Assist students in learning how to advocate for Health and Emotion

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ABSTRACT

This paper addresses the main concept of self-Advocacy in students for health and Based on the review of the literature and input from the stakeholders, this addresses the need to assist students in learning how to advocate for health and summarizes the definitions and components of self-advocacy found that were used to develop conceptual framework. This article also describes an application to assist students to advocate for health to assess students with disabilities as a guide for instructional planning and circular design.

General Terms

Your general terms must be any of the following 16 designated terms: Algorithms, Management, Measurement, Documentation, Performance, Design, Economics, Reliability, Experimentation, Security, Human Factors, Standardization, Languages, Theory, Legal Aspects, Verification.

Keywords

Customers with spinal cord injuries, Assistive technology, Self-advocacy, Rights, Community reintegration, Social security work Incentives, Employment, Empowerment, Assistive technology, Advocacy, Disabilities, Empowerment, Self-advocacy,Convention on the Rights of Persons with Disabilities, group instruction, health rights training, health self-advocacy, intellectual disabilities

1. INTRODUCTION

Communication is a process of understanding and sharing meaning and it plays a key role in life. One of the most common challenges faced by children suffering from spectrum disorder is communication along with social and behavioral. There are organizations that provide special care to children suffering from one of these spectrum disorders. These organizations face hard time understanding the behavior or difficulties in having a meaningful conversation because of the inability of children to communicate effectively about their problems. These problems limit the organizations from providing quality service in taking caring of these children.

A child's ability to communicate depends on their social and intellectual development. Some children have good ability to speak but they may lack vocabulary and some have issues with communicating in speech or language or both. National Institute of Heath has studied Communication Problems in Children and found some patterns of language use and behaviors found in children with spectrum disorders. A few of those patterns are given below:

- Repetitive or rigid language

- Narrow interests and exceptional abilities

- Uneven language development

- Poor nonverbal conversation skills

Often children who are good at speaking, say things that do not have any meaning or irrelevant to the conversation they are having. Some may repeat the same thing again and again or may just catch and repeat a word/phrase, what the other person has just told them. Some may have narrow interests on a topic and may address that topic in-depth but would not be able to have a two-way conversation with someone on the same topic. These children develop their speech and language skills over time but usually they don't reach normal human level of ability. Also, this progress seems uneven among children and sometimes may develop exceptional vocabulary in a topic very quickly but they may not respond to speech of others.

The most common inability of these children is gestures. They may not show gestures like pointing fingers to an object or have eye contact when the other person is speaking. Without non-verbal skills, it is hard to enhance oral language skills and without meaningful gestures, it is very difficult for the other person to understand, which in-turn makes it hard to take timely care.

All these patterns fuse together to form a serious issue when a child is sick. Communication is crucial to provide medical care to a sick person. This leads to inefficiencies especially in medical caring and providing good services. Organizations have been taking immense effort to address this challenge to better understand the behavior these children and help them to communicate their problems comfortably and easily. One such effort is taken by me, along with valuable inputs from stakeholders, is creating a platform that assists children to learn to advocate, specifically for health-related information. This platform is a simple but effective web application that can be easily accessible and usable by these students.

This application takes inputs from students by asking very simple questions like "How are you doing today?" with a possible answer of "Good" or "Bad". Keeping in mind the ability of students who use this, this application does not require students to type or speak but simply to select the options although this requires some level reading ability. Once a option is selected, the application navigates to another screen based on the choices students have chosen. This application also allows students to choose visual choices instead of texts. It provides questions with answers as visual content which would make it easier for the students to recognize and select appropriate choices--e.g., if a student's arm is paining, the screen would show a visual sketch of parts of human body along with a relevant question. Once the student is done answering all the questions, a report is generated and sent automatically to the person who is in-charge for the session. Basically, this application captures the behavior, state and need of students suffering from spectrum disorder into a consolidated report, without having a real conversation with them.

2. LITERATURE REVIEW

Learning how to speak for yourself, making own decisions about your own life, learning how to get information about you and about your life that involves who's going to support you and how are things going to happen.

Considering the fact of supporting students for health so that teachers understand emotions of the students, I have worked on myriad case studies of self-advocacy to find the importance of it in various fields considering various users.[1] Due to plethora of researches on Learning disability and realization by the parents and professionals about advocacy this article provides an operational definition of self-advocacy as it pertains to adolescent and adult learners with learning disability in postsecondary settings, describes high school and college programs that teach self-advocacy skills and discuss important follow up and support activities essential to the effective use of these skills. The article clearly explains the definition of self-advocacy which is the ability to recognize and meet the needs specific to one's learning disability without compromising the dignity of one's self or to others. The article briefly delineates the use purpose of having taken the skill of advocating for students with disabilities provides students with a comprehensive program to prepare them for self-advocacy in their career. Conclusion to the article is that there is an increase in the assistive technology, legal mandates and a student with learning disability are entering post-secondary educational programs are increasing due to the awareness of the skill of self-advocacy being an important part of a student's' life with learning disability provided they are given effective programs such as I can Do this! Which is a self-motivating skill leading the students to expand their area of interest and successfully complete their education level.

