Mehal Agrawal (Individual Pitch)

Need Statement

- Learning disability
- Prevent depression
- Use blogging

Kids with learning disabilities who lack self-esteem and are prone to depression due to self-doubt about their place in society need to start blogging so they are able to channel their insecurities into something positive consequently helping them to see their downcast experiences in a different light by engaging with their peers and establishing social connections resulting self-assurance of their value in society and boosting their self-moral.

a= lack-self confidence and are prone to self-doubt about their place in society

x= Kids with learning disabilities

y= blogging so they are able to channel their insecurities into something positive

Research

X-a

"The stress and frustration a child experiences at school is often accompanied by feelings of shame associated with underperforming. There is also the social stigma of being 'different' to deal with." (About the Author) Kids with learning disabilities tend to suffer from low self-esteem which results in them having lower confidence. These attributes result in them having a poor image of themselves and thinking that they are different from their peers. Many times they think of themselves as stupid convicing themselves that they will never be like others leading them to not want to do anything and acting out. This also results in them not participating in social activities. Kids also tend to create an environment for themselves surrounded by negativity and loneliness. (About the Author)

Y-a

In this post the author talks about how blogging helped her when she was drowning. She explains how blogging helped her during hard times such as when she lost her father and when she had a miscarriage. Blogging helps with people express their emotions and feel heard when they cannot figure it out themselves. (Paris, B.)This website helps identify evidence through science and mental health experts as to why blogging helps kids and adults. It states how it helps them come out of their shell and gain self confidence and self esteem. Through blogging they are able to ease their social anxiety and how anonymous blogging can keep them from feeling judged yet heard. Many psychologists and mental health experts encourage their patients to blog as it can help them gain support from people they don't even know and extend their boundaries by making social connections. (Novotney, A.)

X-y

"...it helps me to see me and my world differently. It helps me look at myself less and more at the bigger picture." In this post the author suffers from a disability and she talks about how writing helps her cope with her feelings. It gives her a temporary place where she can channel her thoughts and emotions. She talks about how her disability made her stand out from others and how she struggled with coping with emotions and how she felt physically as well as mentally. She advises that other kids do the same and even take blogging into consideration. She had a positive experience when writing and it always helped her channel her emotions and figure out what was going on in her life in a positive way. (Ilana Estelle)

Table

Work to do	X, y, a?	Summary of what you are Exploring	Data source

Big Text Analysis (word cloud)	Y and x	With the word cloud I am going to try to find words that stand out in each data set which might have a connection to each other. The words I think that will be largest in size are blogging/ self-esteem/ and disability. I am hoping to find words like happy/ angry which help me identify the emotions people with learning disabilities feel and how that added to their need to blog. Hypothesis: There are going to be different/more words related to emotions (felt/ alone/ understand) in a blog written by a person who has a disability versus a blog written by a person without one. Null Hypothesis: There are going to be the same number of words related to negative emotions in a blog written by a person who has a disability and a	Ilana Estelle: How writing helped me cope with my disabilities. (2020, July 24). Retrieved March 12, 2021, from https://www.writers-online.co.uk/how-to-write/ilana-estelle-how-writing-helped-me-cope-with-my-disabilities/#:~:text=Being%20able%20to%20write%20helps,helps%20us%20understand%20ourselves%20better. Blogger, P. (2011, April 05). 7 tips for bloggers with learning disabilities. Retrieved March 12, 2021, from https://problogger.com/7-tips-for-bloggers-with-learning-disabilities/ Blogs used for analysis: https://www.time-to-change.org.uk/blog/depression-can-affect-anyone-theres-not-always-reason https://www.writers-online.co.uk/how-to-write/ilana-estelle-how-writing-helped-me-cope-with-my-disabilities/#:~:

		blog written by a person without one. text=Being%20able%20to%20write%20helps,helps%20us%20understand%20ourselves%20better. Both of these articles talk about a writer with a learning disability and her success of being able to write her emotions and cope with them. They help emphasize on the need for one to have a way to write or blog to help boost their self-esteem/ confidence.

Meme Analysis	Y and a	Through the network map I am hoping to find a relationship between the number of people depressed and the number of people blogging. Hypothesis: I think mostly bots will be starting this information and spreading it as many people feel uncomfortable when spreading information about people with disabilities especially when they are politically fueled.	blogging, depression
Geographic Information System	X and a	I will be exploring the number of percent of kids with disabilities enrolled in a public school versus the amount of kids per 100,00 who have been hospitalized due to mental health issues. I will try to look to see if these are directly related which may allow me to make the assumption that when more kids with disabilities go to school they are more likely to end up hospitalized due to mental health reasons.	Special education enrollment. (n.d.). Retrieved March 12, 2021, from https://www.kidsdata.org/topic/95/special-education/table#fmt=1146&loc=2,127,347,1763,331,348,336,171,321,345,357,332,324,369,358,362,360,337,327,364,356,217,353,328,354,323,352,320,339,334,365,343,330,367,344,355,366,368,265,349,361,4,273,59,370,326,333,322,341,338,350,342,329,325,359,351,363,340,335&tf=124 (demonstrates the percent of kids going to school with learning

		disabilities by county in CA) Hospitalizations for mental health issues, by age group. (n.d.). Retrieved March 12, 2021, from https://www.kidsdata.org/topic/715/mental-health-hospitalizations/table#fmt=2342&loc=2,127,1658,1659,331,1660,171,1661,357,369,362,360,16

		62,364,356,217,354,1663,339,365,343,367,344,366,368,265,349,361,4,273,59,370,326,1772,341,338,350,342,359,363,340,335&tf=108&ch=1066,1065,1137 (highlights the number of kids hospitalized per county in California by age group per 100,000)

