



Technical Report

Secondary Writing Instruction With Deaf and Hard of Hearing Students

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I. Introduction

Writing is a fundamental part of education at all grade levels. Writing enables students to tell stories, deliver facts, and share opinions, all of which contribute to the development of critical thinking skills essential to personal growth, social interactions, college, employment, and democracy. As such writing development is complex and requires ongoing instruction and practice through childhood into adulthood. Students must learn strategies and skills to effectively achieve their intended purposes of communicating through writing with specific audiences, whether it is to entertain, inform, or persuade. Argumentative writing becomes more prominent when students enter secondary schools and higher education where critical thinking and analytical writing skills are expected for success. Building on what we know about writing instruction in general education and special education, this study examines writing instruction at secondary levels with deaf and hard of hearing students.

Deaf and hard of hearing (DHH) children and adolescents are a low incidence population with diverse experiences with language and literacy at home and in school. Approximately ninety-five percent of DHH students are born into hearing families who may or may not be learning signed language along with their DHH child. While signed language is visually accessible and can be readily acquired by DHH children as opposed to spoken language, not all DHH children are exposed to signed language, or receive signed language input that varies in quantity and quality. Some DHH students have successes in spoken language development with hearing technology and speech training while others experience struggles and delays. While the language trajectories of DHH children and adolescents are highly heterogeneous with respect to signed and spoken language access and input, their experiences in school also vary widely across K-12 and college. There are different educational settings where DHH students are placed: residential or day schools or programs for DHH students, self-contained classrooms in public schools, or general education classrooms in public schools. Various types of accommodations such as ASL interpreters, FM systems, and CART may be used in any of these educational settings. Educational programs also vary by language and communication philosophies: ASL/English bilingualism, Total Communication where ASL is used, Total Communication where sign supported speech is used, and spoken language (e.g., Audio-Verbal Therapy or Listening and Spoken Language). Those who are exposed to ASL and English are bilinguals and benefit from assessments and instructional strategies specific to bilingual development.

II. Survey and Focus Group: Summary of Findings

Researchers from the University of Tennessee, Knoxville and the University of Connecticut developed a survey to explore writing instruction used with DHH students in secondary levels. The survey was emailed to over 2,000 teachers of all grades and educational settings who are teaching DHH students in the United States. The survey was also posted on social media outlets such as Facebook and Twitter. Colleagues through shared listservs such as Association of College Educators - DHH and Hard of Hearing were encouraged to share this survey with any DHH teachers they know. After keeping the survey open for approximately one month, two hundred and twenty-two teachers responded.

Following the survey, three focus groups were held with survey respondents to discuss the results. Ten teachers representing different grade levels (middle school and high school), educational philosophies (ASL/English bilingualism, Total Communication, and spoken language), and years of experience (five or fewer years and six or more years) were invited to participate. This current report provides a summary of survey and focus group findings on the practices, challenges, and research needs in writing instruction with DHH secondary students.

A. Factors

Do these factors influence the time and focus of teachers' writing instruction? N = 222 Scale: (1) Never, (2) Rarely, (3) Sometimes, (4) Often, (5) Always		
<i>Factors</i>	<i>Mean</i>	<i>Indicator</i>
Students' individual writing needs	4.72	Always
The grade level standards	3.88	Often
The program curriculum	3.60	Often
Workforce entry	3.47	Sometimes
Post-secondary education admission	2.94	Sometimes
High stakes writing assessment	2.82	Sometimes

Survey Results

- The survey asked teachers to report on whether certain factors influenced the time and focus of their writing instruction, ranging from *never* to *always*.
- Teachers reported that students' individual writing needs *always* influenced the time and focus of their writing instruction.
- Next to students' individual writing needs, grade level standards and program curriculum *often* influenced the time and focus of teachers' writing instruction.
- Workforce entry, post-secondary education admission, and high stakes writing assessment had the least influence. Yet, workforce entry and high stakes writing assessment were ranked slightly higher for high school teachers compared to middle school teachers.

Focus Group Discussion

In focus groups, teachers were asked to review the survey results and share their thoughts. They were told that post-secondary education admission and high stakes writing assessment are prominent topics in the secondary writing literature; whereas, teachers of DHH students in this study ranked them as less influential factors. High school teachers from different states agreed that reading and content knowledge, not writing, were the most important components of high stakes assessments. A teacher explained how her school held the belief that standardized assessments were biased against DHH students' knowledge and skills. Therefore, she did not place a high value on high stakes assessments and focused on students' individual needs instead. These could be among the reasons why high stakes assessments were ranked the lowest in the survey.

When teachers were asked to clarify why they thought students' individual writing needs were ranked the highest, all teachers in the focus group across levels, schools, and language modalities agreed with this result and placed tremendous value on students' individual writing needs. One teacher noted that since DHH students had writing goals in their Individualized Education Plans, meeting their individualized needs was automatically mandated by the law. Several teachers said the gaps in their students' skills were so severe that preparing them to write essays for post-secondary education admission or high stakes assessments was much too far out of reach. Many teachers stressed the importance of individualizing instruction such as getting their students to write for functional purposes. For example, a teacher shared her goal of getting her students to at least write a sentence that is comprehensible to a reader. She gave an example of wanting her students to be able to go to a restaurant and successfully order food through writing. Another teacher said one of her students does not know his alphabet yet. She wanted him to learn basic skills that are applicable to the future such as writing a simple email to let his boss know that he is sick. The skills required for post-secondary education admission and high-stakes assessments were well beyond their students' immediate needs.

Ultimately, the importance of following students' individual life goals was reflected throughout focus group discussions. Teachers agreed that students' individual writing needs can support other areas such as functional life skills, workforce entry, or post-secondary education admissions. Because many students were career-track, vocational-track, or learning life skills, teachers repeatedly shared that they did not prioritize post-secondary education admissions. However, post-secondary education admission and high-stakes assessment became slightly more important in high school because students were graduating, and some may want to go to college.

