Pre-service students understanding of professional roles

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PRE-SERVICE STUDENTS UNDERSTANDING OF PROFESSIONAL ROLES

A Thesis Submitted
in Partial Fulfillment
of the Requirements for the Designation
of University Honors

Anne Whalen Gradoville
University of Northern Iowa
May 2021
This Study by: Anne Gradoville Entitled: Pre-service students understanding of professional roles

Has been approved as meeting the thesis or project requirement for the Designation of University Honors

Date                Dr. Evette Edmister, Honors Thesis Advisor, Communication Sciences & Disorders

Date                Dr. Jessica Moon, Director, University Honors Program
Abstract

This study aims to begin understanding how well pre-service speech-language pathologists and teachers understand their roles in collaboration in the schools. Data were collected from a survey completed by undergraduate and graduate students in the Communication Sciences and Disorders and Education departments at one middle-sized university in the Midwest. Results indicated a wide range of understanding and preparedness. Several themes emerged as to what students feel confident about in terms of collaboration, as well as what they believe they still need to learn before they can be confident in collaborating in the schools. The data provides insight into what pre-service students see collaboration involving, as well as what educational institutions can do to help students feel more prepared for future collaboration in the schools between teachers and speech-language pathologists.
Introduction

The purpose of this thesis is to see how well pre-service speech-language pathology and education students understand their roles in the schools regarding speech and language services and interventions. While both professions collaborate in the schools, more research needs to focus on whether or not the pre-service students are learning how to do this. This study aims to find out if the students feel they are being prepared to collaborate or not.

Teachers manage their classroom full of students, as well as making sure to provide additional support to students who need it. In a school, speech-language pathologists treat speech, language, and cognition. It is common that teachers and speech-language pathologists work together in the schools. While this sometimes involves co-teaching in a classroom, it can also be working together to determine what works best to support a child and help them to be successful. The problem is that it is unclear what the pre-professional’s experiences are related to collaboration as well as their perception of their preparation for collaboration when working in the future.

There are two overarching purposes of this study. The first purpose is to understand the past and current experiences students have had with learning about collaboration in the schools. This study aims to find out what the pre-service students experiences have been regarding learning about collaboration in the schools. We want to identify when they have learned about this topic, for how many hours they have learned about this topic, and where they have learned about this topic. We also wanted to find out what the students' experiences have been and let them identify whether or not they feel like they need more instruction in this area and possible ideas of what they could look like.
Our second purpose of this study is to find out how aware students are of collaboration in the schools. As professionals in the field, they will have to be familiar with their roles in providing these services collaboratively, and so we want to find out whether or not students are aware of the role collaboration plays within the schools when working with children with speech and language needs. It is important to determine how well pre-service education and speech-language pathology students understand collaboration regarding speech and language services and interventions. If pre-service students are able to go into the workforce with an idea of what this looks like, their students receiving services will receive more client-centered services and will be more likely to have better results.
Literature Review

The idea of interprofessional practice involves working collaboratively with other professionals to give the student the best experience possible. According to D’Amour and Oandasan (2005), interprofessionality is “the development of a cohesive practice between professionals from different disciplines” (p. 9). Interprofessionality is professionals being able to work collaboratively, which has been shown to have positive effects.

The literature has highly agreed upon the fact that working in interprofessional teams improves the outcomes for the person receiving services. Gunaldo and colleagues (2015) stated that not only do interprofessional teams improve health outcomes, but professionals are more likely to work in collaborative teams in the workforce if they were trained using collaborative practice. D’Amour and Oandasan (2005) also believed that by training competent professionals, more practice settings will employ collaborative strategies over time. Most speech-language pathologists report that they were not trained using interprofessional education in their pre-professional education (Pfeiffer et al., 2019). A study by Wilson and colleagues (2015) also reported that student-teachers had little opportunities for collaboration with speech-language pathology students throughout their education in college. Thus, if collaboration among speech-language pathologists and teachers provided the best care for their clients, being trained to work collaboratively would be extremely important. Without the education on collaboration through interprofessional education, teachers and speech-language pathologists would be less likely to use collaborative strategies in the field.

The student benefits of professionals working collaboratively are numerous. A systematic review of the effect of interprofessional education on patient care
“found positive outcomes in the development of collaborative team behaviour, mortality rates, error rates, patient length of stay, emergency department culture, domestic violence management, and mental health care” (Kent et al., 2018, p. 89).

The benefits for patients are wide-reaching, so if professionals want to best serve their patients, working collaboratively will do so.

