

Reflecting on the First Summer of Research - Hidden behind a smile: acquisition and societal perception of speech sounds in children with cleft lip and palate.

I first began my application to be a part of the Laidlaw Scholarship around the winter of 2020. My first port of call was to narrow down potential project ideas. At this point, I knew my main interests were in child language acquisition and development, forensic linguistics and psycholinguistics, and so began my research into topics that most interested me and where there were potential gaps in research. Alongside the influence of some of my family members having cleft lip and palate, I eventually settled on looking into compensatory articulation and the surgeries involved in the presence of cleft lip and palate (CLP). With these ideas, I contacted Julia Kolkman who provided all linguists at the University of York with interest in the Laidlaw programme with information. She pointed me in the direction of both a current Laidlaw Scholar - Cath Brislane - who provided me with invaluable information, as well as potential academic supervisors for my project. In this case, I looked towards Dr Tamar Keren-Portnoy who could offer guidance in child language, and to Dr George Bailey who could offer guidance in phonetics and phonology.

With a focus on what research would be feasible during the current Covid-19 Pandemic, I eventually came up with my project idea which is titled 'Hidden behind a smile: acquisition and societal perception of speech sounds in children with cleft lip and palate.' This is a perception study looking into the accuracy of claims made by medical professionals in the area of CLP that speech of children with CLP should have a high level of intelligibility and a good quality of speech by the age of 5-6 years¹. The project also set out to address how the general public view phonological development disorders, an area which I struggled to find much pre-existing research in. I decided that this research would be conducted through a survey, asking the public to listen to 18 audio recordings of 9 children with CLP and 9

¹ CLAPA. (2021). *Speech*. How is it Treated? Retrieved July 22, 2021, from <https://www.clapa.com/what-is-cleft-lip-palate/how-is-it-treated/>

without, and decide whether they believed the child had CLP or not and how they had reached this conclusion. The survey also set out to ask the public to give a rating 1-5 of the quality of speech and to transcribe the audio in order to determine the intelligibility and quality of the speech of the children in these audios.

Due to personal reasons, concentrating on one set task can be almost impossible at times. This meant that planning my time to utilise it most effectively was vital. In the initial weeks of my 6 week summer research period, I had regular meetings with my supervisors to plan a weekly structure of what I aimed to achieve. Also, in an effort to hold myself accountable for keeping up with the research, I also chose to document each day of my research on the popular video sharing app, TikTok. After finishing creating my survey in the first weeks of the summer, I then spent the third week distributing my survey to get responses - to do this I utilised both the Laidlaw Network and social media platforms Twitter and Instagram. Throughout the remaining weeks, I dedicated myself to analysing the data collected and creating graphs to document it. I also focused on producing a research report to document and analyse my findings, as well as an academic poster to summarise my findings. Through a structured response towards my research, I was able to finish my project exactly 6 weeks to the day after it began.

So far for this project, I have been able to produce a research report containing graphs and statistics documenting my findings which is written in a style which assumes that the reader has at least an undergraduate level of understanding in Linguistics. I have also produced an academic poster which is much more simplified in order for the research to be accessible, it does however still assume a certain level of knowledge in Linguistics. As not all who would potentially find this research relevant, such as medical professionals, have specific knowledge of Linguistics, I may choose to produce a research video to explore my findings in a more accessible manner in order to engage non-specialists.

Currently, the ways in which I have communicated my research findings stand at my research report and my academic poster, both of which I intend to distribute through posting to the Laidlaw Network after my supervisors' approval. As I have produced a written report, I also hope to contact linguistic journals such as the Journal of the Undergraduate Linguistics Association of Britain for potential publication of my research. As this is a perception study, I also look forward to making the research accessible and open up conversation around the subject. In this respect, I would like to focus my efforts on sharing my research at conferences including the Laidlaw Scholars Conference and The International Corpus Linguistics Conference.

To look now more towards how this project has developed my leadership skills, I am truly astounded by how I have seen myself change in just 6 short weeks. Going through various education systems has always given me a person to fall back on and offer me the 'correct' solution to any issues that I was facing. While my supervisors certainly supported me through the process with their academic expertise, I was still somewhat surprised when I ultimately made the final decisions. This was even more so prominent during the current pandemic as my initial plans for my research included the use of a lab and collecting my own data which just was not possible. In this case, it was up to me to research further and change my plan to make it possible within the restrictions of the time. In discussions about these changes with my supervisors, we would often find ourselves at a crossroads where a decision needed to be made in order for the research to progress. In a way that I had not found myself being able to do before, I often found myself being able to say that I have judged the outcome of possible decisions and been able to make a final decision. This massively improved my belief in my own research capabilities, as well as improving my decisiveness which is something I set out to improve as I first mentioned in my initial Laidlaw application.

I feel like a key feature of effective leadership is adaptability. This is somewhat expressed through the change of my overall research topic, but continued through into my research. As I was unable to collect my own data, the corpora that I did have access to was relatively limited and only allowed me to use 1-2 word audios in my survey. This was a challenge as it greatly impacted the quality of speech. To combat this, I chose to focus solely on the individual sound quality rather than the overall word quality. I was also sure to address my findings with the knowledge that the data that I had access to could alter my findings slightly. Though I feel this project was successful despite setbacks, if I ever did have the opportunity to conduct this research again this time through the collection of my own data, I would focus on collecting full sentences both from children with CLP and from typically developing children. For accuracy, I would also have the child from each group say the exact same sentences for each relevant sound.

Another necessary leadership skill that I have demonstrated throughout this research project has been sensitivity and communication. This project required a lot of research to truly understand how speech development disorders affect people, as well as to understand the appropriate language to use in my analysis. Being so distanced from children in the audios made it easy to feel disconnected from the struggles that people do face due to phonological developmental disorders so it was vital to understand that real people are affected by studies such as these and a real leader should approach this fact with compassion.

Overall, I believe that this summer has been a wonderful period of growth and learning for me. I believe that in such a short period of time, I have become more confident in my own decision making, as well as more empathetic and communicative. I have also been introduced to my fellow scholars who are a group of kind and intelligent people, creating such a vital support network to help each other through our research. I am excited to

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progress into further leadership work in my second summer to further apply and refine the skills that have come with this first summer.

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