A teacher described his work as working in a triage where he has to negotiate his time and priorities. He felt college-bound students needed his help the least while other students needed his support the most to develop essential functional writing skills. Although teachers were relatively surprised that post-secondary education admission and high stakes writing assessment were ranked so low in the survey, they expressed relief because they felt supporting students' individual goals was the most important, relevant, and appropriate.

The difference in responses between DHH teachers and general education teachers may be attributed to the options and opportunities for DHH students to enter colleges. Preparing students for college applications may not be the direction that the majority of students are going. They are more likely to be career-driven, so we want to make sure they can access the career pathway. I don't think the results are a reflection of teacher expectations but a reflection of students' actual life goals.

(High School, Deaf School, ASL/English Bilingual)



When I see the word 'individual', I immediately think of the IEP. All of our students have IEPs with writing goals. When I saw this option on the survey, I quickly responded 'yes'.

(Middle School, Self-Contained Classroom, ASL/English Bilingual)

I think our culture does not prioritize high stakes assessments. I work at a deaf school where everyone knows that standardized assessments do not accurately reflect our students' abilities. We feel the assessments are biased against DHH students. It may be that the survey responses reflect the reality that DHH teachers do not place a high value on those assessments like hearing teachers do for their hearing students.

(Middle School, Deaf School, ASL/English Bilingual)

When students enter my class there is usually a big gap between where they should be versus where they are. I'm just trying to get them to be able to functionally write. It makes sense to me that the most popular answer was students' individual needs. If I have a student that can't write a sentence, I'm not focusing on what the high stakes test wants them to do. I need to make sure they can write a sentence first and build off on that. Hopefully in high school they'll become more prepared for college. The gaps are sometimes so severe that I can't even think about them writing essays in middle school. I'm focused on...
can you write a sentence and is it clear?

(Middle School, Self-Contained Classroom, Spoken English)

B. Teacher Preparation and Skills

How prepared do teachers feel to teach writing to DHH students at the secondary level?	N = 222
Not prepared at all	10 (5%)
A little prepared	38 (17%)
Somewhat prepared	74 (33%)
Mostly prepared	70 (32%)
Very prepared	30 (14%)

How would teachers rate their current skills to teach students to do each of the following? N = 220 Scale: (1) Poor, (2) Fair, (3) Average, (4) Very good, (5) Excellent		
<i>Factors</i>	<i>Mean</i>	<i>Indicator</i>
Punctuate appropriately	4.12	Very good
Spell correctly	4.01	Very good
Use accurate grammar	3.99	Very good
Type fluently	3.94	Very good
Organize & structure ideas	3.88	Very good
Generate ideas	3.75	Very good
Construct strong arguments	3.72	Very good
Revise writing	3.63	Very good
Cite reference sources	3.63	Very good
Translate ideas into written text	3.62	Very good
Understand & consider multiple viewpoints	3.59	Very good
Paraphrase source material	3.54	Very good
Use tone and style appropriate for the intended audience	3.52	Very good
Synthesize information from multiple sources	3.42	Average

Survey Results

- Two questions posed to teachers in the survey asked about how prepared they feel to teach writing and for them to rate their skills in teaching specific writing features and skills.
- The majority of teachers reported in the survey feeling *somewhat* to *mostly* prepared to teach writing to DHH students at the secondary level. Almost a quarter of teachers felt *a little prepared* or *not prepared at all*.
- The majority of teachers said they were the most skilled at teaching students to punctuate appropriately and spell correctly, rating their skills as *very good*.
- They also indicated that they were *very good* at teaching how to use accurate grammar, type fluently, organize and structure ideas, generate ideas, construct strong arguments, revise writing, cite reference sources, translate ideas into written text, understand and consider multiple viewpoints, paraphrase source material, and use tone and style appropriate for the intended audience.
- They were least skilled, rated at *average*, in teaching students to synthesize information from multiple sources.

Focus Group Discussion

Teachers in focus groups were asked if they could relate to the survey results and explain why or why not. All teachers were not surprised by the results. Several teachers indicated finding it easier to teach writing skills that are more concrete and feasible to measure, such as punctuating correctly, spelling correctly, using accurate grammar, and typing fluently. This may explain why these skills were ranked the highest. Slightly more complicated skills during writing processes such as generating and organizing ideas were also familiar and comfortable for most teachers. Almost all teachers, including those working in settings using spoken language, said they have found teaching writing skills through ASL first to be helpful for English development, especially when it comes to abstract and complex skills such as using tone and style appropriate for the intended audience. Yet, they felt research and training was extremely limited in this area. Teachers agreed that they did not receive enough training on writing instruction due to a greater emphasis on reading instruction, which has affected their knowledge and skills in writing pedagogy.

**There is not enough training on writing instruction.
Most of the time it is about reading strategies.
Reading is my thing, but writing is important too.**

(High School, Deaf School, ASL/English Bilingual)



Teaching my students in their L1 then adding L2 and sometimes L3 in writing while people expect them to have the same skills as hearing children who were born and raised in spoken English environment is challenging for me.

(Middle School, Self-Contained Classroom, ASL/English Bilingual)

They have never been shown that ASL is its own language with its own grammar and its own phonology; they have never been formally taught that. Most of them didn't grow up with signing parents and don't have deaf adults in their life, and yet we expect them to translate their ASL expressions into English writing. It's my biggest challenge.

(High School, Self-Contained Classroom, Total Communication)

Teaching about tone is really tough, but doing it through ASL is very helpful. For example, we are working on persuasive writing right now. We discussed the difference between telling mom, "I want to do this now!" and "I would recommend..." or "I would like to do this..." Basically, I ground the information through ASL first and make sure they fully understand it before applying their skills to English.

(Middle School, Deaf School, ASL/English Bilingual)

There is not enough guidance for teachers. When I teach writing, I am not sure exactly how to teach skills that are more abstract. Teaching how to type or how to put down ideas on the board is concrete and straightforward. Other skills are more complicated.