In a study in 2018, there were found to be stereotyped views of professions, leading to negative perceptions of interactions (Karasinski & Schmedding-Bartley, 2018). This stereotypic view of professions, especially speech-language pathologists, is best solved by learning and educating other professions about the role speech-language pathologists play in the care of patients (Karasinski & Schmedding-Bartley, 2018). To create healthier working relationships, including increased respect for other professionals, it is necessary to understand the roles and contributions of other fields (Croker et al., 2019). In this regard, speech-language pathologists need to educate professionals on their roles in providing services if they want to work collaboratively at all in the future professional workplace. In a study by Wilson and colleagues (2015), speech-language pathologists and teachers reported skills they believe the other professional needs to better understand; SLPs reported teachers needing to understand therapists’ role and the effects of communication challenges on academics and socialization, while teachers reported SLPs needing to understanding curriculum and classroom management better. Both professions feel the other has a lack of understanding of their expertise; however, each profession would be able to help the other better understand their roles and apply it to their own profession if given the opportunity to work collaboratively.

While this type of collaborative practice has been shown to be effective in the workplace, interprofessional education is needed for future professionals to have the skills to work
collaboratively. Implementing programs to teach pre-professional students to work collaboratively with other professionals has challenges but also great benefits. Louisiana State University Health Sciences Center created an interprofessional education elective course to introduce and teach its students about working collaboratively. After completing the course, the scores on the Roles and Responsibilities section of the post-test varied significantly from the scores on the pre-test (Gunaldo et al., 2015). Having an elective course on interprofessional practice allowed students to better understand not only their roles and responsibilities in providing services, but the roles of other professionals they may work with in the future. Within interprofessional education, students preferred to work in small groups, as it allowed them to have more opportunities to work collaboratively and practice skills with other professionals (Kent et al., 2018).

Interprofessional practice and collaboration is extremely necessary for professionals in the schools. If educators want to best serve their students, collaboration is necessary. For the effectiveness of a school, including improved learning and best outcomes for the students, the professionals in the building need to collaborate with one another (Dobbs-Oates & Wachter Morris). Working collaboratively is even required by federal mandates in schools (Pfeiffer et al., 2019). A study found that most speech-language pathologists pull students out of the classroom to provide services and very rarely do they engage in shared teaching in the classroom (Pfeiffer et al., 2019). Teachers and speech-language pathologists that worked together would benefit not only the students, but the professionals as well. In particular, speech-language pathologists have skills that could be of benefit to general education teachers in helping them to support students with disabilities (Pfeiffer et al., 2019).
A small study done at Edith Cowan University involved students participating collaboratively in interprofessional simulation DVDs. “Participants felt positive about meeting students from another profession, learning about the differences between roles and viewpoints across the two professions” (Lewis et al., 2018, p. 243). The students found the simulation to be beneficial to their learning of working collaboratively. Another study specifically looking at collaboration during language and literacy instruction at a New Zealand university found that simply putting students in collaborative scenarios improved the quality of the instruction, even if no additional discussion was included (Wilson et al., 2016). Students saw benefits in collaboration during their education, even if it simply gave them an opportunity to interact with the other pre-service students.

While research makes it evident that interprofessional practice is beneficial to patients in the field, a gap exists in that students seem to not be receiving much instruction on the topic. The research only mentions that many students feel unprepared, but the extent to which students do not understand their role in working collaboratively in the schools seems to be largely unknown. This lack of knowledge of how unprepared students feel in working collaboratively with children with speech and language disorders exists in both the field of education and speech-language pathology (Wilson, 2019). To understand the true lack of education students receive around collaborative practice, further research would be beneficial.

This study aims to begin understanding how well pre-service speech-language pathologists and teachers understand their roles in collaboration in the schools. There are several research questions that this study aims to answer. The first question is “Do pre-professional speech-language pathology students and pre-professional educators understand what the other professional’s role is in treating children with speech and language disorders?” Another question
that this study hopes to answer is “How prepared do pre-professional speech-language pathology students and pre-professional educators feel to collaborate with one another in the schools?” The final research question that this study hopes to answer is “Are pre-professional students learning about collaborating with other professionals, specifically educators and speech-language pathologists?”
Methodology

Participants

Sixty-three participants (39 Communication Sciences and Disorders students and 24 Education students) were recruited to participate in this study. The specific breakdown of the participants majors and years in school are in Table 1 below. They were recruited through emails forwarded by the department head in the Communication Sciences and Disorders program and the various department heads in the Education program at the University of Northern Iowa. All participants met the criteria of being either an undergraduate or graduate student in the Communication Sciences and Disorders program or Education program. Participation in the study was voluntary and anonymous. No direct identifying information was collected in the survey.
Table 1

Participants

<table>
<thead>
<tr>
<th>Major</th>
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<th>Junior</th>
<th>Senior</th>
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<tr>
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<td></td>
<td></td>
<td>1</td>
<td>1</td>
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<td>1</td>
</tr>
<tr>
<td>Elementary and Middle Level Education</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Elementary Education and Communication Sciences and Disorders</td>
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<td></td>
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<td>1</td>
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<tr>
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<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
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</tbody>
</table>
Procedures

The researcher interviewed one faculty member in both the Education and Communication Sciences and Disorders departments, as well as a school speech-language pathologist to help generate ideas for question development. The information from participants was collected through a survey created and edited by the lead researcher and her thesis advisor. The lead researcher asked a couple of classmates to read the questions to make sure they were asked in a straightforward format. Since respondents did not have the opportunity to ask clarifying questions while taking the survey since it was online, it was crucial the questions were clear. The survey questions were written and reviewed several times prior to sending out the survey. A variety of question formats were used to reduce survey fatigue, as well as ask similar questions in different formats (Fogli & Herkenhoff, 2018). The survey was created using Qualtrics, so it could be sent out to participants.

