Undergraduate Student Perspective



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I recently saw a humorous post online, poking fun at society's expectations of younger generations to have life all figured out. It said, "It just hit me that five years ago, I was in high school and they were asking 'Where do you see yourself in five years?' and I want you all to know [that] I was very wrong." I relate to this deeply, but in the best way possible and completely unironically. Five years ago, I could have never imagined all the wonderful paths this life would take me down. Thanks to my incredible family, friends, and department, I have been presented with and supported in endless opportunities that have helped me grow as a person, student, and linguist. Before I write more about what I've learned from undergraduate research, I'll begin with a very brief introduction of myself. I am, in fact, not a microbiology student--I'm a linguistics undergraduate student at UC Berkeley, finishing up my last semester of college. My passions lie in the linguistics subfields of sociolinguistics, historical linguistics, and Indigenous language revitalization; specifically, I am fascinated by the way that language is used to construct and express identity, on both individual and community levels. I believe that linguistics, as a field, has so much potential for research that directly helps and empowers individuals and communities in their linguistic (and general) identities. In my time at Berkeley, I've had the privilege of working with incredible people on a number of fascinating and important research projects, and I hope to continue working in linguistics academia for the rest of my life. After graduation, I'll be moving across the country to work as a post-baccalaureate researcher in the Linguistics Department at Yale, with a focus on historical linguistics and language revitalization. I am wholly and absolutely in love with the research I do, and the very existence of linguistics is what makes me get out of bed every morning with a smile on my face.

Coming to college, I knew I wanted to study linguistics in some capacity, though I had limited understanding of the wide variety of linguistics research, including methodologies, subfields, and interdisciplinary possibilities. Fortunately, the linguistics department at Berkeley not only has a strong representation of all the subfields of linguistics, they also greatly support undergraduate students' opportunities to do all different types of research. The constant and consistent encouragement to make original contributions to the general linguistics research literature helped fuel my classmates and me to explore the vast expanse of research methods and ultimately find our favorite ones.

While my work isn't in microbiology, I think research contains many universal experiences and teaches us many of the same lessons. For any undergraduate students who are thinking about doing research, my biggest piece of advice is simply this: do it!! Research is a beautiful, rewarding, and sometimes grueling process, and it is so, so worth it. More specifically,

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though, here are some things that I have learned throughout the years:

Be patient with yourself and your research process. 1) Research is a long, consistent process; it's not something you can cram at the last minute. Not only would it be extremely stressful to try and get everything done in one day (or even one week... or one month), it is realistically impossible. Because there are so many factors outside of one's control during a research project, it's also futile (and unsustainable) to try and speed the whole process up by working yourself to exhaustion every day. There's no "if I just work double the amount and time that I do every day, I can halve the timeline of the process." Often, you actually need months to get approval, collect data, analyze data, and put it all together. Plus, when spread out over months, you give yourself time to make mistakes, space to try new solutions and approaches, and--most importantly--freedom to take a day off and rest. I'm currently in the process of writing my senior thesis, and I always have to remind myself to be patient with the process. It took a few months' time just to write a proposal to the Institutional Review Board (IRB), edit and improve the proposal based on feedback, and ultimately get approval from the IRB to start collecting data. Then, it took months of daily work to collect, transcribe, clean, and analyze the data. Even though it took a long time, that doesn't mean that I wasn't working diligently at it during the entire process. All this is to say that a research project is inherently going to take time, and rather than trying to shorten the timeline by trying to "work harder" (because chances are, you are already working incredibly hard and maybe even at the limits of your capacity), you might as enjoy the process of watching your research develop and grow.

