Discursive Constructions[1] of Autistic Students' Experiences with Academic Writing:
Exploring the Sociocultural Interfaces between University Students and their Instructors
[Please note that this title has been updated]

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Step One:

Context

Developing strong academic writing, defined here as writing performed within or for an educational setting, is challenging for most incoming university students and critical for their academic success (e.g., Artemeva, 2008; Casanave, 2002; Freedman & Medway, 1994; Hyland, 2015). Autistic students, however, may encounter unique experiences in this pursuit as the majority of their peers and instructors are usually nonautistic (Gerstle & Walsh, 2011; Prince, 2013). Some nonautistic instructors report challenges in working with autistic students and offer a variety of personal accounts of strategies which the instructors believe to have been helpful (Brown, Johnson, Smyth, & Cardy, 2014; Gerstle & Walsh, 2011; Jurecic, 2006, 2007; Roberts & Birmingham, 2017). Other autistic academics and their allies (nonautistic people working alongside autistic academics and researchers as equal partners with common goals) believe that we already have strategies that work with all students and that also be effective with autistic students (Heilker & Yergeau, 2011); still other autistic academics question the currently dominant ableist academic way of writing, and call for greater flexibility in writing practices at university (Prince, 2013).

With the so-called "social turn" in writing studies (Bazerman, 1997; Dias et al., 1999; Freedman & Medway, 1994; Halliday, 2014; Hyland, 2015; Miller, 1984; Swales, 1990), where the situated, sociocultural context of learning to write is emphasized, the social exchanges between autistic students and their predominantly nonautistic instructors would appear to be crucial to the experience of learning to write at university. To my knowledge, no previous research has included autistic students' *discursive constructions* (the ways they use language to construct their realities) of learning to write at university, especially regarding the role of the sociocultural exchanges between autistic students and their autistic and nonautistic instructors.

To guide this study, the following umbrella question is posed:

What academic writing supports, informed by autistic university students' and their instructors' discursive constructions of their experiences with academic writing, can be recommended to assist autistic students?

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[1]The expression of one's perspective and understanding of reality through the use of discourse (verbal, written or multimodal) situated within group practices, attitudes, behaviours and power relationships in society (Berger & Luckmann, 1967)

To respond to this overall question, three sub-questions are asked:

1. How do autistic university students discursively construct their experiences with academic writing?
2. How do university instructors discursively construct their experiences in supporting autistic students' development of their academic writing?
3. What are the similarities and/or differences in the discursive constructions of university autistic students' experiences of academic writing as provided by the students themselves and their instructors?

Methods

For this study, I use a community-based, participatory research (CBPR) approach, where the researcher and members of the autistic community work together as equal and full members of the research team (Raymaker & Nicolaidis, 2013). Although I am the principal investigator in this doctoral research, this study is enhanced by the experiential expertise of autistic student research assistants (Pellicano, den Houting, du Plooy, & Lilley, 2019) and autistic community members concerning the research design, data collection, analysis, conclusions and recommendations based on this work. *Engaging* with such a participatory team of autistic and nonautistic students and researchers allows the study to incorporate the values, priorities, cultural experiences, and insights of autistic persons and therefore, improves this study's relevance and value to the autistic community (Raymaker & Nicolaidis, 2013).

More specifically, this study uses a phased, convergent, qualitative design (Creswell, 2015) which I intend to extend to a mixed methods design by following up the current qualitative work with quantitative online surveys which are informed and designed according to the findings of the current study. Please see

Figure 1 for the overall design of this qualitative stage. Ethics clearance has been obtained from the research ethics boards at both universities in this study.
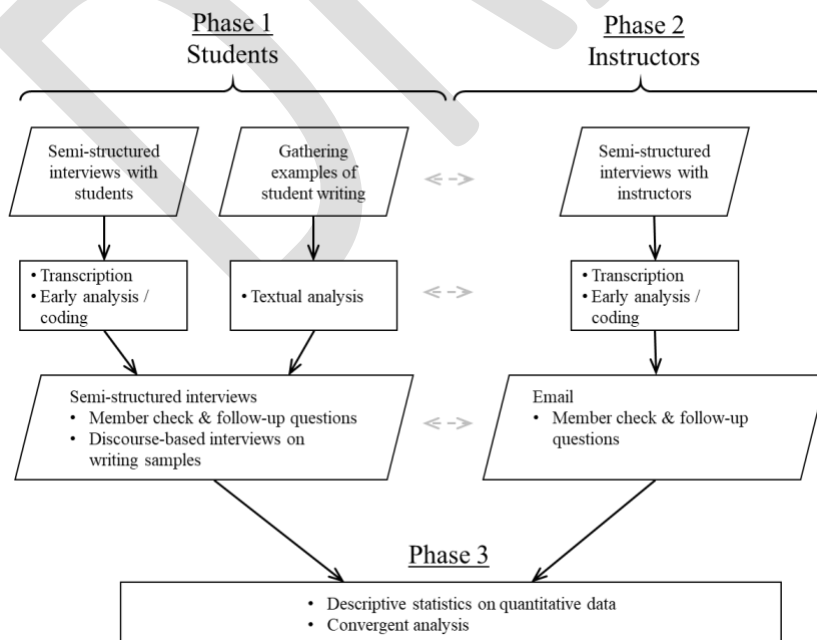
Figure 1. Concept map for overall study: Two qualitative sequential designs followed by a convergent design.