In-sheet statistical calculation	X-a	I will be exploring the average number of kids going to school per county and the number of hospitalizations per county. I will average out the age groups so I am able to get one number per county and then compare it to the percent of kids going to school for that county. Special education enrollment. (n.d.). Retrieved March 12, 2021, from https://www.kidsdata.org/topic/95/special-education/table#fmt=1146&loc=2,127,347,1763,331,348,336,171,321,345,357,332,324,369,358,362,360,337,327,364,356,217,353,328,354,323,352,320,339,334,365,343,330,367,344,355,366,368,265,349,361,4,273,59,370,326,333,322,341,338,350,342,329,325,359,351,363,340,335&tf=124 (demonstrates the percent of kids going to school with learning disabilities by county in CA) Hospitalizations for mental health issues, by age group. (n.d.). Retrieved March 12, 2021, from https://www.kidsdata.org/topic/715/mental-health-hospitalizations/table#fmt=2342&loc=2,127,1658,1659,331,1660,171,1661,357,369,362,360,1662,364,356,217,354,1663,339,365,343,367,344,366,368,265,349,361,4,273,59,370,326,1772,341,338,350,342,359,363,340,335&tf=108&ch=1066,1065,1137 (highlights the number of kids

			hospitalized per county in California by age group per 100,000)
High-Level statistical Graph	X-a	This PDF contains two charts that compare the rate at which able and kids with learning disabilities experience depression on a scale. I can graph this relationship to see the correlation between 1. depression and able kids 2. Depression and kids with learning disabilities 3. Anxiety and kids with learning disabilities 4. Anxiety and able kids. Hypothesis: I believe that children with disabilities will experience a higher depression rate than kids without. Null hypothesis: Kids with disabilities and kids without disabilities will experience the same rates of depression.	https://www.worldwidejournals.com/indian-journal-of-applied-research-(IJAR)/recent_issues_pdf/2015/July/July_2015_1435758601__141.pdf Meghwal Jyoti. A Study of Anxiety & Depression Among Learning Disabled Children. 2015. PDF File. (has four relationships between able kids, kids with learning disabilities, depression, and anxiety)

Citations:

About the Author Meredith Cicerchia Meredith Cicerchia is a teaching affiliate at the University of Nottingham. (2020, March 03). Learning disabilities and self-esteem. Retrieved March 12, 2021, from https://www.readandspell.com/us/learning-disabilities-and-self-esteem

Ilana Estelle: How writing helped me cope with my disabilities. (2020, July 24). Retrieved March 12, 2021, from https://www.writers-online.co.uk/how-to-write/ilana-estelle-how-writing-helped-me-cope with-my-disabilities/#:~:text=Being%20able%20to%20write%20helps,helps%20us%20understand%20ourselves%20better.

Novotney, A. (2014, June). Blogging for mental health. Retrieved March 12, 2021, from https://www.apa.org/monitor/2014/06/blogging#:~:text=In%20a%202013%20study%20of,emotional%20distress%20(Psychological%20Services).
Paris, B. (2015, January 13). Why blogging can boost your self-esteem. Retrieved March 12, 2021, from https://www.huffingtonpost.co.uk/britchick-paris/self-esteem-blogging_b_6148876.html

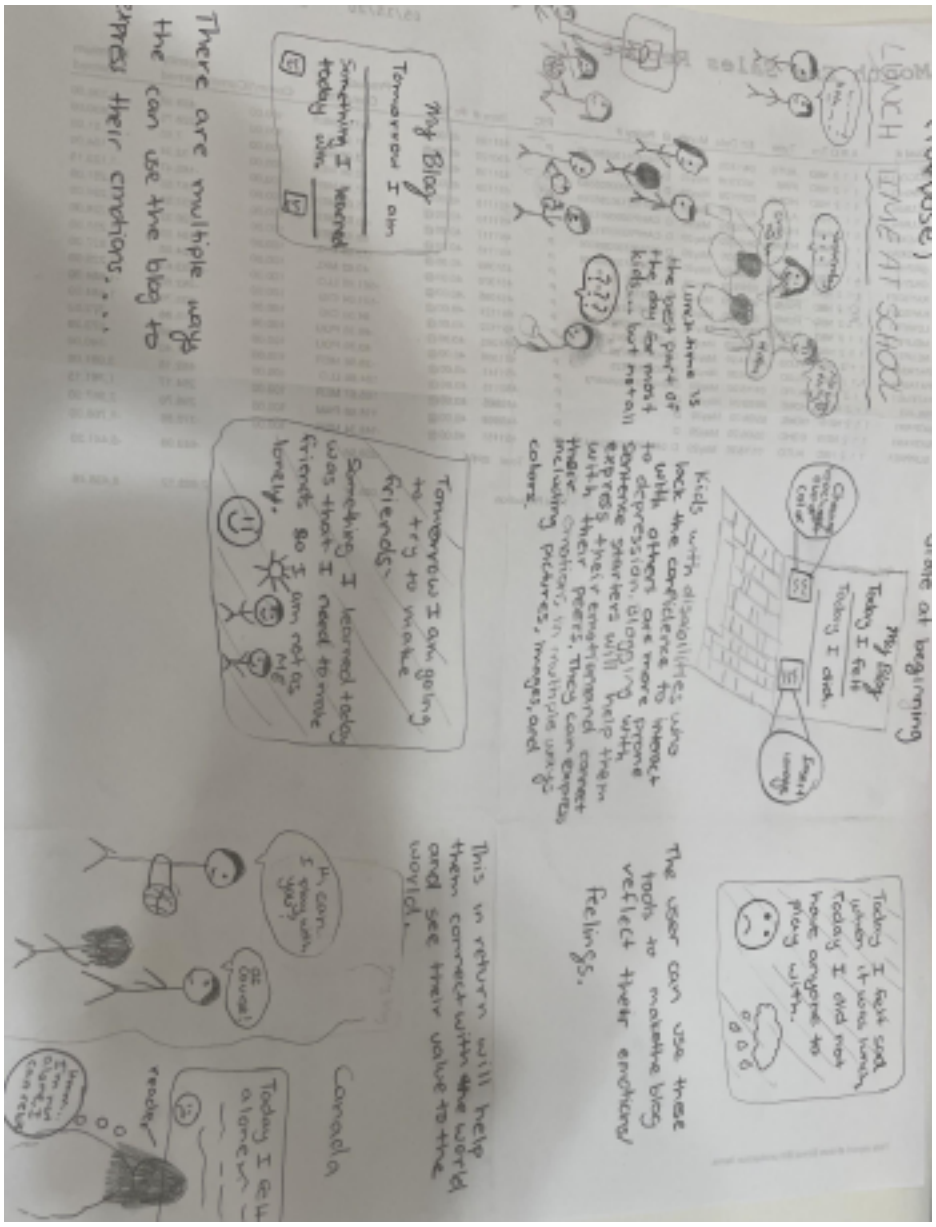
Code/ Storyboard

Our code's goal is to help make a platform in which kids can blog using colors and sentence starters to help them get creative and express their feelings consequently resulting in them coping with emotions and connecting with the world.

Method 1: colorBackground- this is the first method we will be coding and method two will rely on the coding of this method as the first step a user will take while building their blog is choosing the background of their "paper". This method will use a collection as colors will be assigned to values or certain numbers. Rather than typing out the name of the color we will have values assigned to them resulting in it being a collection and more efficient.