Once the survey was created, it received IRB approval. Throughout the entirety of the implementation of this study, IRB approved protocols were used. After approval, the research team sent an email invitation along with the survey link to the department heads to forward on to their students. The email was sent to the head of the Communication Sciences and Disorders department, along with the heads of the various Education departments, including Curriculum and Instruction, Teaching, Educational Psychology, and Special Education. The email included a brief description of the study, the expected time to complete the study, information about consent, and the link to the survey.

Several department heads responded that they had forwarded the survey on to their students. Twelve days after the first invitation was sent to the department heads, another invitation to be forwarded to the students was sent reminding them of the survey. Individuals
communicated their interest in participating in the study by clicking the link to the survey in the email sent to them. When clicking on that link, the students were presented with the consent and needed to decide about it prior to beginning the survey. Students who agreed to participate in the online survey, by agreeing to the consent form, then completed the online survey. Those who said no to the consent were thanked for their time.

The entire survey can be found in Appendix A. The survey began with four questions related to the student’s demographics. Next there were four questions that had students answered on a scale of one through six. Two multiple choice questions were next. This part of the survey provided quantitative data for the research team. The next ten questions allowed participants to provide short answers. These questions gave the research team qualitative data where themes could emerge. The total return rate on the survey is unknown, because we don’t know for sure who all received the email invitations.
**Results**

The results of the quantitative sections of the data were extremely varied. When asked how prepared they feel to work collaboratively in the schools, of the 63 participants there were 10% (n=6) of the participants that did not feel at all prepared, 32% (n= 20) that felt a little prepared, 29% (n= 18) that felt almost prepared, 19% (n= 12) that felt prepared, 10% (n= 6) that felt very prepared, and 2% (n=1) that felt extremely prepared. Within that question, the only participant to feel extremely prepared was a Communication Sciences and Disorders graduate student. To see a breakdown of these by major, see Figure 1 below.

Students were also asked how important they felt it was to collaborate in the schools. For this question, the responses were closer. Of the participants, 2% (n=1) felt it was somewhat important, 6% (n=4) felt it was important, 40% (n=25) felt it was very important, and 52% (n=33) felt it was extremely important. Education majors only marked that it was very important or extremely important, while Communication Sciences and Disorders students also responded that it was somewhat important and important. Figure 2 below shows how important the participants thought it was broken down by their major.

Next, the participants were asked to rate how often they think SLPs and educators collaborate in the schools. Of the participants, 2% (n=1) selected rarely, 14% (n=9) sometimes, 32% (n=20) regularly, 33% (n=21) often, and 19% (n=12) always. The breakdown by major of how often participants think SLPs and educators collaborate in the schools can be found in Figure 3 below. The next question related to how often collaboration is mentioned in their classes. It asked them to rate how often professors mention the idea of collaboration. Of the participants, 2% (n=1) reported that their professors never mention the idea of collaboration, 6% (n=4) reported rarely, 17% (n=11) reported sometimes, 32% (n=20) reported regularly, 30%
(n=19) reported often, and 13% (n=8) reported always. To see how often each major reported their professors mentioning the idea of collaboration, see Figure 4 below.
**Figure 3**

How Often do SLPs and Educators Collaborate in Schools

- CSD Undergraduate Students
- CSD Graduate Students
- Education Students

**Figure 4**

How Often Professors Mention Collaboration

- CSD Undergraduate Students
- CSD Graduate Students
- Education Students
Students were also asked if they had taken a class in college that had focused on the importance of collaboration; 52% (n=33) of students reported that they had and 48% (n=30) reported that they had not. Of the SLP undergraduate students, 21% (n=13) said they had and 25% (n=16) said they had not. For the SLP graduate students, 10% (n=6) reported they had and 6% (n=4) reported they had not. Of the Education majors, 22% (n=14) reported they had taken a class that focused on collaboration, while 16% (n=10) students reported they had not. See Figure 5 for additional information about this question. The last quantitative question asked the participants to choose how many hours they had learned about collaboration between SLPs and educators; 52% (n-33) of students reported learning about collaboration between the professions for 0-5 hours, 32% (n=20) reported 5-10 hours, 10% (n=6) reported 10-15 hours, 5% (n=3) reported 15-20 hours, and 2% (n=1) reported over 20 hours. Figure 6 shows a more specific breakdown of which groups of participants selected which number of hours.