(High School, Deaf School, ASL/English Bilingual)



C. Student Writing Skills

On average, how would teachers rate their students' skills with each of the following? N = 221 <i>Scale: (1) Poor, (2) Fair, (3) Average, (4) Very good, (5) Excellent</i>		
<i>Factors</i>	<i>Mean</i>	<i>Indicator</i>
Generate ideas	2.77	Average
Type fluently	2.46	Fair
Punctuate appropriately	2.28	Fair
Spell correctly	2.27	Fair
Understand & consider multiple viewpoints	2.01	Fair
Translate ideas into written text	1.98	Fair
Construct strong arguments	1.92	Fair
Organize & structure ideas	1.92	Fair
Use tone and style appropriate for the intended audience, cite reference sources, synthesizing information from multiple sources, use accurate grammar, paraphrase source material, revise writing	1.85-1.67	Fair

Survey Results

- The survey broadly gauged DHH students' writing skills by asking teachers to report, on average, how well their students performed on specific writing tasks. While middle and high school students ranged from emergent writers to being enrolled in AP classes, the numbers reported by teachers reflect the mean skill levels across their students.
- Teachers indicated that their students had *average* skills in generating ideas, which was ranked the highest of all fourteen skills listed.
- As for typing fluently, punctuating appropriately, spelling correctly, understanding and considering multiple viewpoints, translating ideas into written text, constructing strong arguments, and organizing and structuring ideas, teachers reported that their students had *fair* skills in those areas. The skills that DHH students were given the lowest rating were using tone and style appropriate for the intended audience, citing reference sources, synthesizing information from multiple sources, using accurate grammar, paraphrasing source material, and revising writing.

Focus Group Discussion

Teachers across focus groups commented on their students being effective at generating ideas in ASL or spoken English but having a range of abilities in translating their ideas into written English. Several teachers shared similar experiences noticing students wanting to immediately stop engaging in the writing process after brainstorming, and often avoiding organizing, writing, or revising altogether. A teacher affirmed that having students translate their ideas into writing was challenging enough, and if she were to ask them to revise their writing next, it would make the experience very negative for her students. A handful of teachers attributed the challenges in getting students to write to the effects of language deprivation, which means their students do not have a strong foundation in a first language. It is very difficult to write while lacking fluency in ASL or spoken English for expressive/receptive communication.

A few teachers mentioned having balanced bilingual students, which means the students are at grade level in their language and writing skills. Those teachers explained that they were not as worried or as invested in those students because they were performing well academically while other students who experienced language deprivation during their early childhood had greater needs for attention and support. Several teachers shared uncertainties regarding the expectations of DHH students' writing skills and did not know if their expectations were too high or too low, which has possibly affected the way they rated their students' skills. To sum up, the results from the survey and the focus groups illustrate the large variability in secondary DHH students' writing skills, ranging from emerging to advanced.

You know a lot of our students are language deprived. They don't have a strong foundation in a first language, and now we're asking them to write in a language that most likely is a second language. If they can sign their answers to you, you'll get a whole list of things that they want to talk about, and then on paper, maybe you'll get only one.

(Middle School, Self-Contained Classroom,
Spoken English)



Revising skill being at the bottom of the survey results makes a lot of sense to me because I know it's a struggle for them just to get a first draft done. When you tell them, "Okay, now we're going to fix it," they look at you like you're crazy. I think the kids take it personally when they're working so hard to give you something on the paper, and then you tell them we're going to work on it to make it better. They are thinking... well, I just gave you my best!

(Middle School, Self-Contained Classroom,
Spoken English)



My students would start with generating ideas. They are most comfortable with this skill. We start there, and they feel good and confident. Then, we switch to English. We have to understand that they have had negative experiences with English. If I only focused on English all the time, my students would not be happy in my class. I cannot allow that. Students can't learn if they are always anxious. So, we start with brainstorming our ideas in ASL and then we transfer them to English. I tell them to not worry about English grammar and that we will fix it later. Later being the next draft. Several drafts later, we are still going and boom: we are on to a different writing topic.

(High School, Deaf School, ASL/English Bilingual)

D. Most Important Writing Skills

Select the top three skills that are important for DHH secondary writers. (Select only three.)	
Translate ideas into written text	138 (21%)
Organize and structure ideas	124 (19%)
Use accurate grammar	69 (10%)
Generate ideas	65 (10%)
Understand and consider multiple viewpoints on a topic	52 (8%)
Synthesize information from from multiple sources	47 (7%)
Revise writing, construct strong arguments, paraphrase source material, use tone and style appropriate for the intended audience, cite reference sources	23-39 (3-6%)
Spell correctly, punctuate appropriately, type fluently	3-13 (0%-2%)

Survey Results

- Teachers were asked in the survey to pick three skills out of a list of fourteen skills that they thought were the most important for DHH writers in secondary levels.
- The majority of teachers felt translating ideas into written text, organizing and structuring ideas, and using accurate grammar were the most important skills.

- A smaller percentage of teachers thought generating ideas, understanding and considering multiple viewpoints on a topic, and synthesizing information from multiple sources were the most important skills.
- Only a few teachers selected spelling correctly, punctuating appropriately, and typing fluently as the most important skills for DHH students to have.

Focus Group Discussion

Overall, when these three key skills are taken together - translating ideas into written text, organizing and structuring ideas, and using accurate grammar - most teachers in focus groups believe DHH students become effective writers. Although teachers reported being the most skilled at teaching spelling, punctuation, and typing skills, these skills were ranked as the least important for DHH secondary writers. When asked about the impact of teaching specific writing skills such as spelling or synthesizing information, perspectives on time and priority spent into teaching those skills varied widely among teachers in focus groups. A teacher admitted spending more time teaching concrete skills (e.g., typing, punctuation, and grammar) over abstract skills (e.g., tone and voice) because her knowledge of writing instruction was limited. Two teachers shared that they did not teach citations because it was too time consuming; they felt time would be better spent elsewhere such as idea generation. Similarly, a teacher did not teach spelling because the autocorrect and spell check features were easily accessible to students. A couple of teachers were careful to point out that having students write about something they truly care about was far more important than learning about grammar. Yet, another teacher said even though she tells her students to not worry about grammar, she secretly believes grammar is a very important skill. Ultimately, students' skills seem to vary as widely as their teachers' pedagogical knowledge, beliefs, and skills.