These two phases of the study (analysis from interviews with both autistic students and autistic and nonautistic instructors) will then converge (cf. Cresswell, 2015), so that the findings from the two sequential, exploratory designs are merged, and then compared and contrasted.

Participants

Study participants were drawn from the following groups: autistic university students (graduate and undergraduate, 15 in total) and a range of nonautistic university instructors who have worked with autistic students. The instructor groups (6 in total) consisted of lecturers 2, student support advisors (1) and learning strategists (2), and professors (1) [I also intend to interview autistic instructors, but at the time of writing this document, we have yet to recruit any. Nonetheless, we hope to do so in early 2021]. Table 1 presents the major subjects taken by the student participants and Table 2 provides the professional fields of the instructors.

Table 1

Students' Major Subjects

Subject	# of students
Computer Science	3
Applied Linguistics	2
English Literature	1
English/Journalism	1
Cognitive Science	1
History	1
Law	1
Political Science	1
Information Technology	1
Media Communications	1
Psychology	1
Professional writing	1

Table 2

Instructors' Field of Expertise

Subject	# of instructors
Educational Support	3
Applied Linguistics	2
Linguistics	1

Data Collection

At this point in the study, 15 autistic students and 6 nonautistic instructors have been interviewed. Two semi-structured interviews, 45 to 120 minutes long, were conducted with each student participant. The first interview (see Appendix for the interview guide) was conducted and audio recorded by the researcher, a speech-language clinician with more than 25 years of experience working with autistic clients. All student participants completed the first semi-structured interview. The research team transcribed all interviews and conducted a preliminary analysis confirming the accuracy of student responses. The transcripts were then sent to the students with a request to read and verify them prior to the second interview. At the beginning of the second interview, students were asked to further confirm that the transcripts of the first interviews were accurate representations of their responses, thus verifying the data. The same procedure was followed with the instructor participants using different, but related questions and the interviews were slightly shorter, 45 to 90 minutes long.

Data Analysis

The interview transcripts were uploaded to the qualitative coding software NVivo 12 Plus (QSR International Pty Ltd., 2019). I conducted a qualitative thematic analysis on all the data using both inductive and deductive coding. The deductive coding (Saldaña, 2016) was particularly informed by the Rhetorical Genre Studies (RGS) theoretical framework (see below).

Key Theories and Theorists

Concepts from Rhetorical Genre Studies. Four central concepts from RGS were used to inform the interpretation of the data in this study, viz. *rhetorical situations, exigences, uptakes* and *kairos*.

At the crux of RGS work is the concept of the *rhetorical situation* which was defined by Bitzer (1992) as "a natural context of persons, events, objects, relations, and an exigence which strongly invites utterance" (p.5). Miller (1984) expanded on this idea, arguing that a rhetorical situation was not a material thing but rather "our construal of a type" of social situation (p.156). Furthermore, embedded within the rhetorical situation is an *exigence* which is a "form of social knowledge" (Miller, 1984). She also argued that such rhetorical situations and their exigences, rather than simply being perceived, are defined, or socially constructed from earlier (antecedent and recurrent) experiences with the genre. Indeed, the definition of the social needs or exigences invites a certain type of social response (verbal or nonverbal) which therefore becomes *typified* (Miller, 1984; Schutz & Luckmann, 1973). Following from Miller's (1984) work then, RGS theorists describe genres as *typified ways of acting socially* in response to *recurrent* social needs, or *exigence* to complete some work or action.

Uptake refers to a rhetorical response which responds to a given exigence in a timely and appropriate manner, or what Freadman (1994) describes as a *genre uptake*, is "informed by genre knowledge but also by one's sense of self, one's memory of prior uptakes, as well as by other

affective, embodied and material factors" (Bawarshi, 2016, p. 189). Freadman (1994) further explains that each genre should include at least two texts or a single text and a nontextual response within a dialogue. Freadman (2012) draws on Austin (1975) and Speech Act Theory to point out that "no speaker or writer can completely secure an uptake" (p. 560) and that other factors, particularly timing, are key to successfully performing uptakes (Artemeva, 2004; Freadman 2012). Indeed, RGS posits that the matter of learning how and when to secure successful uptakes is key to success in mastering genres, including academic writing (Artemeva, 2005; Bawarshi, 2015; Freadman, 1994). Furthermore, the recurrent nature of genre uptakes requires that rhetors remember earlier episodes where similar exigences and circumstances (or ceremonials in Freadman's (1994) metaphor) requires particular uptakes (Artemeva, 2004; Bawarshi, 2015; Freadman, 1994; Miller, 1984; Schryer, 1993; 1999). Learning to perform successful uptakes in diverse cultural contexts (e.g., at university, in different disciplines, or in different countries) is challenging for all students (Canagarajah, 2006; 2002; Dias & Paré, 2000; Dias, Freedman, Medway, & Paré, 1999; Swales, 1990), and this may well include minority autistic students within a majority nonautistic university culture.