Self-advocacy can be addressed not only for the disabled ones but also for the ones who are afraid to come out for social convenience and hence I decided to take up another article which addresses this issue [3] Social empowerment is designed to prepare individuals to rebuild their political, economic and psychological and social environments. Addressing empowerment for lesbians and gay male populations is critical because self-advocacy to come out in public by addressing themselves

Self-advocacy involving such an audience would just take a lot of will power to come out in public and talk about themselves and self-advocacy technique could help such an audience to talk for themselves and create an awareness among the young generation to enforce themselves in applying in social empowerment strategies and the public. With this, I referred another paper which considers the obstacles faced by persons with spinal cord injury with assistive technology involving ADA and Self advocacy. This article describes the barriers of the people with spinal cord injury (SCI) face re-integrating back to the community.

[5] This article also brings self-advocacy as a component and is based on knowledge into action with the whole trust of self-advocacy involving leadership institutes to help the patients understand the tool of rights. The combination of assistive technology, ADA and self-advocacy gives a greater benefit for the patients to overcome the obstacles faced for the patients to be back into the society and leading a much smoother life .Intellectual disability is a disability characterized by significant limitations in both intellectual functioning and in adaptive behavior, which covers many everyday social and practical skills [6]This article explains the importance of randomised control design with up to 6 month follow up with the user for evaluation using 3R's such as Rights,Respect and Responsibility health self advocacy and recognise and redress health rights

3. METHODOLOGY

Interview session was conducted with the mentor from Kennedy Krieger Center for Autism and Related Disorders to understand the prospective users and what could be the best solution to design the application. Based on the literature review and survey from other papers interview session was done concentrating the design of the application to satisfy the problem statement given. Using ideation and brainstorming technique, with the guidance of my mentor I came up with visual clues that needs to be accommodated in the application to make the application simple for the students to use it. Such as using image cues to question rather that contents to make it difficult for the users to understand the context of the application. Understanding the emotions of the students is something that you can never anticipate cause how each student perceives the image is different. While brainstorming, there are a bunch of important key points that were proposed such as;

1. Keeping It simple (KISS) method where the user understands the transition of the application
2. Supporting voice and textual assistance to help the user understand the transition.
3. The data needs to be sent to the teachers to track the records of each student so that purpose of self-advocacy can be achieved.
4. Data needs to be used tracked with date stamps to understand the student's mood and health conditions which was one of the criteria used for tracking the student's activity using the application.
5. Assistive textual notions to guide the student to use the application is also specified in the application if the student loses a track of direction to go about. Low fidelity sketches are demonstrated in Fig (1---→ low fidelity)
6. Aesthetics needs to be clear and entice the users to use the application.
7. A game to let the students stay and finish he questionnaire to achieve the purpose of the application and letting the

students be responsible of nurturing a living could give a student an emotion aspect of coming back to the application. In this way, the data could be tracked.

3.1 Design

The application was designed with tools such sketch which is a design toolkit built to help create best static design from starting ideas to final artwork. Invision which is a powerful design prototyping tool for high fidelity wireframes for the transition and creation of haptic zones. (UI designs).
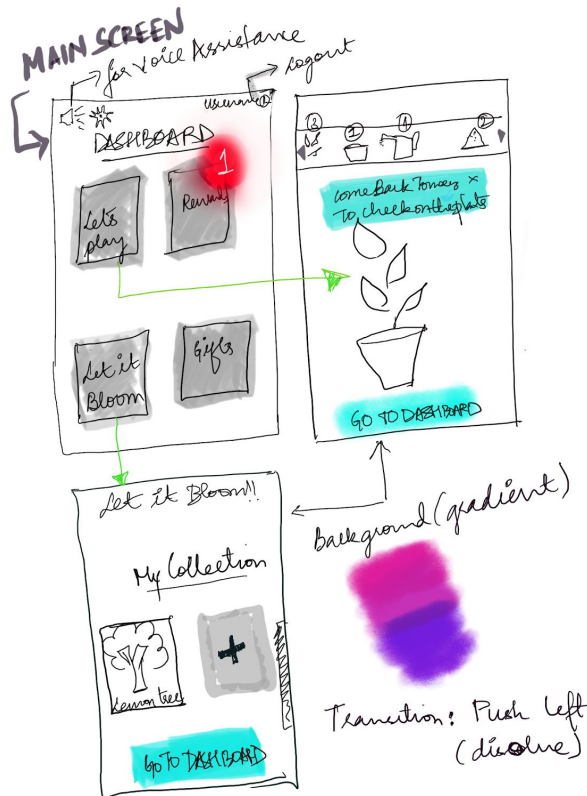

Figure 1. Showing the low Fidelity Sketch of the design

3.2 Interface Design

The screen transitions were done from login page to dashboard which consists of four distinct categories such as let's play which consists of set of questionnaires which the students need to fill in to record the data which would tell the faculty about the student's health and emotions.