Students need to write about something. If the focus is only on grammar, so what? It needs to be about communication. If they don't have something to communicate about, then why bother? They need to write about something they truly care about.

(Middle School, Deaf School,
ASL/English Bilingual)

I think it goes back to teachers' philosophy, priorities, and time. For example, my students wrote an information report. They typed and edited their paper, and put in one reference from a website for their bibliography. I would think it is good enough. I am not going to pick on citations and references. That's just me. That's where I put my energy into. Other teachers may be more strict than me.

(Middle School, Self-Contained Classroom,
ASL/English Bilingual)

I admit I don't focus on spelling because I don't think it is that important. I am a bad speller myself. I grew up in the technology era where autocorrect and google will tell me how words are spelled. With this support, knowing how to spell becomes less important.

(Middle School, Deaf School,
ASL/English Bilingual)

E. Time and Perspective on Genres

What percentage of time do you spend on each genre in a school year and which genre is the most important for your students?	Percentage of time teaching in each genre N = 190	Percentage of teachers picked the most important genre N = 186
Narrative	31%	23%
Informative	28%	54%
Persuasive	22%	18%
Poetry	11%	2%
Other	8%	3%

Survey Results

- When surveyed about the percentage of time teachers spend teaching each genre in a school year, teachers reported that, on average, they taught narrative writing 31% of time, informative writing 28% of time, persuasive writing 22% of time, poetry 11% of time, and other types of writing 8% of time.
- Teachers were also asked to share their opinion on which genre they thought was the most important for their DHH students. Although they spent most of their year teaching narrative writing, the majority of teachers thought informative writing was the most important genre.

Focus Group Discussion

Teachers in focus groups agreed that students were generally more motivated to write about their own personal experiences. A teacher believed narrative was the first and easiest step into writing; therefore, she often stayed in this genre longer than other genres because her students were still developing basic writing skills. Many teachers felt their students were generally uncomfortable with writing, so they aspired to make the experience as positive as possible. Narrative writing was more enjoyable, motivating, and familiar to their students than other genres.

Some teachers said resources to teach genres other than narrative were often a barrier. For example, most of the available mentor texts in ASL and English are narratives, making it challenging to expose students to informative and argumentative genres. Further, several teachers thought the line between informative writing and argumentative writing was difficult to distinguish. They shared their uncertainty about whether a scientific paper in which the student made a claim would count as informative or argumentative writing, which has affected how they reported their percentages in the survey.

Even though they did not spend most time in this genre, all teachers agreed that informative writing was the most important for students' future because of its application to a wide variety of skills and careers. Teachers provided different reasons for not spending as much time teaching informative writing. First, some teachers assumed the responsibility of teaching informative writing largely fell on social studies and science teachers. Second, writing instruction was driven by students' needs and interests, and students were the most motivated with narrative writing over other genres. Third, some teachers found narratives easier to teach and lacked preparation for teaching other genres. Finally, given the other factors mentioned, time for teaching other genres of writing became limited. All in all, teachers felt informative writing was prominent, but their students' individual needs impacted the decision to remain in the narrative genre for a longer period of time.

I think narrative writing is something that is simple to encourage students to express themselves. Most of the time my students resist writing. They do not want to write, and they are not sure how to write informatively. They feel more comfortable and natural writing if it is a story.

(High School, Self-Contained Classroom, Total Communication)

It makes sense to me that informative writing is seen as the most important for school districts, because I know that's where the curricula and the standards are driven.

(Middle School, Self Contained Classroom, Spoken English)

When we watch model videos in ASL, most of them are narratives. Some informative videos do exist, but there are very few argumentative videos. I wonder if limited resources make it challenging for us to switch to informative and argumentative genres.

(Middle School, Deaf School, ASL/English Bilingual)

I think it boils down to insufficient training leading teachers to decide to stick with the narrative genre.

(High School, Deaf School, ASL/English Bilingual)



Teachers picked informative writing as the most important genre because it impacts students' future. Narrative writing is not as impactful. The informative genre will help students in college, their career or even with life skills. It is broad and more applicable to many things.

(High School, Deaf School, ASL/English Bilingual)

F. Reading and Writing Class

During a typical week, how many minutes do teachers spend on certain components of writing instruction?	N = 190
Teaching writing to a class (This only includes time where teachers directly teach writing genres, processes, or text knowledge.)	69 minutes
teaching grammar to a class (This only includes time where teachers directly teach vocabulary, grammar, word order, sentence structure.)	60 minutes
Student writing. (This only includes time spent planning, drafting, revising, and editing that is paragraph length or longer. This does not include instruction.)	68 minutes

Is reading and writing taught in the same class/time block or as separate classes?	N = 186
Same class/time block	124
Separate classes	62

For the majority of your students, do you teach both reading and writing, or only writing?	N = 186
Reading and writing	167
Only writing	19

Survey Results

- To gain a bigger picture of secondary writing instruction, teachers were asked in the survey to indicate the amount of time they spend teaching certain components of writing and whether they taught writing and reading in the same block.
- Teachers reported that they provided direct writing instruction for an average of 69 minutes per week, taught grammar for an average of 60 minutes per week, and had students engage in writing for an average of 68 minutes per week -- totaling up to approximately three hours a week of writing instruction and practice.
- The majority of teachers said they taught reading and writing in the same class/time block.