Since the ancient Greeks, it has been argued that time carries two different qualities, namely, chronos and kairos (Artemeva, 2004; Yates & Orlikowski, 2002). According to Yates and Orlikowski (2002), *chronos* relates to objective, quantitative time such as on a clock or calendar, whereas *kairos* is described as more subjective and qualitative in nature, and existing within the moments of communicative exchanges as opportunities to speak or act (Artemeva, 2004, 2005; Miller, 1992). Freadman (1994) explains that to successfully perform uptakes within a genre is "to know when and where it is appropriate to do and say certain things, and to know that to do and say them at inappropriate places and times is to run the risk of having them ruled out" (p. 59). Yates & Orlikowski, (2002 p. 109) further emphasize Miller's (1992) assertion that kairos is both "constructed and discovered", revealing the highly dynamic nature of any uptake which demands an exquisite sense of time and timing.

Neurodiversity. This concept refers to an understanding that neurological differences (such as autism) are just part of natural human variation and do not need to be rehabilitated or cured (Den Houting, Silberman, 2015; Singer, 1999). It moves away from the biomedical definition of autism as a disorder or deficit and is currently promoted by many leading organizations founded by autistic adults (e.g., the Autistic Self-Advocacy Network or ASAN).

Theory of Mind and the Double Empathy Problem. Perhaps the most prominent **explanation** so far has been the view, known as the Theory of Mind (ToM) account of autism, that autistic individuals lack the ability to understand the minds of other people (or empathize), or even understand their own minds (Baron-Cohen, 1997). However, more recently, Milton (2012) has observed that ToM accounts of autistic individuals have emphasized what was seen as a core autistic deficit, that is, the difficulties that autistic individuals might experience with understanding the perspectives or mental states of *nonautistic* people. And, yet, it has never focused on *nonautistic* individuals' understanding of the perspectives or mental states of *autistic* people (Hacking, 2010; Milton, 2012; Sinclair, 1993). Milton (2012) was the first to describe this

phenomenon as the *double empathy* problem (p. 883). He posited that researchers need to consider the difficulties that both autistic and nonautistic people have in understanding the mental states of each other.

Early Findings and Discussion

This study examines the reports of the lived experiences of autistic university students, their lecturers, learning support supervisors and their professors who have worked with them in the students' pursuit to learn to write academically. The analysis and interpretation were informed by the autistic students themselves (both as student participants and co-researchers) as well as by the perspectives of their instructors. Additionally, concepts from Rhetorical Genre Studies, Neurodiversity and the Double Empathy perspective informed the interpretation of the data. First, I present the major themes from the data from the students' and instructors' perspectives. Next, I will more specifically use RGS to interpret specific aspects of the student-instructor exchanges, both verbally and in their written assignments [this section will be expanded in the next 3 months as further analysis is completed; in particular instead of saying "most" or "many" students, for example, the actual number will be reported when the rest of the data is analyzed].

Experiences reported by students

One of the most challenging aspects of interpreting the data in this study is that autism is appropriately described as a 'spectrum' and as such, the experiences of autistic people are highly diverse. And yet, this study focuses on a small part of the autism spectrum, autistic university students, and therefore, these students share certain common experiences on campus and likely had some similarities in their social and academic histories prior to entering university. With this important consideration in mind, I present the recurrent themes that were identified by the student participants, specifically regarding their social interactions on campus and their experiences of learning to write academically.

Social interactions with instructors and peers. As a group, autistic students report experiencing high levels of anxiety in social situations in person and struggling to make friends on campus, even though many had taken formal training in developing their social skills. Student 2 reported that "Most of my friends have been off campus, and the reason being I just can't associate with people and I find if I don't know people I don't want to go and come out of my shell." (Interview, January 7, 2019). Student 5 also shared that they felt "an incredible amount of social anxiety, but I've had really, really good coping mechanisms that [so] I can meet people fairly easily. And when I say fairly easy, I don't mean like the process is easy. Like internally, it's gut wrenchingly difficult." (Interview, May 27, 2019)

They also reported that they often made friends online, and often friends either were diagnosed with autism or self-identified as being autistic or described to be 'nerdy' in some way. Student 6 reported that "almost all of my closest friends are also autistic, and a lot of them I met

through the neurodiverse movement through the internet" (Interview, May 14, 2019). Going further, they shared that

> When I speak to my autistic friends, it's like we're speaking a different language than when I'm speaking with my allistic[2] friends, like. I just feel like communication just becomes so easy because we're on the same wavelength, like we're thinking the same weird stuff. I can make like... It's affected my identity, like jokes and the sort of social communication is so freeing and it feels so great that... I wouldn't actively identify as autistic if I didn't have all these autistic friends that I fit so perfectly in. It's really... That is what makes me, like the community is what makes me want to accept myself for being autistic (Interview, May14, 2019).

They reported that if they did have friends or acquaintances on campus, they would likely be associated with strong/intense interests such as computer or video games, fantasy games or historical re-enactments (e.g., Student 2, January 7, 2019). Even though they reported having few friendships, those that they did have, were described to be very close (Student 6, Interview, May 14, 2019).