Along with this the dashboard consists of rewards and gifts which the application gives the user points and seeds so that the user can plant the seeds to nurture the tree and this makes the user to login back to the application to check the plant in that way, the data of the students can be tracked by the teacher. [Figure 3] The dashboard consist of Let it bloom which consist of collection the trees that students would take care and receive points.

3.3 Evaluation and Testing

Now considering the demographics of the user involved were about ranging from 20-30 to understand transition and the purpose of the application. There were around 7 eclectic participants who

were taken into consideration for testing and evaluation of the application where a pilot testing was done by 2 users who had no knowledge about the application and wanted to check if the transition were understood. Rest of them were asked to participate in the think aloud to understand the expectation of the user and how the users can interact.

Going back and forth and iterating the application for the user alongside to get a uniformity in the understanding the users mind to keep it simple was another task while designing the application. [Figure 2]
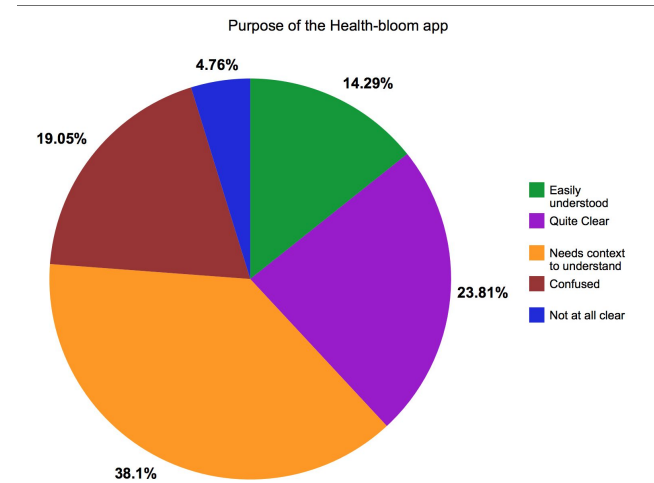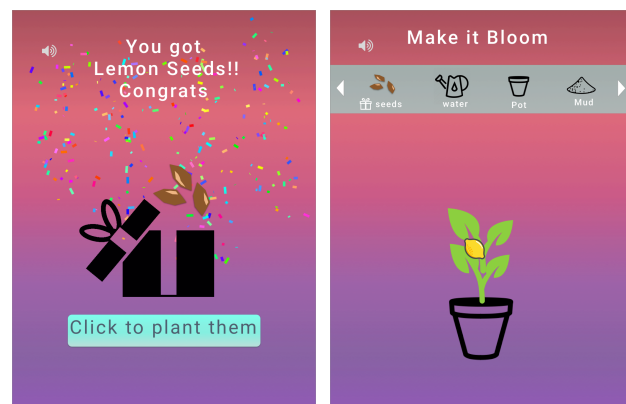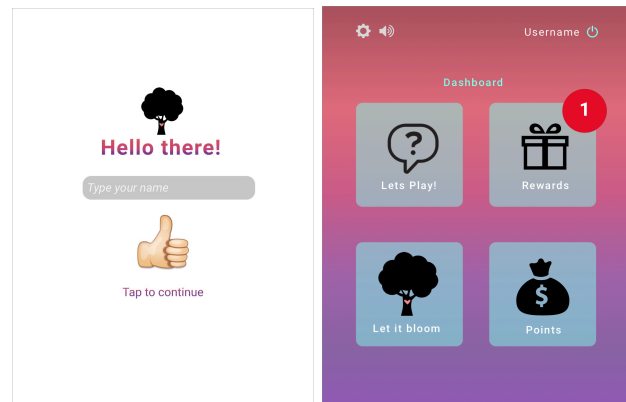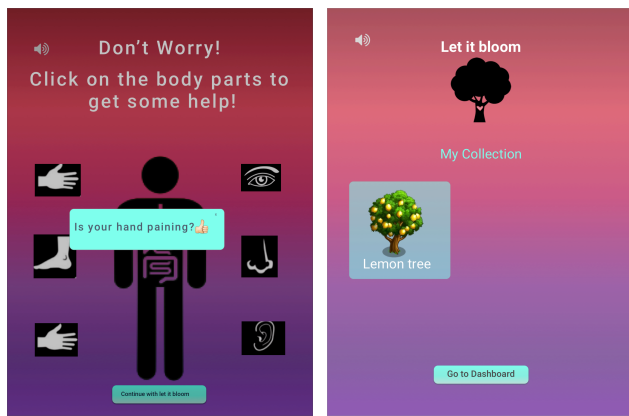

Figure 2. User survey pie chart

Figure 3. Interface Design screens

4.   LIMITATIONS

The results did vary from the proposed solution and design due to time constraints and this can be considered for future works to finish the proposed project.