Figure 5

Have You Taken A Class Focused on Collaboration

<table>
<thead>
<tr>
<th>Collaboration Class</th>
<th>CSD Undergraduate Students</th>
<th>CSD Graduate Students</th>
<th>Education Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>15</td>
<td>14</td>
<td>13</td>
</tr>
<tr>
<td>No</td>
<td>8</td>
<td>13</td>
<td>2</td>
</tr>
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</table>

Number of Participants
In the qualitative section of the data, several themes emerged in the different questions. These themes were determined by reading participant’s responses several times and grouping similar responses into groups. From those groups, a word or short phrase was used to describe the theme. When asked if they believed collaboration between SLPs and teachers is necessary or not and to explain their answer, every participant believed that it was necessary. Themes that emerged from explanations provided by students in both majors included being able to communicate about goals and methods, being most beneficial for the student, aligning what is taught across settings, and understanding if generalization of skills is occurring. Communication Sciences and Disorders students also mentioned that teachers see their students for larger amounts of time in the day so it is important to obtain their knowledge about the children and that their goals have to be in line with the curriculum so they need the teacher’s expertise related to that.
The next question asked students to describe opportunities they have had while in college to collaborate with pre-professional teachers or SLPs. Themes that emerged from the pre-professional SLP students included volunteering at a preschool, classes, internships, and assignments with pre-professional teachers. Another theme was SLP students mentioning that they had not had experience with educators, only pre-professional speech-language pathologists. Themes that emerged from the pre-professional teachers included assignments, teaching placements, classes, lesson planning, student teaching, and they too had a theme that they had not had opportunities to collaborate with pre-professional speech-language pathologists.

Next, the participants were asked to list any themes they had learned about collaboration. Both pre-professional teachers and pre-professional speech-language pathologists listed delegating tasks, being a good listener, doing the work you commit to doing, being open to new ideas, staying on the same page by communicating, and teamwork. Pre-professional speech-language pathology students also mentioned the ideas that collaboration maximizes success in therapy, it is important for continuity, it generalizes skills, it should be client first, and it depends on the setting as to what professionals will collaborate. Two pre-professional speech-language pathologists mentioned that they had not learned specific themes about collaboration. Pre-professional teachers mentioned additional themes they had learned, including that collaboration takes a village, is important, takes intentional effort, involves compromising, and is mainly done in the context of special education.

The next qualitative question asked participants to list what they felt are barriers to collaboration in the schools. A predominant theme that emerged was lack of time and not having a structured time to meet; 28 participants mentioned something related to this in their responses. In addition, both sets of pre-professional students listed agreeing on plans and a lack of
communication as barriers. Pre-professional speech-language pathology students also mentioned teachers having more students to focus on, the heavy caseloads of the SLPs and the fact that SLPs often travel between schools as barriers. One student also mentioned the poverty of the school as a factor to why there would be a barrier. Pre-professional teachers mentioned fixed mindsets, a lack of knowledge, and insufficient resources and training as additional barriers.

In contrast, the next question asked about the benefits of collaboration. Both groups of pre-professional students mentioned that it is better for the students and it is helpful to have other professionals’ perspectives. Pre-professional speech-language pathology students also mentioned themes of kids spending so much time in the classroom, making tasks easier to complete, helping to use curriculum in therapy, having more opportunities for the children to learn, and helping with goal writing. Pre-professional teachers also mentioned the benefit that collaboration would give a space for material sharing, provide consistency across settings, and show children the importance of teamwork.

The survey also asked students to describe the role of collaboration in the IEP process. Seven participants mentioned that they did not know what the role of collaboration was during this process. Both groups of students mentioned that collaboration during this process are best for the students so their exact needs can be met and in addition, collaboration results in an IEP that is focused on the individual student and their goals. Pre-professional educators mentioned that it also makes the process less stressful, while pre-professional speech-language pathologists mentioned the idea that collaboration would allow goals for the student to be made to translate across settings.

Next, we asked participants where most of their resources regarding collaboration had come from. Three students were not able to list any places resources had come from. Both sets
of students mentioned group work, mentorship from professors, classes, and experience in the field, whether at field placements for education students or internships for speech-language pathology students. Pre-professional speech-language pathology students also mentioned resources coming from Simucase (online clinical simulation), notes and documentation in their clinic.

When asked if the idea of collaboration between the two professions needs to be focused on more in college classes, five students expressed that they think it is focused on enough and doesn’t need more of an emphasis. The reason these students provided was that they felt they had sufficient information and that there is only so much professors could say before the idea gets old. All of the rest of the responses believed that it does need to be focused on more. The reasons they believed it needed to be focused on more were that it is likely to occur often, they need to know how to work together, and it is important to practice before they are in the field. Three education students expressed a lack of knowledge or understanding of what SLPs do in the field; a speech-language pathology student also felt that pre-professional teachers don’t know what SLPs do.