In interacting with nonautistic peers and instructors, the autistic students reported adjusting their social and other behaviours in order to fit in with nonautistic expectations, sometimes reported in the literature as "camouflaging" (Hull et al., 2020). However, executing these social performances usually led to high levels of exhaustion and following their time on campus, many students reported the need to sleep or rest to overcome their extreme fatigue after attending classes. Student 6 shared that camouflaging "can be kind of exhausting because people don't realize that I'm doing it, but I'm very much suppressing my own social needs and desires in order to, you know, make small talk or just like have conversations about things and make eye contact and stuff." (Interview, May 27, 2019)

They also reported that feeling that they had to camouflage their behaviour sometimes led to feelings of loss of identity and depression in that they understood that the way they naturally are is "too weird" (Student 13, Interview, July 22, 2020) for most of the people on campus. In addition, they also reported exhaustion following being on campus being associated with challenges in dealing with crowds and large classes as well as noise, light and other sensory input to which they responded intensely (Student 14, July 30, 2020). If, on occasion, the students became severely distressed or "melted down" on campus because of becoming overwhelmed by social pressure or sensory discomfort, they reported feeling embarrassed and ashamed and this sometimes led to depression. Student 5 shared that their emotions seemed magnified compared to others, reporting

> My joy is more emphatic... One of the things you've had to learn to suppress, your reaction. Have you ever seen people higher on the autism scale, doing the flap? Yeah, yeah. Reactions like that. I could have reactions like that, and I just suppress those. So, my

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[2] "Allistic" is a term used in the autistic community to refer to nonautistic persons.

joy is more joyous, my anger is more hateful, my depression is more depressing. Like it's more crushing. (Interview, May 27, 2019).

Experiences of learning to write academically

Many autistic university students reported enjoying writing in general and many also felt that they communicated more effectively in writing than in verbal communication. Several students even reported aspiring to becoming professional writers. For example, Student 3 (Interview, January 14, 2019) reported "One thing I particularly enjoy on my own time, is trying to write novels. I am an aspiring writer."

Yet, others selected major subjects based on a reduced requirement for writing and reported underlying language difficulties with grammar and general written formulation of their ideas. Simply put, Student 12 (Interview, February 1, 2018) said, "just grammatically and structurally, I'm not good at writing".

More students enjoyed creative writing and described having problems with the formal expectations of academic writing such as citations and other formal features. They also often reported struggling with understanding their audience's needs. Student 3 (Interview, January 14, 2019) shared their experience that "it turns out that the way society interprets a sentence like that is completely different to what I thought".

Most students reported a love of researching information and facts and often wrote long and very detailed essays which often were considered by their instructors to be over-detailed with information and arguments tangential to the assignment prompt. Student 2 (Interview, January 7, 2019) reported that they "have been told I have a proclivity to be over-detailed in writing sometimes to the point where it becomes detrimental to the argument I'm making".

Students also found that they struggled with meeting the requirements of assignments if the instructions given were not very explicit or if a rubric was not provided. Specifically, when asked about what was helpful in learning to write academically, Student 6 (Interview, May 14, 2019) responded,

Rubrics for sure. Every time I would write a paper, I would get out the... One rubric from one class that I had that had like all of the APA style like requirements on it, as well as like the requirements for the content and you know, just having that and being able to read like "points flow easily from one to another" or something like that, that made it easy to sort of remind myself.

Many students reported unusually strong memories for facts related to topics of intense interest to them but had difficulty with tasks requiring auditory working memory and found that they struggled to attend in lectures because of either co-occurring attention problems or difficulties with auditory working memory. A large proportion of the autistic students also reported that they struggled with organizational skills and time management and often missed deadlines and profited from a reduced course load and consequently, they often took more than

the typical number of years to complete their study program. Student 6 (Interview, May 14, 2019) reported that "my autistic friends…struggle with like time management, especially" and Student 12 (Interview, February 1, 2018) shared that "as someone who is on the spectrum, I decided to work with student support services and decided to do a reduced course load".

As writing is so closely associated with thinking, the study also focused on the students' cognitive practices. Several students reported being highly perfectionistic, sometimes leading to difficulties with completing assignments. Student 2 (Interview, January 7, 2019) shared that, "you know, I wanted everything to be just... perfect… I was very obsessive about it even as a child".

However, most believed they had a strong work ethic and reported that their intense interests (e.g., history, music, visual arts, languages, computers) had led them to their major subjects. They also reported that having read extensively in these areas, they sometimes held very strong opinions (associated with black and white thinking processes) which were not consonant with academic ways of hedging and presenting arguments. Student 6 (Interview, May 14, 2019) shared that they were "a very opinionated person, so when I read…an article and have an opinion about it and just got to write my opinion, that comes very easily to me."

Interestingly, most students reported being precocious readers (reading fluently as preschoolers) and continued to love to read, particular in their areas of intense interest, usually facts, rather than fiction. Student 7 (Interview, May 30, 2019) described their experience as, "Like when I was younger, I used to read like all the time. Especially like we have a cottage so, I would read and like stay up till like 6 a.m. reading, just like I couldn't stop reading".

Experiences reported by instructors

This section will be expanded in the next months as several more instructor interviews still need to be coded and analyzed.