2) It's okay if you realize that the research you're doing--whether it be the methodology, data, or general topic--isn't right for you long term. It's great to explore different types of research, but you don't have to feel guilty about finding out that a certain methodology isn't what you want to do. In linguistics, there are endless ways of conducting research, gathering data, and analyzing it (depending on your subfield, research question, etc.)--and these methods vary quite a bit. Exploring different research methods is for the purpose of finding what works for you. For example, I've done a handful

of research projects where I realized quickly that certain ways of gathering data and analyzing it wasn't anything I would want to do in the future. After the conclusion of said projects, I stopped doing those specific types of research. Rather than looking at these experiences negatively as "wasted time," I saw them as experiences that helped me learn about myself as a researcher, and it helped guide me to develop my ideas for future projects. Knowing what research methods I liked and didn't like allowed me to choose projects whose processes I knew would be interesting and enjoyable the whole way through. Namely, when I was choosing my topic for my senior thesis, I knew that this project would be all-consuming, and I would be in this process for a whole year. I decided to pick a topic and a few methodologies that I would never get tired of (after having experiences that I learned from on research projects where I would get tired of a certain method or not enjoy the methods to begin with), and it made all the difference.

3) There is no shame in creating your own opportunities for research by yourself! If I could star, bold, and underline one important piece of advice, it would be this one. Even without institutional funding or structure, there is still so much independent research that you have the capacity to do! In my freshman year of college, before I discovered the official program(s) for undergraduate research opportunities within the linguistics department, I became interested in the topic of gender in language and did my own digging into it. Eventually, my own little pet project turned into a threeyear long personal research passion, opportunities to present my work at research conferences and be involved in related (and more official) research, and the foundation of the future research I want to do. The premise is this: in grammatically gendered languages (e.g. Spanish, French, etc.), there are words that fall into the feminine gender or masculine gender (and in some languages, there is a neuter gender too). These genders are marked on the words, often in the form of a suffix. My interest in this topic began with the feminization of French profession nouns--specifically how a grammatically gendered language like French can reflect a history of misogynistic norms in the way the language is structured. It started with reading a simple footnote in my French textbook about how there were no officially recognized grammatically feminine forms for certain profession nouns like "author,"

"professor," or "doctor" because those were not jobs traditionally held by women in the history of French society. I then started looking into the history of the French language and other sociolinguistic literature on grammatically gendered languages. Additionally, I reached out to some linguists in the French Department at Berkeley and asked about some of the issues surrounding this topic. Finally, I wrote my findings into a "blog" of sorts, which later turned into a more academicallywritten paper, which then took me to presenting this work at conferences all over the world. As the feminization of French profession nouns is an ongoing debate in France, I updated my work with what was happening in France with feminist linguists and oppressive language institutions.

I also realized during this personal research project that gender in language went beyond the gender binary, and that many language activists across the world (and across many languages) are now working on ways of making grammatically gendered languages more gender inclusive (e.g. the term "Latinx" in Spanish is used as a gender inclusive term, often used by nonbinary speakers to transcend the binary gender reflected in the grammar of the language). This semester, I was able to expand my interest in language and gender through a research project in Berkeley's Linguistics Department. In the department, there is a research program called the Linguistics Research Apprentice Practicum (LRAP) that graduate students, undergraduate students, and sometimes even faculty are involved in. Recently, a Gender in Language project was created through LRAP, and I now have the chance to use what I learned through my French feminization pet project in research of how gender is marked in Mandarin--and the social and historical implications of linguistic gender. Specifically, we put together a nonbinary grammar and lexicon reference of Mandarin, based on many gender-inclusive movements that are already going on in China, Hong Kong, and Taiwan. Had I never embarked on this personal research journey that began with just a simple interest, I would have never known just how passionate I am about the topic of gender in language--so much so that in the future, I want research the intersection of gender and sociophonetics (which is the subfield of linguistics that deals with how individuals construct, index, and express their identity with the qualities of the sounds in the way they speak).

4) If a personal pet research project isn't for you, you can also cold-email supervisors and ask for their help in creating opportunities! Sometimes, the research that you want to explore might require technical skills or knowledge that you don't quite have yet -- and the process to learn what you need might be out of your own control or grasp. In these cases, don't be afraid to reach out to researchers in your department, or even at other schools, to ask for help! Often, researchers are more than happy to chat or send you resources that can help you develop the skills and knowledge base that you are seeking. If you're lucky, they might even have an official or unofficial research position for you (or a project that you can collaborate on). In my own research processes and research exploration, I cold-emailed a good handful of professors and researchers at other universities to ask for insight on various issues, and I received such great resources and help. Specifically, while writing code for my thesis, I had to consider and try out many different computational models on my linguistic data, and talking with researchers whose previous computational work I had read helped me significantly in formatting and analyzing my own data (and of course, in writing code). In one case, one of my cold-emails from a while ago now actually led to me working remotely with a lab at a different university for many months on a very interesting and engaging project. Through that project, I gained computational skills that I'm using not only for my thesis, but for work I want to do in the future.