The participants were asked if they felt they had the tools to collaborate in the schools. Eighteen students mentioned specific comments about not being prepared or feeling unsure. Many of the rest of the students expressed a mix of feeling like they have some skills but could use more. Both sets of pre-professional students mentioned that they have the tool of being open to ideas and listening well. Pre-professional speech-language pathology students mentioned MAPS as a tool, as well as asking teachers for lesson plans, push in therapy, and the curriculum. Pre-professional educators mentioned shared goals, emails, professional development, and collaboration meetings as tools they have in terms of collaboration in the schools.
The last question asked students to share ideas they have for helping pre-professional SLPs and teachers learn about collaboration. Both groups of students mentioned the idea to have a class in both majors to talk about working with each other. In addition, both mentioned role playing and having scenarios in class to work through. Pre-professional speech-language pathology students mentioned the idea to have a set time each time to collaborate, have presentations at club meetings, have professors from each department go to the opposite department for a class, have a discussion panel, and work through mock IEPs. The pre-professional educators mentioned having a guest speaker on how they work together, having workshops, focusing on listening, and exposing students to the other profession.
Discussion

The responses to how prepared pre-service students feel to work collaboratively in the schools were widely varied. The wide variety of responses shows a diverse level of preparedness of the students. One factor in the differing responses can be attributed to the different levels of preparedness, based on year in school. While that could account for varied responses, the speech-language pathology graduate students did not all feel prepared, very prepared or extremely prepared, even though they are very close to entering the professional workforce. Two of the graduate students felt only a little prepared and five felt almost prepared to work collaboratively. It is difficult to know if this lack of preparedness comes from being closer to the working world and being more aware of what they do not know, they are more nervous about working independently, or if the topic of collaboration is discussed more in undergraduate classes.

Overall, the participants tended to feel it was important to collaborate in the schools. No participants felt it was not at all important or a little important and only one participant felt it was somewhat important. All other participants felt it was either important, very important, or extremely important, with the majority thinking it was extremely important. This points to an interesting connection in the education pre-service students have received; they have obviously received education that collaboration is important. Whether or not they have received education about the specifics of what collaboration is and how to do it is what appears more variable.

Participants had varied results in how often they believed collaboration between SLPs and educators occurred in the school. No participants believed that collaboration never occurred and only one education student believed it rarely occurred. The majority of students believed that collaboration either regularly or often occurs between the professionals. A smaller number
believed it sometimes or always occurred. Variance in how often they believe it occurs could have depended on their definition of collaboration. For someone who believes collaboration involves working with similar students or an SLP doing push-in services may believe collaboration occurs more regularly than someone else who defines collaboration as a formal meeting between the professionals.

Professors can greatly affect pre-service student’s understanding of collaboration and how important they deem it to be. For this reason, it is important to know how often professors are mentioning and talking about collaboration with their students. One elementary education student noted that their professors never mention this idea. Most students reported that their professors regularly or often mention the idea of collaboration. An important distinction to understand would be if professors are mentioning it in passing or if students feel like it is a threaded theme or specific chapter within the class. The professors in these departments seem to value collaboration due to their mentioning of collaboration relatively frequently, according to student’s responses.

The students indicated they might like a class on the topic of collaboration when asked what would be helpful to learn more. Therefore, students were asked to select whether or not they had a class in college that had focused on the importance of collaboration. There was almost an even split between students that had selected that they had and had not taken a class that focused on this idea. In freshman and sophomores, a majority of students reported not having taken a class, while juniors, seniors, and graduate students had a majority of people report they had taken a class. This leads to a conclusion that the content focusing on collaboration may occur later in the student’s college experience. An interesting note is that four speech-language pathology graduate students reported not having taken a class focusing on collaboration, while
six did. This could also be attributed to the fact that some of the graduate students may have had that class content, while others had not.

The last question asked how many hours they had learned about the collaboration between SLPs and educators. A majority of the students reported only having learned about this topic for between 0-5 hours. This shows that while students report professors mentioning the idea and know it is important, there is not much of a focus on this topic while in pre-service classes. Ten students reported learning about this idea for more than 10 hours. While this number alone does not seem substantial, that many hours could represent a significant portion of one college class. While students reported taking a class that focused on collaboration, the number of hours students reported learning about the collaboration between SLPs and educators alone does not show that the class they took focused on this specific collaboration. It does appear that this type of content may be embedded across classes, instead of specific to just one class. With a wide range of hours the students had learned about collaboration between SLPs and educators, we once again see variability in responses. This again could be related to the year the students are in their academic program.

Every participant reported that they believed collaboration between SLPs and teachers is necessary. There was similarity across pre-service students from both departments that collaboration is best for students. Students talked about how collaboration allows what the student is learning is one setting to be connected to what the student learns in the other setting, as well as being able to see if skills obtained in one location can be transferred to different locations. Students also talked about how collaboration between the professionals allows for the opportunity to communicate about goals and methods, an important part of transferring what is taught in one setting to another, as well as how it is taught. Speech-language pathology students
mentioned needing to collaborate with teachers because they see their students more. While the SLP may only have a couple sessions a week with a student, the classroom teachers spend numerous hours each day with a student. Therefore, SLPs may better understand the need to get input and be able to ask classroom teachers questions about the child’s progress. In addition, the pre-service speech-language pathology students mentioned needing to collaborate to tie services to the curriculum. SLPs are required to connect what they do in therapy to the curriculum, so they may feel they need the teacher’s expertise in this area as well.