- The Basic idea of the design and the solution was achieved in the high-fidelity prototype with the help of the surveys from the users this was confirmed.

- Coming to the goals, the project had an extension of tracking data of every user which can be done to let the teachers know that can be taken for future projects and the data could be exported to spreadsheet.

5.   CONCLUSIONS

Children suffering from spectrum disorders face serious challenge with communication. This involves thousands of children and organizations are struggling to understand their behavior, so the need to address this problem space is very important and to help organizations take better care and provide quality service to these children. I have addressed this issue by creating an application that bridges the communication gap between children with spectrum disorders and other people, so they can better share their need and emotions to other people. This application allows students to answer simple questions and choose appropriate choices. To make it more engaging, some of the questions have visual answers.

While literature helped in forming an overall idea of the contribution made by the research community, valuable inputs from stakeholders was vital in making decisions in terms of design and other aspects of the application. Utmost care has been taken while designing this application to make it more simple and usable yet engaging. This application provides consolidated report of the children after they are done answering questions.

5.1   Future Work

This application can be used for treatment for Intellectual disability and children with dementia or Reading disability.Other users dependant on the condition the application could be modified and used for various users.

Physical treatment for adults and children after an accident or pitfall to motivate them to live happily. The application can be used as some sort of simulation game to make them understand the importance of taking care of themselves and education to know about how they can be treated especially adults with mental illness.

6.   REFERENCES

[1] Aase, S., &Price, L. (1987). Building the bridge: LD adolescents' and adults' transition from secondary to postsecondary setting. In D. Knapke, &C. Lendman, (Eds.) Capitalizing on the future (pp. 126–149). Columbus, OH: AHSSPPEDing, W. and Marchionini, G. 1997. *A Study on Video Browsing Strategies*. Technical Report. University of Maryland at College Park.

[2] Anderson, P. L. (1993). Issues in assessment and diagnosis. In L. Brinckerhoff, S. Shaw, &J. McGuire, (Eds.) Promoting postsecondary education for students with learning disabilities: A handbook for practitioners (pp. 89–136). Austin, TX: PRO-ED.

[3] TSavage, T. A., Harley, D. A. and Nowak, T. M. (2005), Applying Social Empowerment Strategies as Tools for Self-Advocacy in Counseling Lesbian and Gay Male Clients. Journal of Counseling & Development, 83: 131–137. doi:10.1002/j.1556-6678.2005.tb00589.x

[4] Turner, E & Wehman, Paul & Wallace, J.F. & Webster, M.-K & O'Bryan, J & O'Mara, S & Parent, W. (1998). Overcoming obstacles to community reentry for persons with spinal cord injury: Assistive technology, ADA and self-advocacy. Journal of Vocational Rehabilitation. 10. . 10.1016/S1052-2263(98)00014-2.

[5] Goldman, A.S. & Tachau, S.M.. (1996). Empowerment, advocacy, and self-advocacy for assistive technology. 5. 243-250.

[6] Feldman, M. A., Owen, F., Andrews, A., Hamelin, J., Barber, R. and Griffiths, D. (2012), Health self-advocacy training for persons with intellectual disabilities. J Intellect Disabil Res, 56: 1110–1121. doi:10.1111/j.1365-2788.2012.01626.x

[7] Leanne Gosse, Dorothy Griffiths, Frances Owen, Maurice Feldman, Impact of an Individualized Planning Approach on Personal Outcomes and Supports for Persons With Intellectual Disabilities, *Journal of Policy and Practice in Intellectual Disabilities*, 2017, **14**, 3

[8]

[9] Yu, Y. T. and Lau, M. F. 2006. A comparison of MC/DC, MUMCUT and several other coverage criteria for logical decisions. *J. Syst. Softw.* 79, 5 (May. 2006), 577-590. DOI= http://dx.doi.org/10.1016/j.jss.2005.05.030.

[10] Spector, A. Z. 1989. Achieving application requirements. In *Distributed Systems*, S. Mullender, Ed. ACM Press Frontier Series. ACM, New York, NY, 19-33. DOI= http://doi.acm.org/10.1145/90417.90738.