The instructors who participated in this research included support supervisors, learning strategists, lecturers and professors. Most had some previous experience in working with autistic students with the support supervisors and learning strategists being the most experienced (with all having 10+ years of working with autistic students). The support supervisors and learning strategists worked with the students individually, either virtually or in person. In contrast, the lecturers and professors worked with the students as part of classes ranging from 20 to 100 students, but they all reported individual face-to-face interactions with the students either before or after class or during office hours. All instructors reported both positive and negative experiences working with autistic students and all were highly motivated to do what they could to accommodate the students' needs. However, several lecturers and professors commented that the current university system is not well set up to support autistic students' likelihood of success. Instructor 1 (Interview, July 10, 2020) commented, "They're smart enough to have a degree, they just don't have enough skills to do it in the way that we expect them to." In particular, they added, "I think that some of the accommodations that we offer them and maybe other students, they're not the right accommodations because they need serious help [with]…you know, write

this many words, turn it in by this date, put it in this format." Owing to these difficulties with organization and time management, instructors reported realizing that students were often quite fearful that they would be perceived as being lazy or not caring about their work, which was usually quite the opposite from their reality. In describing one of their students who experienced challenges with organizational and time management skills, Instructor 3 even shared that "he was always really concerned…that I would think he was lazy or stupid or didn't care, but I told him explicitly that I would never think he was lazy".

Instructors' social interactions with students

Instructors reported that within the classroom, autistic students varied in their visibility with some being very quiet and not being noticed by their peers as being in any way different from the other students and others being quite apparent, usually because of repetitive or unusual behaviours, sensory needs or becoming openly distressed in front of the other students. Instructors also reported concern that the autistic students became even despondent after a negative incident in class, some becoming depressed or even dropping out of the class for that reason. Instructor 3 shared an experience when a student had an angry outburst in class and she shared that, "I know he was just really angry, but I thought it was such a shame, because now I know that he was embarrassed, because he never came to class after that, I don't think he really handed anything in" (Interview, July 14, 2020).

Some students had difficulty taking turns in conversations during class and even would dominate both the other students and the instructors in their need to make comments or ask questions. Instructor 1 reported that one particular student "would of sort of get in trouble in class because they'd just jump in with these big thoughts and arguments and it would be like, 'no, no, we're not talking about that now, this is an undergraduate class', but they were always making these big leaps" (Interview, July 10, 2020).

On a positive note, instructors also observed autistic students often making exceptional contributions to class discussions, bringing up interesting, creative and insightful points which reflected how widely informed they were. Instructor 2 shared that

> Sometimes these students, the ones who had felt comfortable to speak out in class, often bring a different way of looking at things that I haven't considered, necessarily. I think that it really enriches the class discussion on topics because, they are smart and insightful and relevant to the discussion (Interview, July 13, 2020).

Another common observation by instructors was that autistic students often need to doodle, draw or engage in some physical activity in order to keep their focus during class. Despite not looking engaged, the students invariably were easily able to answer questions on topic during class discussion. Instructor 1 observed that one student

> always had a paper, or a notebook and they draw the whole time, and they're an excellent artist, and they told me a long time ago, they said, 'like I just want to let you know that I have to do this in class because I can't focus on what's going unless I'm occupying myself

with sketching,' [and] I said, 'Sure, I don't care. Do whatever you want.' But I guess it must work because they have their head down 99% of the time, sketching in this book and the second I say, 'Hey, what do you think about what Joey (pseudonym) just said?' And the head's right up, and they're there with the perfect response to it, so whatever they're doing, they're very, they're following everything (Interview, July 10, 2020).

And yet, most instructors reported believing that their communications with autistic students were much more successful when they met in face-to-face, individualized settings such as office hours. Instructor 1 shared her preference by saying, "In person, I mean, if I'm having a choice, I would always prefer to speak with them in person" (Interview, July 10, 2020).

Most instructors also reported some serious communication breakdowns when communicating through email. For example, Instructor 3 (Interview, July 14, 2020) shared that one student wrote an unexpectedly long email to her, mistaking her comments on an assignment and becoming very angry with her,

> And he felt like he needed to respond to all of this and sent me a whole email like a huge manifesto of all of the questions that I had asked, which must have taken him ages, and he didn't have his homework done for the next class (Interview, July 14, 2020).

Experiences of supporting students in learning to write academically

Instructors reported that many autistic students were "good writers" (Instructor 2, July 13, 2020) with a few demonstrating exceptional abilities. Indeed, instructors described many of their autistic students as showing advanced and creative thinking during class and making many more insightful connections between various ideas and topics than their nonautistic peers. Instructor 1 shared that "you've got to read it a few times to get to what they're saying...it is quite deep and involved and you have to unpack a lot. There's really no wasted words."

And yet, they also reported some challenges experienced by other students in completing their written assignments. Sometimes the difficulties related to struggles with time management and organization, but additionally, the instructors reported difficulties such as writing very long and over-detailed assignments, not following directions, or providing off-topic responses to prompts. Instructor 1 described a student as "honestly by reading it, like if I gave you a reading reflection by them, you would have, I'm sure, no clue as to what the prompt was. You have to dig because they aren't just answering the question" (Interview, July 10, 2020)

Some students were observed to lack coherent structure in their writing (writing in a stream of consciousness kind of way) and a weakly developed sense of their audience. Students were also observed to struggle to acquire new academic genres without being explicitly taught. However, syntax and spelling were strong, although there were some exceptions.