When asked to describe opportunities students had in college to collaborate with pre-professional teachers and SLPs, there were some specific and some general opportunities mentioned. Several speech-language pathology students mentioned volunteering at a campus preschool with education students. Otherwise both sets of students mentioned group projects, and classes. Both sets of students also mentioned internships and student teaching, where they were able to get practical collaboration experiences in the field while under the supervision of a professional. Pre-service teachers also mentioned that they had collaborated doing lesson plans. Both groups of participants mentioned not collaborating with the other pre-service students. It seems that collaboration opportunities are intermingled in activities and classes within each major. Students indicated they have enjoyed the opportunities for students from the two majors to get together and interact and would like to see this be something that there are more opportunities for in the future.

The participants also talked about how they had learned about collaboration in general. This question revealed that students had learned about elements of collaboration, as there were several themes that emerged from the responses. Delegation of tasks, listening well, doing the work you commit to doing, being open to new ideas, communicating in order to stay on the same
page, and teamwork were all themes that the pre-service students knew about collaboration. There was evidence that the students had learned about elements of collaboration or generally knew what good collaboration requires. Speech-language pathology students also noted how collaboration maximizes success in therapy, is important for continuity of services, assists with skill generalization, promotes client first planning, and varies with the setting. Speech-language pathology students probably drew these conclusions because they have been taught the importance of carrying over skills into a student’s general education and the importance that holds for the success of an individual. They also probably know more about collaboration in other settings, as speech-language pathologists can work in a variety of settings, such as clinics, hospitals, retirement communities, and more. Therefore, they would know that collaboration with professionals will vary based on the setting you are in. Pre-professional teachers also mentioned that it takes a village, is important, takes effort, involves compromise, and is done in special education.

Participants identified perceived barriers to collaboration in the schools. For the participants to be able to hypothesize possible barriers they foresee in the school regarding collaboration demonstrates knowledge about the topic. Time emerged as a predominant theme as to why collaboration does not occur; this could be influenced by the fact that it appears finding time to collaborate during pre-service education can also be challenging. Lack of structure was also a theme as to why collaboration does not occur. The variability and flexibility of collaboration between professionals to meet the particular needs of the situation could contribute to the feeling of a lack structure. It also increases the complexity of instruction. Other barriers included having more kids to focus on, poverty in the school, heavy caseloads, and speech-language pathologists traveling between schools. Having heavy caseloads tied back into
the theme that there is a lack of time in the professional’s days. It is difficult for relationships to be established when speech-language pathologists are forced to spread their time between multiple buildings. Pre-service teachers also mentioned fixed mindsets, a lack of knowledge, and insufficient resources and training as barriers. Whether pre-service teachers viewed their own knowledge as lacking or that of the speech-language pathologists regarding matters of education would be an interesting theme to explore in greater detail.

Perceived benefits of collaboration were the next topic that was asked about. Both groups mentioned several benefits. By being able to list the many benefits of collaboration, the participants again show that they have knowledge surrounding this topic. The predominant theme revolved around collaboration being more beneficial for both parties, the student and the professional. Specifically, the participants mentioned that the students they would serve would have more consistent and focused care, while the professionals would benefit from being able to share resources and ideas with one another. In addition, the professionals would be able to ask questions and seek support from one another. Pre-service speech-language pathologists also saw collaboration being beneficial because kids spend so much time in the classroom, they need help using curriculum in therapy, and it can be helpful with goal writing. All of these reasons show that the speech-language pathologists are seeking educators’ support in areas they feel less qualified in or need additional support for, since they cannot be with the child every second of every day. Pre-service teachers mentioned collaboration allowing for material sharing and showing the importance of teamwork. Material sharing would benefit the teachers because many speech-language pathologists have tools that could be beneficial for all children, not just those with speech and language difficulties. The notion of showing children the importance of teamwork is not one that the research team expected to see as a benefit; however, it is vital that
school personnel embody the qualities they desire the children to also have so this is also important.

The research team felt it was important to ask about the role of collaboration in the IEP process, because it is a time that the speech-language pathologists and teachers are often required to collaborate at least a little in the schools. The objective was to assess whether or not pre-service students seemed to understand their role in the IEP process in terms of collaboration. The pre-service students both recognized that it would be in the best interest of the students for the professionals to work together in this process to meet the student’s exact needs. They saw collaboration also being necessary to make the process less stressful and allow the goals to be understood across different settings. There was a lack of specific themes or roles that the pre-service students had in mind when discussing their role in the IEP process. This seemed to be one area within collaboration that pre-service students felt more unsure or unconfident about; however, what they discussed shows that they do have some knowledge about collaboration when considering IEPs. Many of these participants may not yet have written or worked with IEPs.