Method 2: sentenceStructure1- The end result of the method will be sentence starters that kids with learning disabilities/ kids in boarding schools (Anjali's side of the project) can use to help express their emotions as they tend to struggle with this. For this method to run, the background color has to be chosen first which is method 1. This method will have user input as they can fill in the blank part of the sentence starter. Ex. Today I felt _____. The user would drag and drop the sentence starter onto their blog and then fill in the blank. Selection would be used while

coding it because only if the user chooses that specific sentence starter then will it be added to their blog. Sequence would be demonstrated in the method because the program would run in a sequential order executing one line at a time. Iteration would be present because we could use a loop to code the drag and drop part of the code to make it more efficient and less tedious.



Timeline

Week 1 (due March 22 am)	Finish Pitch/ Need Statement/ Timeline/ start deliverable/ collaboration paragraph
Week 2 (March 29 am)	Finish two deliverables, write respectiveanalysis
Week 3 (by April 5 am)	Finish two deliverables, write respectiveanalysis

Week 4 (by April 12 am)	Be done with all deliverables
Week 5 (by April 26 am)	Work on the sentence starter methods, debug all of them, start methods paragraphs
Week 6 (by May 3 am)	Work on create narrative
Week 7 (by May 10 am)	Create video of the program running (1 min max)
Week 8 (by May 17 am)	Finishing touches, look over paragraphs, blocks of code, as well as need statement

6 Qualities of Code

Polymorphism is the ability of different objects to respond in a unique way to the same message. In our case, this program is polymorphic, because depending on the **background** choice, **image** choice, and **selection** of sentence starters, the user can tailor his/her blog so it reflects their exclusiveness through multiple characteristics of the app.

Decidability is seen in our project, because an output is displayed every time we run the program. With the various selection of different features that our user can attain, every time an output will be displayed, whether that includes the pressing the buttons labeled as colors and the background color changing, or choosing an image which is inserted that represents how they are feeling, choosing a sentence starter which displays in the textbox of the blog, or simply if they just want to write in the textbox, our program gives an output for every input.

Completeness is present in our code because all cases always display a dependent output. In our flow chart, we can see that after picking sentence starters the user is forwarded back to the homepage, where multiple buttons can be pressed for an output to occur, whether that means a pun is displayed or the background color is changed. For example if we follow one path of the flow chart, the user first chooses any sentence starter, then the corresponding input (choice of sentence starter) is displayed as an output in the textbox where they are typing. From there, they can press the buttons labeled red, green, blue, yellow, or pink and a unique pun to the color will be displayed. After this occurs, the user is then also able to choose between the output they want displayed, such as an image (by “Choose an Image” button) or by simply clicking the button “Finish Blog”, as seen by the last two boxes on our flowchart. Another path could be choosing a sentence starter, choosing an image, then choosing a background color, and finally

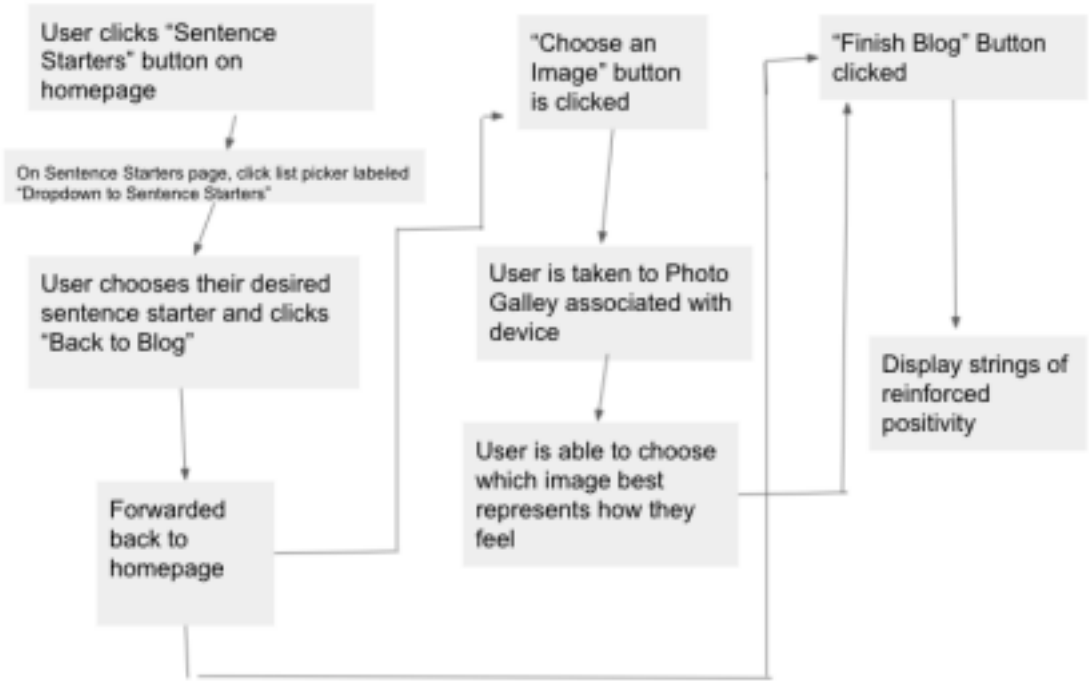
clicking finish blog. All of these inputs assure that we have the corresponding output.