Focus Group Discussion

In focus groups, there were variations to whether reading, writing, and signing are taught in the same time block or as separate classes. Some schools separated reading, writing, and ASL classes while others combined all three and called it 'Bilingual Language Arts'. Some schools allotted 50 minutes

while others provided an hour and half or more to reading and writing (and sometimes ASL) instruction daily. One teacher shared her challenges and frustrations in helping students to develop a broad array of literacy skills with time constraints of teaching only for 50 minutes.

A few teachers expressed the belief that their students benefited more from having a writing class as a stand-alone class so that more time can be dedicated to teaching writing. A teacher noticed that with reading and writing being combined in the same class, she had the tendency of focusing on reading more. However, another teacher disagreed and felt his students become better writers when reading and writing classes were merged together. His school had tried separating both classes in the past and found it ineffective. The mix of experiences and perspectives shows no clear agreement on the benefits of combining or separating reading and writing classes.



My school integrates both ASL and English in the language arts class. We don't have any class that is English only. We call it 'Bilingual Language Arts'. Basically, we have one long block with two 50-minute periods of Literature and Composition that focus on ASL 50% of the time and English 50% of the time.

(Middle School, Deaf School, ASL-English Bilingual)

In middle school, our students have 50 minutes for reading, 50 minutes for writing, and 50 minutes for ASL, and they all overlap.

(Middle School, Deaf School, ASL-English Bilingual)

My school keeps writing and reading classes separate. My students become better writers when both classes are separate.

(High School, Deaf School, ASL/English Bilingual)

I don't have a separate writing class. ELA integrates both, which impacts my writing instruction. I only have 50 minutes daily for ELA.

(Middle School, Self-Contained Classroom, ASL/English Bilingual)

G. Teacher Collaboration

<p>Is there collaboration on writing occurring between you and other teachers or service providers? <i>(This may include writing being planned for and/or taught during the E/LA period and/or the content area class period.)</i></p>	<p>N = 186</p>
<p>Yes, there is collaboration</p>	<p>95</p>
<p>No, there is not collaboration</p>	<p>91</p>

Survey Results

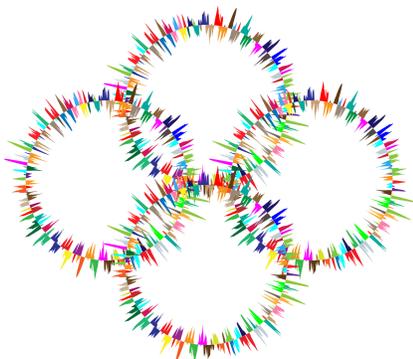
- When asked about whether teachers collaborated with other teachers or service providers on writing instruction in the survey, approximately half of the respondents said collaboration occurred.
- Those who said they collaborated were asked a follow-up open-ended question about the nature of their collaboration.
- Thirty teachers wrote that they collaborated with other content area teachers such as science, social studies, math, and ASL teachers.
- Twenty-one teachers said they collaborated with other English Language Arts teachers.
- Fifteen teachers working in mainstream schools indicated their collaboration with general education teachers.
- Eight teachers reported collaborating with speech language pathologists.
- Their collaboration varied from helping each other come up with writing topics to developing interdisciplinary writing projects.
- Some teachers noted that content area teachers exchanged vocabulary lists or grammar areas with each other so that they could reinforce similar skills in their own classes.
- A few teachers said they found collaboration challenging due to not having sufficient time.

Focus Group Discussion

In the focus group discussion, collaboration varied from teacher to teacher depending on multiple factors. Many teachers agreed that insufficient time to meet with other teachers was an impediment, and when they were provided with time to meet, writing instruction was not always the focus. Teachers in small mainstream schools or programs for DHH students reported working in isolation, thus not having an opportunity to collaborate with colleagues at their schools. Some teachers collaborated more frequently with language arts teachers while others collaborated more often with content area teachers. There was a general consensus among teachers in DHH schools that individual personality and preference impacted their decision on whether to collaborate or not. While itinerant teachers said collaboration was required for their job, this often entailed providing guidance and support to general education teachers.

As an itinerant teacher this year I'm in ten different schools so I do a lot of collaboration just with each of the school teachers.

(High School, Public School, Spoken English)



No. I am the only middle school teacher in my program.

(Middle School, Self-Contained Classroom, ASL/English Bilingual)

Time is a factor. I don't collaborate because of time. When the director of curriculum plans for our meeting to discuss writing instruction, it is really beneficial.

(High School, Deaf School, ASL-English Bilingual)

Whether teachers collaborate or not has a lot to do with personality. I collaborate a lot because that is who I am.

(Middle School, Deaf School, ASL-English Bilingual)

H. Digital Tools

How frequently do you use digital tools in your writing instruction? (e.g., Google Docs, PowerPoint, FlipGrid, YouTube, Blogs, Apps, etc.)	N = 182
Every lesson	109 (60%)
Weekly	51 (28%)
Monthly	12 (7%)
A few times during the semester	9 (5%)
Never	1 (1%)

Do you use digital tools for these following writing activities? (Select all that apply.)	N = 178
Grammar exercises	129
Individual planning or writing	130
Grammar support	118
Spelling support	114
Create pictures, graphs, videos	107
Connect students to resources, topic word banks or vocabulary support, progress monitoring or assessment, mentor/model texts, peer-editing, progress monitoring or assessment, organizing resources	70-100
Access multimedia content for writing, collaborative composing, word prediction, writing portfolios, and prevent plagiarism	40-70
Share writing with a wide or varied audience, publishing outlets, connect with mentors for writing	0-40

Survey Results

- The survey asked if teachers used digital tools in their writing instruction, and if so, how often and for what purpose.
- On the whole, most teachers (60%) reported using digital tools in their writing instruction every lesson while a smaller group of teachers (28%) used digital tools on a weekly basis.
- Even fewer teachers use digital tools monthly or a few times a semester.
- Teachers indicated using digital tools mainly for grammar exercises or support, individual planning or writing, and spelling support.

- They also used digital tools to create pictures, graphs, and videos.
- Not many teachers reported using digital tools to share writing with an audience, to access publishing outlets, to engage in collaborative writing, or to create writing portfolios.