Value of Rhetorical Genre Studies for understanding autistic students' verbal and written communication

This study builds on previous work reported in Ballantine and Artemeva (2020) where RGS was found to be a useful theoretical framework to use in understanding the distinct nature

of autistic rhetoric in all modalities as performed in the university context. That study was based only on the discursive accounts of autistic university students concerning their interactions with nonautistic peers and instructors while this study has added the perspectives of various kinds of nonautistic instructors (as described in Table 2 above). We still plan to incorporate data collected from autistic instructors as well as both students and instructors reported that they sometimes benefitted from when both of them were neurodivergent in some way and were able to share a first-hand understanding of the social and academic experiences of each other.

For now, we will use RGS to analyze, interpret and compare the main findings from students' and instructors' accounts of their interactions and learning experiences as the students worked to acquire academic writing.

Recognition of Rhetorical Situations

Most students reported that they struggled to understand social interactions or situations, particularly in larger groups. Student 5 shared that

> I have to look at the situation and be like, okay. These are the cues, this is what I'm observing, these are the responses that are appropriate. These are the responses that are ideal. That might sound to some people that interactions with me could be disingenuous, and that's not the case. It's that it's taught me to …[engage] with a social situation critically. And... carefully. There's a certain degree of calculation but not in a Machiavellian way, if that makes sense. (Interview, May 27, 2019)

However, in larger groups, Student 1 (Interview, January 7, 2019) expressed that "if everyone's talking and there's not a whole lot of coherence happening and that kinda stuff, then it can be really overwhelming." Instructors reported that they noticed this and clearly stated that individualized, face-to-face communication was usually more successful than interacting in larger groups (see Instructor 1, page 10). Student 5 associated their difficulties in recognizing rhetorical situations to their social anxiety, stating, "I've learned because of the social anxiety, because of the disconnect, because I don't appreciate some of the social cues and other aspects of socialization that other people will tend to appreciate naturally" (Interview, May 27, 2019).

One rhetorical situation which instructors described as being frequently unrecognized by autistic students was the need to respond to emails. Instructor 1 (Interview, July 10, 2020) shared her experience that "the only times when they have not been responsive, is a specific situation where I have emailed". Interestingly, several students reported having negative experiences with email and Student 5 stated

> And it's hard to express … just how anxiety-inducing I find checking an email inbox. There's no, it's not rational. And it's not something, like I can theorize about it, but I can't give you a reasonable answer as to why it has the effect that it has. It is intense. There are lots of unpleasant things that I'd much rather do than have to check my email box. It's completely irrational. (Interview, June 15, 2020)

Audience and Exigence Awareness

To recognize the social needs of one's communication partner, one must at least have some sense of audience. In both verbal and written communication, both students and instructors reported that they struggled to understand each other. Student 3 described not ever thinking about his audience when writing:

I never really thought in terms of that or in terms of who I was writing something for. I really just wrote really, if anything, here's what I am wanting to write and this is for anyone who is willing to read such a thing. (Interview, January 14, 2019)

He went further to say that he often struggled to respond to assignment prompts in the way that the instructor expected. Specifically, he reported that "I thought I had clear understanding of what I was supposed to do but I didn't" (Student 3, Interview, January 14, 2019)

Correspondingly, Instructor 1 (Interview, July 10, 2020) also observed that in autistic student writing, "you know that KYA, like 'know your audience' and also like know the parameters of what your assignment is, that's sort of missing". She went further to describe her feedback to a particular student as ""Like, you're making references to people and theories that I can't figure out because I am not familiar with it. So, to you, it's clear, to me, it's not". Instructor 1 also went on to say that she struggled at times to respond appropriately to a particular student because she was aware that their needs in the conversation were not the same needs as the other students in the class. More specifically, she said, "so his answers almost always confuse me and most other people, but they're often quite insightful, or they confuse me because I know where they're coming from, and I don't know how to respond given the audience".

Indeed, the data indicates that both autistic students and their instructors find that they are challenged to meet the social needs or exigences of each other in both verbal and written communication.

Performance of Uptakes

Both autistic students and their instructors reported differences in the responses or uptakes of the students, both verbally and in written assignments as compared to nonautistic students. Overall, differences included uptakes which were long, but deep and complex, but not expected given the rhetorical situation. Instructor 1 shared that she was comfortable with the large amount of information in general, but for the rhetorical situation at the time, it was not appropriate. She stated, "Yeah and I'm okay with that. And if they were a PhD student and we were just sitting in a lounge, and jamming about their ideas, I'd be great, but since I'm either the instructor or the assistant, I know that they've got to narrow this down to, you know, 8 double spaced pages so you can't just do all the things (Instructor 3, July 4, 2020).

Indeed, according to the instructors, the uptakes were often more advanced in their thinking and expression than the students' nonautistic peers. Instructor 1 shared that, "Well,

yeah, their response, if I ask for their contribution in class, is typical for them, I would say, I'm not going to say that it's typical of the rest of the students, again, because they can so clearly critique an idea and it doesn't matter, if we say okay, we're looking at this from a specifically feminist, critical, discourse perspective, they can totally grasp that (Interview, July 10, 2020). Instructor 2 also shared that "Sometimes these students, the ones who had felt comfortable to speak out in class, often bring a different way of looking at things that I haven't considered, necessarily. I think that it really enriches the class discussion on topics because, they are smart and insightful and relevant to the discussion (Interview, July 13, 2020).