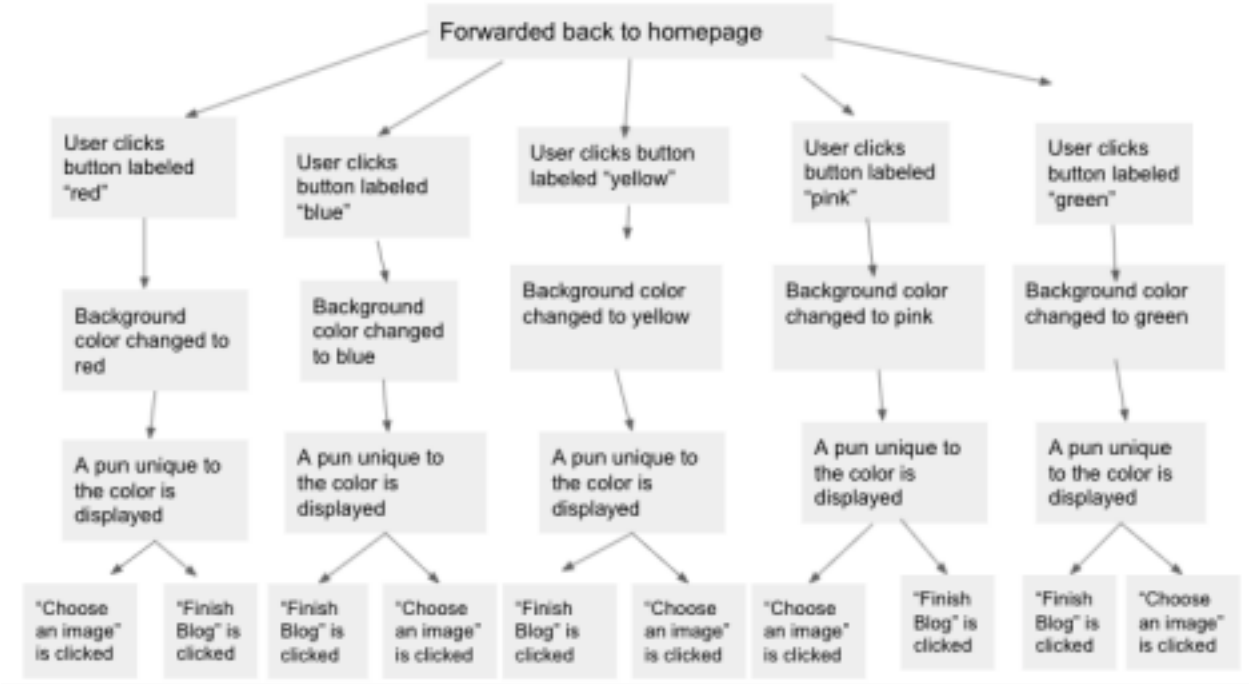
Soundness is also seen in our project, because similarly to correctness, a “sound” output would be seen according to when the data between variables is transferred through two different screens. We are able to see how that input of the user clicking the desired sentence starter they want is now the “output” on the main home blog screen, and provides the user a way of starting to write their new blog.

Correctness refers to the fact that the output is correct based on our algorithm (between what should happen and what actually happens). Correctness is present because whenever a user clicks a “Color” button when choosing the Background Color, it always gives them the corresponding background color as the labeled button as well as a personalized saying for each color. An example would be when clicking the “Red” button, the background color turns red and they receive a message saying “Wow! This color is unique just like you!”

Efficiency refers to when the algorithm uses less time, number of steps, and amount of memory. We use buttons labeled on our “Screen 8” page, which allows the user to be efficient when switching between multiple screens of the blog, and can be considered as a heuristic. Additionally, the data that we garner from “Screen 8”, is also replaced with the text box on the blog homepage. We also had one general method (changing the background color called BackgroundColor) which worked with many different parameters (different lists to be specific) which was efficient because we did not have to write a unique method for each different parameter or each time we wanted to call a specific list.

Evidence for Completeness





Word Clouds

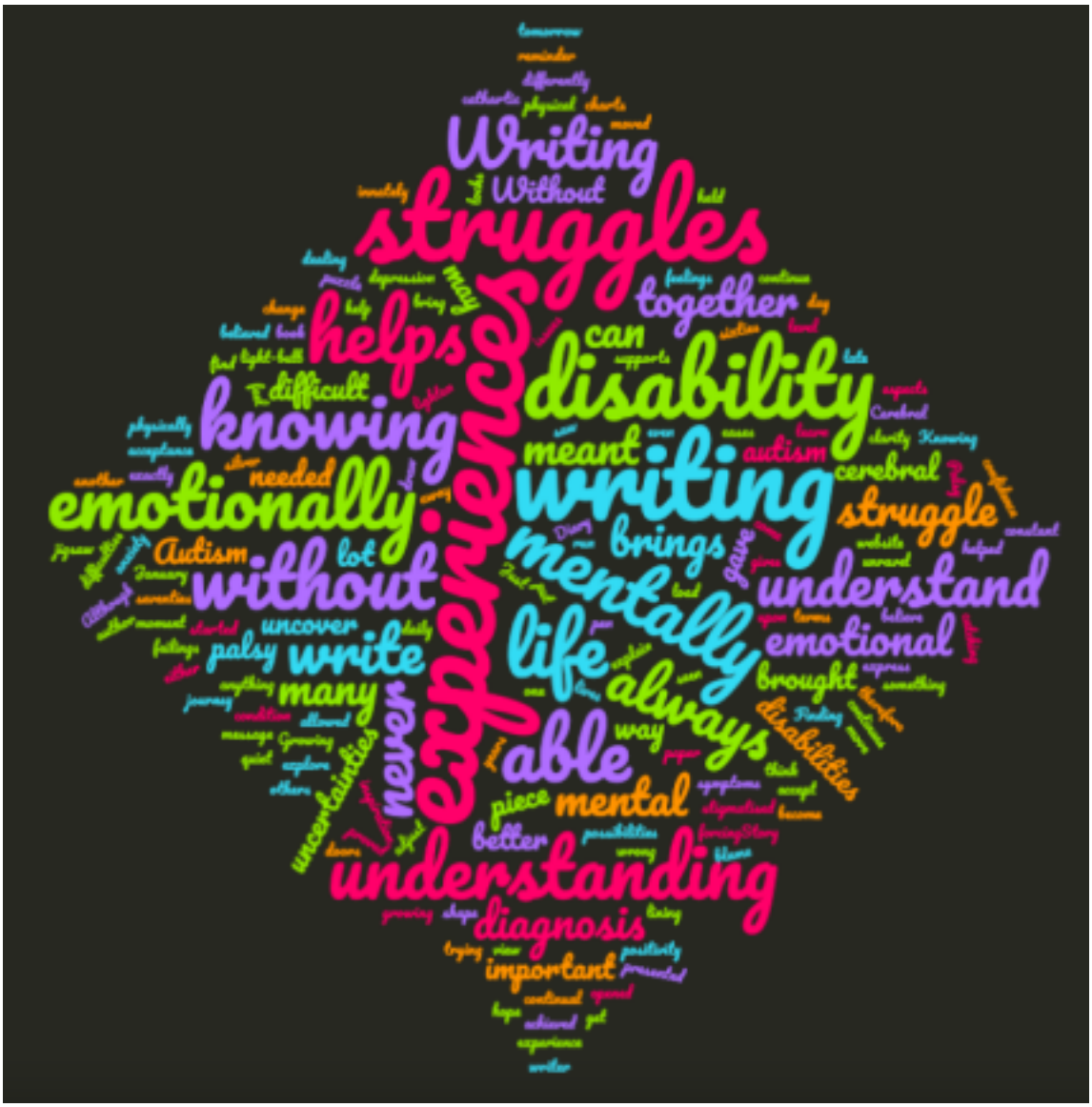
Objective: With the word cloud I am going to try to find words that stand out in each data set which might have a connection to each other. The words I think that will be largest in size are blogging/ self-esteem/ and disability. I am hoping to find words like happy/ angry which help me identify the emotions people with learning disabilities feel and how that added to their need to blog.