Focus Group Discussion

It was evident in focus groups that digital tools played a big role in teachers' instruction. Teachers provided plentiful examples of digital tools being used for different purposes during writing instruction. The survey results indicating the popularity of digital tools for grammar exercises and writing activities resonated with teachers. Many noted the benefits of student- and teacher- friendly online platforms that provide independent practice for grammar. A teacher liked how IXL had the ability to match students' individual levels and bring forth individualized practice. Similarly, Newsela and No Red Ink made it possible for teachers to individualize reading and writing assignments. Moreover, those online platforms recorded and tracked student progress, which teachers incorporated into their reports during IEP meetings.

Teachers shared using digital tools in multiple ways in both ASL and English throughout the writing processes. Some examples include: graphic organizers, outlines, and drafted ASL compositions on video. A teacher explained how she used Google Jamboard, a digital whiteboard, to draw, show Google images, label, and write whenever communication breakdowns occurred while discussing writing topics. Digital tools make multimedia writing possible.

All teachers said they utilized GoogleDocs, exemplifying the widespread use of this digital tool for writing. Features found in GoogleDocs such as annotation tools, live chats, comments and suggestions that students can accept or reject, and the history of previous document versions have positively impacted teachers' writing instruction. A teacher said she loved that GoogleDocs made it possible for her to provide specific feedback to multiple students at the same time while they are writing. That same teacher said she also used GoogleDocs for peer-to-peer collaborative writing where students would write together simultaneously using individual computers.

A handful of teachers shared the same expectation of having their students submit all of their papers digitally. A teacher remarked not being able to remember the last time he has accepted a handwritten paper from anyone in over ten years. Another teacher did not accept handwritten papers because she thought it was important for her students to become comfortable with typing as it is needed for life. However, typing came with unique challenges. Some teachers noted the difference in students' writing when it was typed compared to handwriting. For example, students would become stuck when they see the red underline indicating spelling errors under their typed words. In addition to issues with spelling, typing seemed to impact some students' capitalization skills. A teacher said his student was good at capitalizing words if they wrote with their hands, but their capitalization skills diminished while typing. However, a few other teachers said their students did not have those issues with typing. On the whole, most teachers in focus groups strongly encouraged typing in their classes while handwriting was considered more useful during the brainstorming and outlining processes. When

asked whether they thought their students' writing scores would be higher if they had typed or written with their hands, teachers were unsure.

The number of teachers using digital tools for publishing outlets was low in the survey. When asked for their opinion, teachers in focus groups agreed that the term 'digital tools' may be vague and that teachers may actually be publishing online more than they realize. A teacher said she hadn't considered that emailing students' writing pieces to readers could be considered as a form of publishing outlet using digital tools.

Whilst positive sentiment about digital tools was clear, several teachers felt they did not have sufficient training to maximize the benefits. A teacher argued that when digital tools are being utilized in classrooms, they are not used in ways that improve the effectiveness of instruction. Generally, teachers were supportive of an integrated approach in incorporating digital tools in their writing instruction and desired more time, training, resources, and support for both teachers and students.

I can't remember the last time my students submitted a handwritten paper.

(High School, Deaf School, ASL-English Bilingual)

Teachers do not have sufficient training on using digital tools in creative ways like peer editing. So, we end up using technology based on what we know like editing or grammar work.

(High School, Deaf School, ASL-English Bilingual)

I usually use GoogleDocs. I teach students how to read the comments I leave for them, and I like that they can accept or reject my suggestions.

(High School, Deaf School, ASL-English Bilingual)

I use all Google products. All the time.

(High School, Self-Contained Classroom, Total Communication)

I love the annotation tools in GoogleDocs. I love being able to add circles, put comments, and provide feedback.

(High School, Deaf School, ASL-English Bilingual)

My students have IEP, so those digital tools that have tracking data on student progress are helpful for reporting in IEPs. I think that is one reason teachers rely on digital tools the most for grammar exercises because they do not need to re-create the activities and to collect data for the IEPs.

(Middle School, Self-Contained Classroom, ASL/English Bilingual)



I. Areas of Need for Research

Do you think there is a need for writing research on DHH students in secondary levels?	N = 181
Yes	179
No	2

Which areas of research do you feel are needed? (Select all that apply.)	N = 179
1. determine effective ASL/English bilingual approaches to writing	154
2. determine effective practices in teaching DHH secondary students	147
3. identify the specific needs of DHH secondary students	116
4. approaches that prepare students to use writing in the workforce	110
5. approaches to motivate student writers at the secondary level	107
6. approaches that prepare students for post-secondary education	103
7. differentiating instruction	102
8. approaches to integrating digital tools effectively	65
9. approaches that prepare students for high-stakes testing	42

Survey Results

- A fundamental question posed in the survey is do teachers think research on DHH in secondary levels are needed, and if so, in what areas.
- Almost all teachers surveyed agreed that there is a need for writing research on DHH students in secondary levels.
- The majority of teachers felt the most needed area of research was effective ASL/English bilingual approaches along with determining effective practices in teaching DHH secondary students.
- Motivation was ranked differently by middle school and high school teachers. Motivation was ranked the third most important area of research for high school teachers and the seventh most important for middle school teachers.
- Differentiating instruction was ranked slightly higher by middle school teachers, placing it as the fifth most important area for this particular group.