And yet, almost every student reported being very uncomfortable with engaging in so-called "small talk" with nonautistic partners. Student 5 (Interview, May 27, 2019) shared that they had "a really hard time having superficial interactions with people. I can do small talk, but it is more exhausting than having an engaged conversation like this. Exponentially more". Participant 6 even described experiencing interacting with other autistic partners as

> …it's like we're speaking a different language than when I'm speaking with my allistic friends, like. I just feel like communication just becomes so easy because we're on the same wavelength, like we're thinking the same weird stuff. I can make like... It's affected my identity, like jokes and the sort of social communication is so freeing and it feels so great that... I wouldn't actively identify as autistic if I didn't have all these autistic friends that I fit so perfectly in. It's really... That is what makes me, like the community is what makes me want to accept myself for being autistic. (Interview, May 14, 2019)

Additionally, some instructors found autistic students would respond inappropriately (according to nonautistic standards). Instructor 3, for example, reported that "he's doesn't realize a response isn't needed. Like, if there's any opportunity to respond, he'll respond at length" (Interview, July 14, 2020).

Autistic students reported that they struggled at times to engage with their peers or instructors because of how widely they themselves had read, how much information they remembered and how much they had researched their favourite topics and that they had been called "a walking encyclopaedia" (Student 10, Interview, February 8, 2018). Additionally, they noticed that others found them over-opinionated but struggled to fully understand why. Participant 12 shared "I've heard that, 'You think you're right about everything.' Well, of course, I do, why would you believe something if you don't think it's right? "(Interview, February 8, 2018). Instructors confirmed that holding strong opinions sometimes led to violations in academic norms in writing with being very direct and using little to no hedging. Also, Instructor 2 observed that "Like there were a couple of students who took questions very, very literally" (Interview, July 13, 2020).

Time and Timing

In conversations and written communication, saying the right thing at the appropriate time (Freadman, 1994, p. 50) is a critical aspect of being an effective and successful rhetor. Almost all of the student participants reported that they experienced difficulty in their timing of

utterances, especially in group conversations. Student 11 (Interview, January 26, 2018 shared that "when they [nonautistic individuals] meet . . . you can just watch them, just click. It's in their eyes, it's in their voice – like their brain waves are synching." They further noted, "I don't necessarily do that". These differences appear to sometimes relate to autistic differences in auditory processing time or time needed to formulate verbal or written language. Participant 1 shared that "a lot of the time people will ask me a question, and it feels like it takes me 5 years to figure out what they said, but it's like a second, but often times that's like too slow compared to what people are expecting, or a classic one is somebody will say something and I'll say "what" and one second later my brain figures out what they said and then I answer" (Interview, January 7, 2019). Participant 4 explained that their difficulties in responding in a timely way seemed related to verbal formulation challenges. They said, "It's like I have a thought up here, like I'm speaking but "wait a minute", it's just like I guess maybe trying to maybe get the words, thinking about the words to say a clear, coherent sentence" (Interview, January 16, 2019). Participant 4 also went on to describe how they had a similar experience when writing, "When I write down like a idea, like sometimes like my idea itself is the story, like uh--but there's so much going on in my head that like... Sometimes my writing like when I create story ideas isn't fast enough to capture what's going on in my head" (Interview, January 16, 2019).

Interestingly, instructors confirmed that they also encountered differences in timing of verbal and written information when engaging with autistic students. For example, Instructor 2 stated that, "I almost feel like there was like a processing speed difference, but I don't know, because I felt understood [but]…there was sometimes a lag getting there (Interview, July 13, 2020). They went on to observe that "I wondered sometimes if that's because I presented from my lens, as a neurotypical individual, and if they're having to then spend time translating. It's almost felt like you're talking to someone sometimes, like... I would say that in some ways it's similar to when I am talking to students with a second language".

Conclusions and Implications for Future Research

I feel that I am unable to complete this section at this time, but some of the ideas which may be relevant include

- Emphasizing how RGS provides a much more detailed way of understanding the ways in which autistic students and their nonautistic partners differ when it comes to verbal and written exchanges compared to earlier research into social cognition and autism
- The relevance of these findings for supporting the growing numbers of autistic students entering university
- The importance of using Neurodiversity and Double Empathy concepts to understand that these reflect cultural differences in the ways these groups of people think, socialize and communicate, and not deficits in one group, which must be remediated
- The need to expand this research to capitalize on information from quantitative data drawn from surveys which have been informed and designed by the current quanlitative analysis.

Appendix

Semi-structured Interview Guide for Students

    Reading and Writing Experiences:

1. Can you describe your memories of first learning to read?
2. Can you do the same for learning to write?
3. Can you describe your experiences in high school when you first learned to write an essay?
4. Were there any challenges with this task?
5. Do you remember any particular feedback you received regarding your writing from your teachers or anyone else?
6. What kinds of writing have you been asked to do since entering university?
7. Which kinds of writing are your favorite?
8. Which kinds are more difficult? Why?
9. How many essays have you written since entering university?
10. Can you describe your writing process since entering university?
11. What have you found easy?
12. What has been more challenging?
13. Can you share any feedback you have received on your writing from your professors, TAs or anyone else?
14. At this point, how would you rate or describe your writing skills?
15. What are your strengths? And weaknesses?
16. What do you think would help you to develop your writing skills even more?
17. What do you think may be barriers to improving your writing skills?
18. Do you like to write, academically or otherwise?
19. Do you have any other personal experiences of writing which you can share with me to help me better understand your experiences as an academic writer?