When participants talked about where resources regarding collaboration in their pre-service studies have come from, they mentioned group work, mentorships, classes, and experiences in the field. Pre-professional speech-language pathology students also mentioned opportunities they have had in their on-campus speech-language pathology clinic and their time as clinicians there. While most students were able to list a general place they received resources, very few students listed specific assignments or resources they had received or accessed.

The research team also asked a question about whether or not the pre-service students believed collaboration needed to be focused on more within their pre-service preparation. Since
this research ultimately wanted to investigate whether or not the pre-service students felt prepared to collaborate in the future, they wanted to know if they felt they needed to learn more now. A small number of participants, 8% (n= 5) did not believe that collaboration needed to be focused on more in their pre-service education, with the overwhelming majority of 92% (n= 58) believing that they needed more instruction and more of a focus on the idea of collaboration.

With such a large number expressing that they think it needs to be focused on more, it is evident that while the pre-service students expressed general knowledge of collaboration, they felt they were not completely prepared for collaboration in their future jobs. Both pre-service teachers and pre-service speech-language pathologists expressed their concern that teachers do not know what speech-language pathologists do. In order to collaborate with one another, both professionals need to know the roles and responsibilities of the other profession. For this reason, it would be important that pre-service teachers are taught the role of speech-language pathologists.

About a quarter of the participants did not feel they were prepared or were unsure if they had the tools they needed in order to collaborate in the schools with one another. Many of the other students also expressed that they felt they needed more skills in order to be able to collaborate. This once again showed that there was a feeling of being unprepared by pre-service teachers and speech-language pathologists. Both groups of students mentioned that they have qualities that could be helpful in collaboration, such as being open and listening well. While both groups were able to mention some specific tools for their field that they had to collaborate, there was not much mention of shared collaboration tools. For example, pre-service speech-language pathology students mentioned Making Action Plans (MAPs) as a resource, but whether or not education pre-service participants would know how to engage fully with that is unclear.
Pre-service teachers mentioned a tool being professional education and training. Practicums and internships seem to be a place that they feel collaboration would be learned.

The last question turned more towards how institutions could help pre-service teachers and speech-language pathologists learn more about collaboration from the participant’s point of view. This was a beneficial question since many of the pre-service students had indicated they felt they needed more education. The question provided ideas for a direction as to what students desired to help them feel more prepared. One predominant idea was to have some sort of class that both majors would take together where they would be able to engage and learn more about collaboration together. Other institutions have implemented classes like this, so while the pre-service students who participated in this survey did not report a specific class, the effectiveness could be further investigated. Another topic students mentioned was having role play scenarios and IEPs in classes to talk about and work through. This is something that professors could do or increase within their current classes, rather than having to develop an entirely new class. In addition, the ideas included having the other professionals speak at club meetings, having discussion panels, and having professors from the two departments speak in classes with the other pre-service students. These are all very concrete and attainable action steps that could be implemented or increased to help further student’s level of preparedness. A more abstract idea presented but harder to see concretely implemented was to focus more on the concept of “listening”. Pre-service students identified “listening” would also help them to engage more fully in collaboration in the future.
Limitations and Future Research

There were several limitations in this research. To begin, the sample size was relatively small; therefore, results may not be generalizable to a larger population. In addition, research was only conducted at one middle-sized Midwestern university. This institution may integrate the idea of collaboration into their pre-professional programs more or less than other institutions.

Another limitation to this research was the online survey format. At times, especially in the short answer responses, participants' responses were short and concise, making it hard to gauge their exact thoughts about the question. Other times, it would have been helpful to have been able to ask them follow-up questions. The varying levels (e.g., freshman, sophomore, graduate, etc.) of the pre-service participants may also have played a role in responses as some of the students might not have yet taken the courses that would have had a more targeted instruction on collaboration.

Future research could investigate the data further to explore additional differences and similarities between levels, as well as a survey could be developed to target students after practicum or internship experiences. A survey at the end of the program could capture a picture right before future work.

Future research related to pre-service understanding of professional roles in the schools between speech-language pathologists and educators is needed. It would be beneficial to conduct this research at several different institutions throughout the country of various sizes where there are Communication Sciences and Disorders and Education departments. This would help to generalize the data to a larger population.

In future research, it would be wise to evaluate more closely what the pre-professional students perceive the role of the other professional to be. It was mentioned that there is a lack of
understanding of the speech-language pathologist’s role in the schools, so it would be beneficial to evaluate whether or not students know what their role encompasses. A list of possible roles where participants could select what they perceived to be an SLPs role in the schools could be an effective way to evaluate this.

In future research, it would be beneficial to conduct the research in a different format than only an online survey. Conducting the research in focus groups or in interviews would allow the research team to get more in depth information from the participants and allow them to expand upon their thoughts, especially for the short answer questions. Future research could have the participants answer the first ten questions on their own before participating in a focus group for the next ten questions. If this format is used, the research team should be prepared to ask follow-up questions to the participants to gain a clearer understanding of their thoughts.
Conclusion

Pre-service education and pre-service speech-language pathology students may need to collaborate in the schools when working in the future. The problem is that it is unclear what the pre-professional experiences are related to collaboration as well as their perception of their preparation for collaboration when working in the future. Professionals may be expected to do this without learning how to collaborate with one another in their pre-service education years. The purpose of this study was to see how well pre-service educators and pre-service speech-language pathologists understand their roles in the schools regarding collaboration. Specifically, this study hoped to understand the past and current experiences students have had pertaining to collaboration in the schools and to find out how aware students are of collaboration in the schools.