Hypothesis: There are going to be different/more words related to emotions (felt/ alone/ understand) in a blog written by a person who has a disability versus a blog written by a person without one.

Null Hypothesis: There are going to be the same number of words related to negative emotions in a blog written by a person who has a disability and a blog written by a person without one.

Kids Without Disabilities

Kids With Disabilities



Results						
	blogger w/ disability	blogger w/o disability				Row Totals
struggle	11 (8.67) [0.63]	2 (4.33) [1.26]				13
experience	10 (7.33) [0.97]	1 (3.67) [1.94]				11
emotion	9 (6.67) [0.82]	1 (3.33) [1.63]				10
feel/felt	3 (8.00) [3.12]	9 (4.00) [6.25]				12
always	5 (7.33) [0.74]	6 (3.67) [1.48]				11
Column Totals	38	19				57 (Grand Total)

The chi-square statistic is 18.846. The *p*-value is .000843. The result is significant at $p < .05$.

Through the world clouds we are able to see the words that stand out or are present in the corpi the most often. The words that are bigger show that they have a higher frequency while the words that are smaller show that they have a lower frequency in the bodies of text. The words that are most common in the blogger without the disability are "**depression", "always", "felt" and "now"**. The words that are most commonly seen in the second corpus, or the one written by a blogger with a disability are **"struggles", "experiences", "disability", "writing", "understanding" and "always".** Through the word clouds we are able to see how people who have depression and people who have disabilities have similar feelings. While writing they

both use the word “always” which conveys how they are able to express their feelings of how they used to feel (this assumption can be made by looking closer at the text and where the words appear in each of the corpi). Evidence for my null hypothesis is demonstrated through the fact that there are the same number of words related to emotions in both our corpi. The word clouds demonstrate how blogging helped people with depression and disabilities express their emotions and connect with the world, highlighting that a forum for blogging would be helpful for them. In the chi squared table, I took words that showed up frequently in both the corpi and compared them to see if they both used the same amount of words to express their emotions. The degrees of freedom is calculated by subtracting the amount of categories by 1 which means it is 4. The chi squared value is 18.846. The p-value, .000843, is significantly less than 5% portraying that the writers use different language while writing. From this we can assume that the writers use different emotive language while expressing their emotions in their blogs allowing us to accept the hypothesis. The blogger with a disability has more emotive words and talks about tangible ideas such as writing and understanding allowing us to assume that people with bloggers have a lot to say but lack the confidence to be able to say it while talking to people. Blogging gives them a platform to be able to express themselves and their feelings/ ideas giving them confidence and a connection to other people. The word cloud allows us to assume that providing a blogging platform to people with disabilities would help them overcome their lack of confidence and help share their experiences and feelings, consequently connecting them to the world and allowing them to understand that their feelings also matter.

Corpi:

Corpus 1 (Body of Text for blog written by person w/ disability):

Without my disabilities and experiences to draw upon for inspiration, I could not have started to write, or run my website The CP Diary. So for me I feel that without my experiences, I would never have become an author or writer. My book: *Cerebral Palsy: A Story* charts my disability journey. My writing has proved to be a cathartic experience and a constant reminder that there is always a silver lining, a message of positivity and a way through our experiences. Not knowing I had cerebral palsy until I was 46 meant I had a lot of catching up to do, trying to understand my struggles and my experiences. I needed to understand and learn to accept what I saw as my struggles and failings. There was a lot I needed to come to terms with and I believe that I could never have achieved any level of acceptance, or understanding of my life, without me writing about my experiences.Although I have always seen my life as a jigsaw puzzle, knowing there was something wrong, physically, mentally and emotionally, but not knowing what, I held on to hope. Not knowing always gave me a quiet confidence that tomorrow was another day and that I would get better. I never gave up on that. I innately believed I would find out about my disability, what my disability meant and for me to understand how and why I presented the way I did. It is only through my writing that I have been able to uncover many aspects of my disability. Knowing about my disabilities late, was difficult. But my view is you can either continue to blame others, or you change what you can and move on. Without understanding myself or what exactly I was dealing with growing up, I could never have moved on mentally or emotionally. My writing has opened many doors for me and has brought about many possibilities. It was difficult to explain my mental and emotional struggles and my anxiety and depression, without a diagnosis. Finding out about autism in January 2019, some 10 years after my cerebral palsy diagnosis and then being able to unravel my symptoms and write about my experiences, has allowed me to piece those struggles together. Writing helps us uncover our issues, and our struggles. For me, it has brought my life together and supports me mentally and emotionally. Just being able to put pen to paper, helps me lighten the load. Writing gives me feelings and experiences to explore and brings about understanding, forcing me to think differently about my life. Writing has helped me piece my life together, it eases my mental and emotional struggles and brings about understanding. My autism diagnosis has been an important ‘light-bulb’ moment for me, one which continues to shape my writing. Autism is a condition that ‘locks you away’ mentally and emotionally; therefore, it is important I am able to write about my experiences and express my struggles. Autism is my continual daily struggle. Growing up in the sixties and seventies when disability was stigmatised, without knowing anything about my disability,

meant I would always struggle with my mental, emotional and physical difficulties. This is where writing helps. Being able to write helps us adjust into our lives mentally and emotionally. It brings understanding where we may have uncertainties, and even without the uncertainties, writing can help bring us more clarity where we may struggle. Writing helps us understand ourselves better.

This blog is written by a person with a disability and is about how she coped with it. She shares her experiences and how finding out about her disability much later in her life than normal affected her. She talks about how autism shapes you and how it affected her everyday lifestyle. It changed everything inside of her mental health and emotional health. She sums it up by talking about how others can learn to cope with it through writing about as that has helped her. It is about 580 words.

“Ilana Estelle: How Writing Helped Me Cope with My Disabilities.” *Writers Online*, 24 July 2020, www.writers-online.co.uk/how-to-write/ilana-estelle-how-writing-helped-me-cope-with-my-disabilities/.