    Student interactions with instructors:

20. Think of an instructor who was very helpful to you. Can you describe some of the things that they did which were helpful?
21. What did they do that was not particularly helpful?
22. Think of an instructor who was not at all helpful. Can you describe some of the things they did which were not helpful?
23. Did they do anything that was helpful?
24. Have you ever experienced difficulties knowing **when or if** someone was speaking to you? Can you describe any incidents? How often has this happened? Was your conversation partner autistic or not? Has anything similar happened while reading or writing an email (that you did not notice or perceive that your communication partner expected some kind of response from you? Please describe the incident. How often has this happened?

25. Have you ever experienced not understanding **what** someone was expecting from you in a conversation? Can you describe what happened at that time? How often has this happened? Was your communication partner autistic or not? Has anything similar ever happened when reading and writing e.g., in an email, not understanding the purpose of the message, or misunderstanding it? Please describe the incident. How often has that happened?

26. Have you experienced a time when what you said was not well-received by your communication partner? Can you describe what happened? How often has this happened? Is there any difference in these experiences when speaking/listening versus reading/writing?

27. Have you experienced difficulties with timing your participation in conversations (e.g., taking more time to respond than your conversation partner seems happy with; being off topic because you responded too late; being off topic because of your timing of your response during the conversation?) Was your conversation partner autistic or not? Has this happened when reading and writing? Please describe. How often has this happened?

28. In general, can you contrast your experiences when interacting with autistic individuals compared to those who are not autistic?

Semi-structured Interview Guide for Instructors

1. Do you identify as autistic or nonautistic?
2. What role do you play in instructing autistic students?
3. As far as you know, approximately how many autistic students have you instructed?
4. What positive experiences can you report in working with these students?
5. Have there been any challenges? Please describe.
6. How would you describe the overall writing abilities of the students?
7. Did you notice any differences in communicating effectively in different modalities (e.g., through email, in class, in individual consulting/mentoring?)
8. Have you ever found that a student was not responsive to any part of a conversation (in any modality) or did not seem to know that you were addressing them?
9. Have you ever experienced a student not understanding or responding to your comments/questions during a conversation? How did you deal with it?
10. Has a student given a confusing or unusual response to a comment or question? In what way? How did you handle it?
11. Have there been any differences in the timing in conversations with the student (e.g., taking more/less time to respond than you expected, being off topic, talking too much or too little)?

Step Two:

Institutional Description

This qualitative study investigates the reported discursive accounts of autistic university students' experiences of learning to write at two different Canadian mid-sized universities. It also investigates the experiences reported by their support mentors, lecturers and professors as they have sought to support the students in their acquisition of academic writing according to various academic disciplines. The autistic students are both undergraduate and graduate students who are part of an increasing minority of who have started to attend university throughout the world in the past two decades Alcorn-MacKay, 2010; Gelbar, Smith, & Reichow, 2014; White et al., 2016). Alcorn-MacKay, 2010; Gelbar, Smith, & Reichow, 2014; White et al., 2016). Both universities offer a comprehensive range of courses of study and the students in this study reflect a range of academic disciplines from the arts and social sciences to engineering, technology, science and mathematics.

Theories and Theorists

Please find this information under Step One on page 4.

Glossary

Ableism: "The practices and dominant attitudes in society that devalue and limit the potential of persons with disabilities" ('What Is Ableism?', n.d., para. 1)

Academic writing (also, scholarly writing): Any writing that is performed within or for an educational setting, usually to achieve a requirement of the institution (e.g., school, college, or university).

Autism: Several definitions of autism exist, and these are often quite contentious. Autism (also autism spectrum disorder) has been described as a neurological condition characterized by

- Persistent deficits in social communication across a variety of contexts (reciprocity, nonverbal communication, development/maintenance of social relationships)

- Restricted, repetitive behaviours (American Psychiatric Association [APA], 2013).

The above definition is widely used by such professionals as psychiatrists, psychologists, educators, and various therapists; however, I also recognize and indeed, adopt the autistic community's definition of autism as a diverse kind of neurology which results in a different way of being in the world that does not require a cure (Heilker & Yergeau, 2011; Network, n.d.).

Context: That which helps us to give meaning to events, things and utterances through time and space, internally and externally for a given interlocutor.

Culture: The ways in which people participate in the common practices of a community (Rogoff, 2003).

Disability: "Sociological disadvantage experienced by people with an accredited impairment" (Barnes & Mercer, 2010, p.11)..

Discursive construction: The expression of one's perspective and understanding of reality through the use of discourse (verbal, written or multimodal) situated within group practices, attitudes, behaviours and power relationships in society (Berger & Luckmann, 1967)

Genre: In Rhetorical Genre Studies, a typified response to a recurrent and perceived social need (Miller, 1984).

Impairment: "A medically classified biophysiological condition" (Barnes & Mercer, 2010, p.11).

Member check: A stage in a qualitative research design where students are asked to review transcripts of previous interviews with them and state whether they represent their statements in a trustworthy way.

Text: Any stretch of language (in any modality) that can be understood in context (Nordquist, 2019)

Utterance: A "link in a chain of communication" which is addressed to someone and therefore acquires its "addressivity" (Bakhtin, 1986, p. 95) and situated meaning.