Focus Group Discussion

There was a strong and shared consensus in all focus groups that more research is greatly needed on ASL/English bilingual approaches. Several teachers painted a picture of this need by sharing that they were coming up with their own bilingual approaches without knowing whether they were effective or if other teachers were using the same techniques. A teacher said she was familiar with ASL/English bilingual approaches such as the chaining method, but not enough new information was coming out, especially in the areas of student outcomes. Moreover, a teacher remarked on the popularity of multimedia writing in general education, yet she found that there was not enough information on using this approach bilingually with DHH students. Another teacher shared her desire in having a research-based, high-quality, attractive ASL/English bilingual curriculum with student- and teacher-friendly online platforms incorporating writing prompts, projects, assignments, lessons, exercises, and assessments. Since ASL and English bilingual benchmarks and assessments are lacking, teachers in focus groups found it challenging to purposefully, fairly, and effectively track and evaluate students' signing and writing progress. Further, this impacts their ability to establish expectations appropriate to their students' writing development. The issue of teachers being untrained in ASL was repeatedly brought up throughout the focus group discussion. Teachers felt their lack of ASL knowledge was a barrier in their ability to assess students' ASL. When asked about specific areas of research related to ASL/English bilingual writing instruction, teachers made some suggestions:

- (1) the development of ASL and English mentor texts based on grade levels,
- (2) the methods in using ASL and English mentor texts effectively,
- (3) the benefits of DHH cultural representation in mentor texts,
- (4) the methods of using translanguaging practices effectively,
- (5) the methods of teaching ASL/English processes in each genre,
- (5) the development of ASL/English benchmarks, and
- (6) the methods of evaluating students' ASL/English texts.

Middle and high school teachers in focus groups felt the survey data provided an accurate portrayal of how both departments face different challenges when it comes to motivation. Middle school teachers reported their students being generally easy to work with due to their developmental stage and desire for support from teachers. Their students were still relatively young, ambitious, and excited about going to school to learn. High school teachers noted their students' excitement wearing off once they entered high school; motivating high school students to write becomes even more challenging. Because time is running out, high school teachers experienced elevated pressure to help their students develop essential skills before graduating. One teacher noticed the tendency of her students to start giving up on their education in high school because they haven't been achieving in reading and writing for so many years. This may explain why motivation becomes one of the major concerns for high school teachers as reported in the survey.

Other research areas discussed in focus groups included: differentiated instruction, sustainability of teaching practices, and writing for life. A middle school teacher felt she would be able to motivate

students more if she did a better job with differentiated instruction. Another teacher felt there were many teaching practices being introduced to them without any sustainable programs to reinforce and refine newly acquired skills. Finally, all teachers repeatedly emphasized the importance of making writing a purposeful activity to navigate life such as communicating with hearing people in public places, at work, or any other settings. They felt functional writing skills for meaningful and effective communication were not adequately addressed in research.

Research needs to be done with a bilingual approach for students who use ASL and write in English. In my district, my administrator just started listening to us when we say that our DHH learners are also bilingual learners. I think more research on that would be beneficial.

(Middle School, Self-Contained Classroom,
Spoken English)

A number of my students have cochlear implants, and they have interpreters. They are not getting a solid foundation in either language. They wanted to give my students a phonetic based test. She's just going to get all the nonsense words, and she has to say all the sounds. She can barely recognize words so how are you going to get her to say all the individual sounds, so you are actually putting her at a bigger disadvantage.

(Middle School, Public School,
Spoken English)

I would like to see clear expectations for age-appropriate writing skills in each grade level. It would be good to have models of what deaf writers look like in each grade level. It would be nice to have a clear picture about what language deprived bilingual students and balanced bilingual students' literacy skills look like across ages. It is helpful to have benchmarks to compare with.

(High School, Deaf School, ASL/English Bilingual)

We all do and try different things, but there is no clear consensus on what is the most effective. There are a lot of uncertainties with who should do what. We have a limited knowledge and understanding of best practices. We are coming up with things as we go. It is like we are building the plane while we are flying it.

(High School, Deaf School, ASL-English Bilingual)

I know that colleges are interested in multimedia writing, and this is perfect for deaf students. They are already familiar with multimedia writing through the use of ASL. I think there needs to be more research in this area.

(High School, Deaf School, ASL-English Bilingual)

I think it is helpful to have a curriculum that is truly bilingual with an online platform. I want to be able to pick out reading questions or writing questions and engage my students in the writing process using both ASL and English. For example, I may have students develop their outline in ASL then write in English or vice versa. I could have my students develop their outline in English and then do ASL essay. It would be amazing if there was a platform that allowed us to do that.

(Middle School, Deaf School, ASL-English Bilingual)

I am interested in knowing how we can create a sustainable program. Many ideas are great but they fall apart. How can we evaluate the program and identify what works and what doesn't work?

(High School, Deaf School, ASL-English Bilingual)



III. Methods

Data collection was conducted in two phases in this mixed methods research using the explanatory design (Creswell, 2006). The first phase involved quantitative data collection with a nationwide survey for middle and high school teachers of the DHH. This was followed by the second phase of collecting qualitative data through focus groups. In focus groups, teachers viewed survey data results and were asked follow up questions. In this way, the study is considered a follow-up explanations model that is quantitative oriented. The purpose of this design was to provide a broad picture of secondary writing instruction (with the results of the nationwide survey), and then explain or interpret those findings (with focus group comments).

The survey was developed by researchers of language and literacy from the University of Tennessee, Knoxville and the University of Connecticut. The researchers received feedback on the format of the survey as well as question items from a research team involved in a current grant project studying Strategic and Interactive Writing Instruction for DHH students in upper elementary. After receiving an approval from the Institutional Review Board, this research was implemented.

Phase 1: Survey

After an exhaustive online search identifying as many DHH schools, DHH programs, and school districts as possible for over a period of five months, a list of teacher and administrator email addresses was compiled. On February 2, 2021, the survey was sent to over 2,000 teachers and administrators through researchers' personal email. The administrators were asked to share the survey with their teachers. However, numerous emails did not get through due to school protection systems. The survey was also posted on social media outlets and listservs that was shared by the researchers as well as other people outside of the research team. The survey closed on March 10, 2021.

Survey Sample

Two hundred and twenty-two teachers responded to the survey, and 172 completed the whole survey. At the end of the survey, teachers were asked to share their demographic information such as grade level, school philosophy, years of teaching experience, DHH identity, racial identity, and gender identity. The information provided a better understanding of the sample we have collected data from and whether they are reflective of the whole population. See the tables below for teacher demographics.