Corpus 2:

This was the person that I had spent 3 and a half years travelling the world with. The person who I had bought my first home with. We were doggy parents to a beautiful German Pointer puppy now, and I showed no interest or enthusiasm for making lasting memories or a lovely home together. I just existed. Going through the motions day after day until oblivion. Even though I was always there, she must have felt so alone. That's not living, that's wasting time. All through my teenage years, my 20's and most of my 30's I've always been told that I'm so laid back, relaxed and nothing ever bothers me. I always believed that these were good personality traits. Ever agreeable, 'happy' to go with the flow and always aiming to please. But there were other signs as well. I never had much drive or motivation to do well academically. I often felt worthless, tired, hopeless, and anxious. I dismissed the notion of it being depression, as I had no reason to be sad. I had a great childhood with loving parents. I'd found my soulmate and now owned a house in a beautiful part of the country. I had a good job with good people. And I was healthy, and so was everyone important to me. So why was I feeling like this? I decided to seek help about a year ago now. My depression had reached a point where I just wanted to vanish into a puff of smoke. Everything, every task, every email, every small job felt like an absolute chore. So, as silly as I thought I was being, I went to see my doctor. And even before finishing my first sentence I completely broke down. It all came out and as bad as I felt, it was a relief to finally tell someone how I was feeling. That first conversation was a hugely important first step to a happier me. It’s been a long road. I'm not going to lie and say that the medication (Sertraline aka Zoloft) cured me overnight. I still feel down, tired and some days are still a struggle. But I'm a lot better. My relationship is healthy again, I'm focused at work and enjoying life a little more each day. She’s been very supportive and now understands why there are some days when I don’t want to talk or do anything. Aspects of my behaviour that used to be annoying now have an explanation. And this made a big difference to me too. Whereas previously I felt like I had to thrust “happy” me to the forefront every day, I no longer needed to. This only drains you further in the long term, and the cracks will start to show. For me, this mostly manifested itself as irritability. I had no patience for anyone or anything and I’d snap and backchat at even the most trivial things. My story? Well, I only realised that I had symptoms of clinical depression recently. And probably that I've had it a lot longer than I thought.I was always of the belief that depression was a result of a traumatic event, a loss, stress, unhappiness at home, being bullied, those types of things. But it turns out you can just have bad brain chemistry. My brain just doesn't produce enough serotonin. It dawned on me that I no longer enjoyed the things I used to love. I couldn't remember the last time I laughed.

This blog was written by someone who did not have a disability yet still suffered from depression. He talks about how depression can affect anyone including people who come from loving families and are surrounded by many caring people, like him. He talks about his symptoms and how he was not able to put them together to have a diagnosis. He mentions how he finally confronted his doctor and the relief he felt after. He says that it has been a “long road” back and it was not an overnight fix, it is something he struggles with on a daily basis. It is also about 850 words.

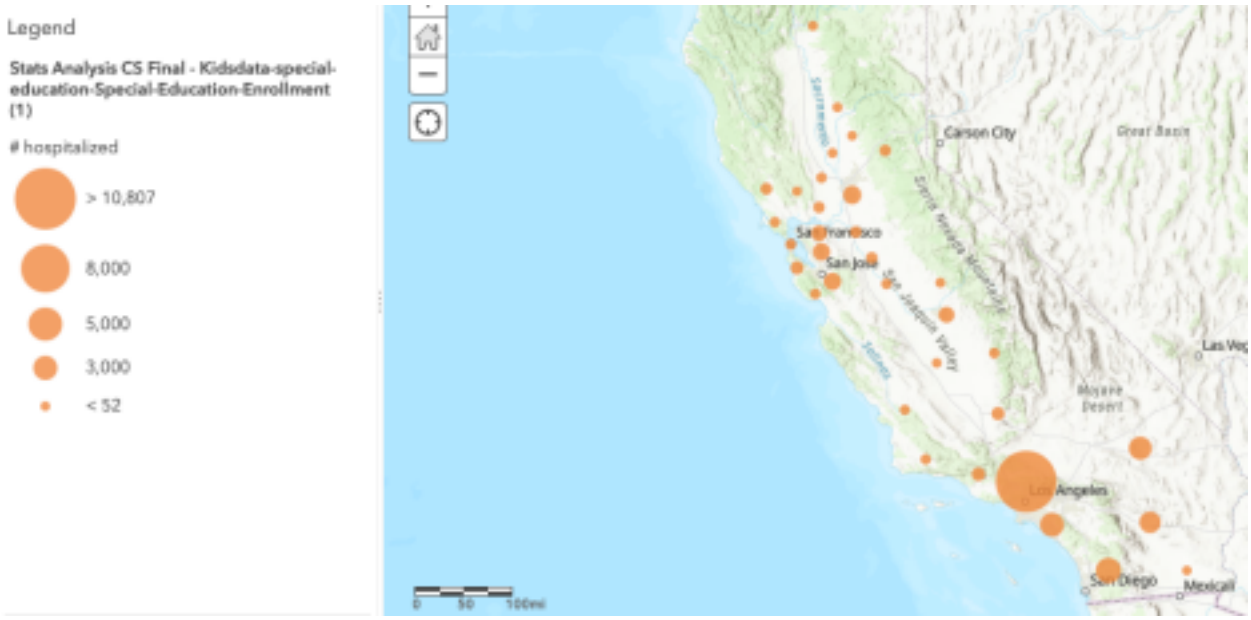
“Depression Can Affect Anyone, There's Not Always a Reason.” *Time To Change*, 17 Sept. 2020, www.time-to-change.org.uk/blog/depression-can-affect-anyone-theres-not-always-reason.

Meme Analysis

Hypothesis: I think mostly bots will be starting this information and spreading it as many people feel uncomfortable when spreading information about people with disabilities especially when they are politically fueled.

For the meme analysis part of the project I chose the word “disability” and analyzed fake news surrounding it. I found an article with the headlines “Illegal Charged with Murdering Four Americans Claims He is ‘Mentally Disabled”. Through the map we can see that most of the accounts circulating this news are controlled by humans as the human like score is 100 while the bot like score is only 66. We can also see that on the map there are more blue dots than any other color. This news most likely started spreading through an account which was more bot-like as the origin of the biggest cluster is yellow. The dots around that cluster are connected by arrows going out from the center showing how the news spread. Since the arrows are longer while going from the origin to the first wave of people who got the information it shows that it took a longer time to spread. On the other hand, after the news was spread to the first wave the arrows are much smaller signifying that information started spreading faster. The smaller clusters that are not connected to the main one resemble related information spreading but not the same exact article. There are many small clusters which also demonstrate that the news tended to spread only a little before dying down quickly. From this we can assume that many people did not feel comfortable sharing this information which is why they stopped spreading it. Furthermore, since the arrows are gray it highlights that the information spreading is unreliable and does not have any proof. The graph provides sufficient information to verify my hypothesis that the information would most likely start by robots with the intentions of gaining money. It does not fully support the second part of my hypothesis because there are humans present in the graph and the information does spread to them. However, there are less arrows coming out of the blue dots (the human accounts) signifying that they are not spreading it as much as the bots, rather they are just receiving the information. Through the timeline we can see that the news spread rapidly through the first few days but then tapered off by August 16. This could be because people did not feel comfortable walking about this topic or lost interest in it.