The survey provided an opportunity to gather the student’s perceptions about the following topics: students' knowledge of the importance of collaboration, students desire to learn more about collaboration, and students desire to increase knowledge in this specific area while in their pre-professional education.

This study showed first and foremost that pre-professional students believe collaboration between professions is important. While the data showed they believe it is important and they reported class instruction on collaboration, there is a wide variety of responses as to how prepared they feel to collaborate with one another. The students, for the most part, expressed a desire to learn more about collaboration with the other professionals.

Since the sample for this study was limited to only one institution, replicating the study including other institutions to get more generalizable results would be helpful. In addition, a multi-method study including face-to-face interviews or focus groups regarding this topic could
be beneficial for future research. With these preliminary findings of students feeling unprepared to work collaboratively but knowing its value, it is important that more research is conducted surrounding these topics and finding ways to better prepare pre-professional students.

This study contributes to the literature discussions regarding preparation for pre-professional educators and speech-language pathologists to work collaboratively in the schools. This is important not only to contribute to the research, but in planning purposes for the majors. As programs are aware of student topic interests, they can incorporate them into curriculum and classes.

Pre-service education and pre-service speech-language pathology students understand that collaboration between their two professions are important in the schools. They also express a desire to learn more about engaging in collaboration with one another. While those themes contribute to the literature, future studies would be beneficial to provide more generalizable results.
**References**


Appendix A: Participant Survey

Q1 What is your major? (Check all that apply).

☐ Early Childhood Education
☐ Elementary Education
☐ Middle Level Education
☐ Secondary Education
☐ Special Education
☐ Communication Sciences and Disorders (Pre-professional Speech-Language Pathology)
☐ Communication Sciences and Disorders (Pre-professional Audiology)
☐ Other ________________________________

Q2 Additional educational emphasis (i.e., minors, certificates, second major)
__________________________________________________________________________

Q3 What is your status in school?

☐ Freshman
☐ Sophomore
☐ Junior
☐ Senior
☐ Graduate (Master's level)
☐ Graduate (Doctorate level)

Q4 Please list previous or current jobs in the education field or therapy field.
__________________________________________________________________________

Q5 On a scale of 1-6, how prepared do you feel to work collaboratively in the schools with teachers/SLPs?

☐ 1: Not at all prepared
☐ 2: A little prepared
☐ 3: Almost prepared
☐ 4: Prepared
☐ 5: Very prepared
☐ 6: Extremely prepared

Q6 On a scale of 1-6, how important do you feel it is to work collaboratively in the schools?

☐ 1: Not at all
☐ 2: A little
☐ 3: Somewhat
☐ 4: Important
☐ 5: Very important
Q7 On a scale of 1-6, how often do you think SLPs and educators collaborate in the schools?
   ○ 1: Never
   ○ 2: Rarely
   ○ 3: Sometimes
   ○ 4: Regularly
   ○ 5: Often
   ○ 6: Always

Q8 On a scale of 1-6, how often do your professors mention the idea of collaboration?
   ○ 1: Never
   ○ 2: Rarely
   ○ 3: Sometimes
   ○ 4: Regularly
   ○ 5: Often
   ○ 6: Always

Q9 Have you taken classes in college that have focused on the importance of collaboration?
   ○ Yes
   ○ No

Q10 How many total hours do you think you have learned about collaboration with teachers/SLPs for?
   ○ 0-5 hours
   ○ 5-10 hours
   ○ 10-15 hours
   ○ 15-20 hours
   ○ 20+ hours

Q11 Do you think collaboration between SLPs and teachers in the schools is necessary? Why or why not?
   __________________________________________________________

Q12 Could you describe any opportunities you have had in college to collaborate with pre-professional teachers/SLPs?
   __________________________________________________________

Q13 What are the main themes you have learned about collaboration?
   __________________________________________________________

Q14 What do you think are barriers to collaboration in the schools?
   __________________________________________________________

Q15 What do you think are the benefits to collaboration in the schools?
   __________________________________________________________

Q16 What do you feel the role of collaboration is during the IEP process?
   __________________________________________________________
Q17 Where do you feel most of your resources regarding collaboration have come from?
________________________________________________________________

Q18 Do you think the idea of collaboration between SLPs and teachers needs to be focused on more while in college classes? Why or why not?
________________________________________________________________

Q19 Do you feel you have the tools to collaborate in the schools? Could you list examples?
________________________________________________________________

Q20 What ideas do you have for helping pre-professional SLPs and teachers learn about collaborating with one another?
________________________________________________________________