at home – it provides learning moments of build funny and dynamic. So, the tinqüe adds to implant of culture game in the society contemporary at contemporary with the pedagogic process. It can be help as society problem of discrimination of dyslexic children or as of children that there are difficult in the education process, it helps also in the society between mateclass, teacher, professional, parents and friends.

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