ArcGis



Hypothesis/ objective: I think the dots of both the layers (# of hospitalizations and # of enrolled) will be about the same because as the number of disabled students enrolled increases the number of hospitalizations due to mental health issues will also increase.

This map supports my hypothesis. The scale in the legend for each map is different.

For this reason, we cannot analyze the numbers directly but rather how the sizes of the dots compare. The top screenshot shows the number of hospitalizations per county and the bottom screenshot shows the number of disabled students enrolled in school. We can see that when the dots of both the maps are at the same location their sizes are about the same. From this map we can also infer that since the hospitalizations are related to the number of disabled students enrolled, counties with

disabled students tend to have a corresponding number of hospitalizations. Since these two variables correspond it emphasizes the need for a forum in which students with disabilities can express their emotions releasing thoughts related to depression. This will help decrease the amount of hospitalizations so that the dots of the hospitalizations are smaller than the dots of the number of students with disabilities enrolled rather than the same size.

Special education enrollment. (n.d.). Retrieved March 12, 2021, from https://www.kidsdata.org/topic/95/special-education/table#fmt=1146&loc=2,127,347,1763,331,348,336,171,321,345,357,332,324,369,358,362,360,337,327,364,356,217,353,328,354,323,352,320,339,334,365,343,330,367,344,355,366,368,265,349,361,4,273,59,370,326,333,322,341,338,350,342,329,325,359,351,363,340,335&tf=124

"Hospitalizations for Mental Health Issues, by Age Group." *Kidsdata.org*, www.kidsdata.org/topic/715/mental-health-hospitalizations-age/table#fmt=1016&loc=2,127,1658,1659,331,1660,171,1661,357,369,362,360,1662,364,356,217,354,1663,339,365,343,367,344,366,368,265,349,361,4,273,59,370,326,1772,341,338,350,342,359,363,340,335&tf=124&ch=1137&sortType=asc.

In Sheet Statistical

E12

	A	B	C	D	E
1	County	# enrolled	# hospitalized		
2	Alameda	26,809	1,703		
3	Butte	4,479	156		
4	Contra Costa	22,897	1,327		
5	Fresno	22,089	1,400		
6	Imperial	4,427	52		
7	Kern	22,091	811		
8	Kings	3,220	117		
9	Los Angeles	196,844	10,807		
10	Madera	3,485	172		
11	Marin	4,059	276		
12	Merced	7,261	291		
13	Napa	2,672	106		
14	Orange	58,144	3,054		
15	Placer	8,666	515		
16	Riverside	56,880	2,542		
17	Sacramento	33,596	1,902		
18	San Bernardino	53,634	2,869		
19	San Diego	72,123	3,341		
20	San Francisco	7,885	383		
21	San Joaquin	19,474	533		
22	San Luis Obispo	4,731	234		
23	San Mateo	11,267	824		
24	Santa Barbara	8,304	288		
25	Santa Clara	30,960	1,692		
26	Santa Cruz	5,565	300		
27	Shasta	3,504	176		
28	Solano	8,081	473		
29	Sonoma	10,159	561		
30	Stanislaus	14,074	537		
31	Sutter	2,828	135		
32	Tulare	9,753	302		
33	Ventura	17,598	915		
34	Yolo	4,016	302		
35	Yuba	2,139	109		

Alameda	26,809	1,703	15.74221961	/FOR EVERY ONE HOSPITALIZED 15 ARE ENTROLLED
Butte	4,479	156	28.71153846	
Contra Costa	22,897	1,327	17.25470987	
Fresno	22,089	1,400	15.77785714	
Imperial	4,427	52	85.13461538	
Kern	22,091	811	27.23921085	
Kings	3,220	117	27.52136752	
Los Angeles	196,844	10,807	18.21449061	
Madera	3,485	172	20.26162791	
Marin	4,059	276	14.70652174	
Merced	7,261	291	24.95189003	
Napa	2,672	106	25.20754717	
Orange	58,144	3,054	19.03863785	
Placer	8,686	515	16.82718447	
Riverside	56,880	2,542	22.37608183	
Sacramento	33,596	1,902	17.66351209	
San Bernardino	53,634	2,869	18.69431858	
San Diego	72,123	3,341	21.58724933	
San Francisco	7,885	383	20.58746736	
San Joaquin	19,474	533	36.53658537	
San Luis Obispo	4,731	234	20.21794872	
San Mateo	11,267	824	13.67354369	
Santa Barbara	8,304	288	28.83333333	
Santa Clara	30,960	1,692	18.29787234	
Santa Cruz	5,565	300	18.55	
Shasta	3,504	176	19.90909091	
Solano	8,081	473	17.0845666	
Sonoma	10,159	561	18.1087344	
Stanislaus	14,074	537	26.20656611	
Sutter	2,828	135	20.94814815	
Tulare	9,753	302	32.29470199	
Ventura	17,598	915	19.23278689	
Yolo	4,016	302	13.29801325	
Yuba	2,139	109	19.62385321	

Hypothesis/ Objective: How does the number of hospitalizations relate to the number of students who are disabled enrolled in school? (determine this using a ratio)

I found two data sets, one with the number of disabled students enrolled into school and one with the number of hospitalizations for kids related to mental health. I divided the number of disabled students enrolled by the number of hospitalizations. If the quotient or ratio was equal to one it meant that two numbers were equal and for every one student enrolled into school who is disabled there is one hospitalization related to mental health. In the spreadsheet, we can see that this is not the case. In this instance most of the ratios range from about 13-30. This means that for every one hospitalization 13-30 (depending on the ratio) disabled students are enrolled into school. This pattern follows for every county except Imperial county where the ratio is significantly higher, about 85. Since the ratio is higher, it means that there are significantly less hospitalizations than disabled students enrolled into school. There are about 85 students enrolled for every one hospitalization. This connects to my overall research and topic of interest because we can see that although disabled students may experience depression, it will most likely not be to the extent of where they are hospitalized as hospitalizations are crucially less. Our forum, or blogging app can help decrease this number further as the hospitalizations are due to mental health issues. Through creativity this issue can be less severe decreasing the number of hospitalizations and hopefully making the ratio undefined (# of disabled kids enrolled(0 hospitalizations).