Including this year, how many years have you taught DHH students in any grade(s)?	N = 177
5 or fewer years	46 (26%)
6 - 10 years	36 (20%)
11 - 15 years	24 (14%)
16 - 20 years	36 (20%)
21 or more years	35 (20%)
Including this year, how many years have you taught writing to DHH between grades 6 through 12?	N = 176
5 or fewer years	69 (39%)
6 - 10 years	38 (22%)
11 - 15 years	26 (15%)
16 - 20 years	27 (15%)
21 or more years	16 (9%)
In your most recent year of teaching writing, which levels did you mostly teach?	N = 174
Middle school	78 (45%)
High school	96 (55%)

Almost 40% of respondents were relatively new to teaching DHH students in grades 6 through 12 while approximately 60% of respondents had six or more years of experience. However, a larger number of teachers had more years of experience teaching in other grade levels outside of grades 6 through 12. Slightly more respondents in this sample taught in high school than middle school.

Gender Identity	N = 175
Woman	159 (91%)
Man	6 (6%)
Gender diverse	2 (1%)
Prefer not to answer	4 (2%)
DHH Identity	N = 176
Deaf	49 (28%)
Hard of hearing	13 (8%)
Hearing	106 (61%)
Coda	6 (3%)
Racial Identity	N = 175
Asian	0 (0%)
Black or African American	3 (2%)
Indigenous or Native American	0 (0%)
Latinx or Hispanic	1 (1%)
White	162 (92%)
Multiracial and/or multiethnic	4 (2%)
Prefer not to answer	5 (3%)

The majority of respondents were white, hearing, and women. Approximately a third of respondents were DHH and hard of hearing. This sample accurately reflects the demographics of teachers of the DHH in the United States, which are predominantly white hearing women (Simms et al., 2008).

What is your current educational setting?	N = 175
Residential or day school for DHH students	124 (71%)
Self-contained DHH classroom in public school	26 (15%)
Itinerant	14 (24%)
What is your school/program's language or communication philosophy?	N = 175
ASL/English Bilingualism	115 (66%)
Total Communication (ASL used)	28 (16%)
Total Communication (Sim-Com)	13 (7%)
Oral/Aural or Listening and Spoken Language	7 (4%)
Other	12 (7%)
What is your personal language or communication philosophy?	N = 175
ASL/English Bilingualism	126 (72%)
Total Communication (ASL used)	23 (13%)
Total Communication (Sim-Com)	10 (6%)
Oral/Aural or Listening and Spoken Language	5 (3%)
Other	11 (6%)

Most respondents worked in deaf schools or programs that adhered to ASL/English bilingual philosophy. Even more respondents reported having a personal preference for the ASL/English bilingual philosophy although it may not be the philosophy of their program. Research shows that 75% of DHH students are mainstreamed in public schools, and some of them receive support from itinerant teachers and/or DHH teachers (Antia, 2013). Therefore, the respondents of this study were not reflective of a representative sample of DHH teachers even though dedicated effort was made to reach out to this population (DHH teachers teaching in mainstream schools). One possible explanation of this challenge is that the majority of middle and high school students in the public schools receive little to no writing instruction from DHH teachers.

Phase 2: Focus Group

At the end of the survey, 97 teachers expressed interest in participating in focus groups. Based on this smaller pool of teachers, five teachers were selected for each of the three focus groups reflecting diverse representations of educational philosophies, types of schools, DHH identities, racial identities, and gender identities. Group A contained a mixture of middle and high school teachers using spoken English approaches. Group B was composed of high school teachers using ASL and English bilingual approaches. Group C was made of middle school teachers using ASL and English bilingual approaches.

Teachers were asked by email to indicate their availability to meet online for the focus group discussion on Zoom. Not everyone was available on the same dates/times, and replacements were made for those who could not participate. Ultimately, three teachers, four teachers, and three teachers participated in the focus groups, respectively. Focus group questions were developed based on survey results, purporting to elicit discussions from teachers regarding their perspectives and experiences on secondary writing instruction with DHH students. Teachers were asked to look at the survey data and share their thoughts on whether the results matched their experience and provide examples. Their comments brought the data to life where in-depth explanations and examples were provided to support results. The survey results and focus group comments were summarized in this report.

Focus Group Sample

The first focus group consisted of two middle school teachers and one high school teacher in programs that used the Listening and Spoken Language or Simultaneous Communication philosophy. The first participant was a hearing teacher working in a self-contained classroom in a middle school who had taught for five or fewer years. The second participant was a DHH teacher working in a self-contained classroom in a high school who had taught for five or fewer years. The third participant was a hearing teacher working in the itinerant role who had taught for twenty-one years. They all identified as white women. During the focus group, the DHH teacher switched back and forth between speaking, signing, or doing both simultaneously, and the hearing teachers used spoken language only.

The second focus group had four high school teachers in schools or programs that adhered to the ASL/English bilingual philosophy. The first participant was a DHH teacher working in a small DHH school who had taught for five or fewer years. The second and third participants were two hearing teachers working in small DHH schools who had taught for six to ten years. The fourth participant was a DHH teacher working in a large DHH school who had taught for sixteen to twenty years. Three teachers identified as white women, and one teacher identified as a black man. ASL was used during the focus group discussion.

The third focus group contained three middle school teachers in schools or programs that utilized the ASL/English bilingual philosophy. The first participant was a DHH teacher working in a large DHH

school who had taught for five or fewer years. The second participant was a hearing teacher working in a self-contained classroom in a mainstream school who had taught for six to ten years. The third participant was a hearing teacher working in a small DHH school who had taught for sixteen to twenty years. They all identified as white women. ASL was used during the focus group discussion.

Phase 1: Survey		
Participants	Date	Number of Participants
Nationwide	February 2, 2021 - March 10, 2021	222
Phase 2: Focus Group		
Group A	March 18, 2021	3
Group B	March 20, 2021	4
Group C	March 22, 2021	3

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