5) Criticism of your research isn't criticism of you as a person (or as a researcher). In fact, critical responses can often be really helpful in making your research better. In academia, there is an immense (and sometimes unhealthy) amount of pressure on every researcher to continually produce work. While this is actually just a reflection of the toxic internalized capitalism present in academia, the best an individual can do is just to compartmentalize your work and you as a person into separate boxes of your identity. As much as you can be passionate about your work and have your time consumed by it, it's very dangerous to start equating your worth as a person to how well your work does or how much work you produce (again, that's what internalized capitalism will do to you). Instead, you can use criticism of your work as something to improve your research with, because the process of research

in academia will inevitably include critical feedback (on your writing, on the actual content of your work, on your very research question itself, etc.), and your mental health will greatly thank you if you learn to remove your self worth from your role in the institution of academia.

6) Take your time in figuring out who you are and what research you want to do--and when do you figure it out, embrace it! Ultimately, research should be something that brings you joy. At the very least, it should be something that you feel like is worth it, whether that be because you enjoy the specific topic, because you believe in the bigger purpose and impact of your work, or both. As obvious as it sounds, it took me my entire life to know myself as well as I do now, and I know that I'll continue to grow as a person and researcher--and continue to get to know myself better--for the rest of my life. In the process of exploring different types of research in college, I had the misconception that there were certain methodologies that were more "expected," or certain skills that were more "desirable" to have. I thought that I would have to check off a certain list of boxes to be academically marketable as a researcher, when in reality, the most important and "marketable" quality is that one is genuinely passionate about their research, and that they get up after every time they fall down to consistently pursue these passions. Any skill you need along the way of your research, you will no doubt learn and develop as you go. Finally, in the process of learning about yourself, you'll also realize that your growth as a researcher doesn't take away from anyone else's--and similarly, someone else's growth and success will never take away from yours. In a cutthroat, capitalistic institution like academia, it's so, so important to support one another and value compassion and collaboration over competition. Additionally, academia is often inaccessible as an institution, and many communities are excluded in research, discourse, and representation. This needs to change, and personally, I try to use the tools within and related to linguistics to dismantle the inaccessibility in academic spaces. I have come to realize that who I am as an academic is inextricably linked to centering and uplifting communities, such that whatever academic work and research I do will always be for the good of the community I am serving. This, then, becomes reflected in the subfields of linguistics that my research is focused on:

sociolinguistics, historical linguistics, and Indigenous language revitalization. While some of these subfields of linguistics is sometimes disregarded by traditional, elitist parts of academia as "not real research" because it serves communities rather than research literature production, I wholeheartedly believe that not only is it real research, it is even more important research because of the greater community implications it has beyond writing an academic paper.

Looking back, I have learned so much through all of the good and bad that comes with research. Academia is not a perfect institution by any means, but I hope that through the researchers who go into this field to make the world a better place, the institution can become a little less flawed as well. I have gained so much from my experiences in undergraduate research, and I would highly encourage everyone to dip their toes in it as well. Who knows? You might just fall in love with it. I will forever be grateful for the Linguistics Department at Berkeley--and for everyone I have been lucky enough to cross paths with -- for making me who I am today and bringing me the best years of my life so far. I want to give a million thank-yous to my family, who have always supported me and believed in me, even when I didn't believe in myself. Finally, I want to thank Lauren Andrews for reaching out to me and giving me this opportunity and platform to share my experiences; it honestly means so much to me, and I'm so humbled to have this space to reflect on the things I've learned.

While that sarcastic post I saw online was meant to be a joke, I think about how lucky I am all the time to be in love with my major, research, and work. Truly, I never could have seen it coming; my reality today is beyond High School Me's wildest dreams, and Five Years Ago Me wouldn't believe you if you told her all the unseen ways she would learn through undergraduate research and grow into a version of herself who has never been happier. I can't even begin to imagine what the next five years will bring.