Special education enrollment. (n.d.). Retrieved March 12, 2021, from https://www.kidsdata.org/topic/95/special-education/table#fmt=1146&loc=2,127,347,1763,331,348,336,171,321,345,357,332,324,369,358,362,360,337,327,364,356,217,353,328,354,323,352,320,339,334,365,343,330,367,344,355,366,368,265,349,361,4,273,59,370,326,333,322,341,33

8,350,342,329,325,359,351,363,340,335&tf=124

"Hospitalizations for Mental Health Issues, by Age Group." *Kidsdata.org*, www.kidsdata.org/topic/715/mental-health-hospitalizations-age/table#fmt=1016&loc=2,127,1658,1659,331,1660,171,1661,357,369,362,360,1662,364,356,217,354,1663,339,365,343,367,344,366,368,265,349,361,4,273,59,370,326,1772,341,338,350,342,359,363,340,335&tf=124&ch=1137&sortType=asc.

High Level Statistical Analysis

Chart – 2
Comparative Depression level among Able children & Learning Disabled Children

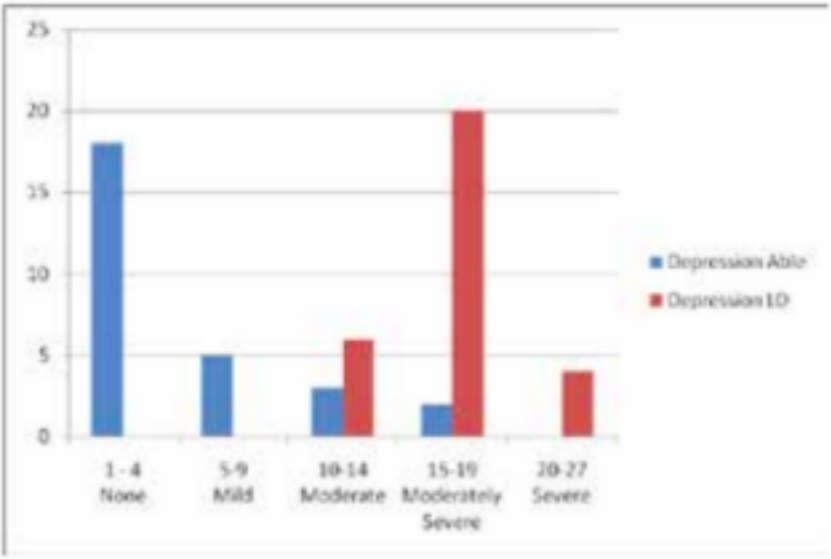


Table – 4
Z test of Depression level among Able children & Learning Disabled Children

	Able	LD
Sample Size	30	330
Mean	5.6	17.433
Standard Deviation	4.23125	3.57851
Z test P Value	1.02846E-16	

Hypothesis: I believe that children with disabilities will experience a higher depression rate than kids without.

Null hypothesis: Kids with disabilities and kids without disabilities will experience the same rates of depression.

The graphs above show the depression rates between kids who have disabilities versus kids who do not. Using a bar chart above we can see lower rates of depression align with smaller numbers. We can see that children who do not have a disability tend to have lower depression rates as the bars decrease in size as the number signifying the

depression rates get higher. On the other hand we see that the red bars, which demonstrate depression rates between kids with disabilities, increase in size as the numbers get higher. Through the bar chart the overall depression rate among kids with disabilities is higher than kids without. The table below analyzes the bar chart above. The mean is much higher for kids with disabilities than kids without. This is emphasized by the numbers 5.6 and 17.433. This means that kids without disabilities have mild depression rates On average while kids with disabilities have moderately severe depression rates. P value in the last row is also greater than 5% signifying that both the study groups experience very different levels of depression. This table supports my hypothesis as the mean for kids without disabilities is significantly higher conveying that they experience higher rates of depression. Through this graph we can understand that kids with disabilities experience significantly higher depression rates portraying that the target audience is significantly big and that they suffer from the illness that our platform is directed to help solve.

https://www.worldwidejournals.com/indian-journal-of-applied-research-(IJAR)/recent_issues_pdf/2015/July/July_2015_1435758601__141.pdf
Meghwal Jyoti. A Study of Anxiety & Depression Among Learning Disabled Children. 2015. PDF File.

Summary:

Kids with learning disabilities who lack self-esteem and are prone to depression due to self-doubt about their place in society need to start blogging so they are able to channel their insecurities into something positive consequently helping them to see their downcast experiences in a different light by engaging with their peers and establishing social connections resulting self-assurance of their value in society and boosting their self-moral. This project helped me dig deeper to analyze the relationship between blogging, depression, and kids with disabilities. The word clouds allowed me to perceive how people with disabilities are able to overcome them by writing. They have a lot to say but many times lack the confidence to say it. The meme analysis demonstrated how people feel uncomfortable talking about people with disabilities as the story spiked but then tapered off. The Arcgis and in-sheet statistical demonstrate the relationship between hospitalizations related to mental health issues and the number of students enrolled in school who are disabled in a given county. The high-statistical analysis conveyed how kids with disabilities have high depression rates supporting the need for a forum where they can unleash creativity and blog as this helps people fight through depression as seen with the bloggers in the word cloud. The evidence I found most compelling was the high-statistical analysis as the means for both the test groups differed greatly. Our platform helped students with disabilities overcome their depression as they were given a chance to be creative and express themselves. They are able to start blogging so that they can help find reassurance of their place in society and have higher confidence and self esteem. This blogging platform also gave them a place to connect with the world in an effort to help overcome depression. To help expand my research and create a tool which is more tanbigable for kids with disabilities who are fighting depression, I can research what aspects of creativity have shown to help overcome depression. For example, maybe drawing has been proved to help overcome depression in kids with disabilities. I could analyze such aspects of creativity and depression to find trends. Once I find these trends I can include procedures in my code that

allow the users to use these proven methods of creativity. (eg having a drawing feature in the blog so they can draw a picture that relates to their blog).

Final Product

Code:
https://drive.google.com/file/d/13muGDTHF7Yrvl27tW1SnmNmlpIUgVpY7/view?usp=sharing

Product:

https://drive.google.com/file/d/1iIxnfV823Z_Nl_m1DL20QrmHJYwHIv5z/view?usp=sharing