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# Interventions Used Among School-Based Occupational Therapy Practitioners to Promote Student Performance

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Interventions Used Among School-Based Occupational Therapy Practitioners to Promote

Student Performance

Nichole Campbell

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### **Abstract**

Occupational therapy practitioners working in the school setting play a role in contributing to student's lives. Through many interventions, these practitioners contribute to promoting student performance within the academic setting. Yet, there is more research to be done related to the overall impact school-based interventions have on performance. Therefore, the purpose of this study was to explore the relationship between role perceptions of school-based occupational therapy, interventions implemented, and the impact on student performance.

A qualitative approach guided this study. Participants currently employed through a local, rural school district participated in this research by completing an online survey. A total of five occupational therapy practitioners provided informative data used for analysis. Four were Registered Occupational Therapists (OTR) and one was a Certified Occupational Therapy Assistant (COTA). The survey responses were analyzed for common themes that existed among the questions and throughout the data.

Four themes emerged from the data. First, the role of the student in the academic setting is to learn. Second, the role of the occupational therapy practitioner in school-based practice is to help, assist, and provide support for students to achieve maximum ability and independence about their school learning. Third, intervention activities should address underlying deficits that compromise handwriting and other fine motor tasks. Fourth, focusing on underlying deficit skills improves student academic participation. These findings have implications for current occupational therapy practice, as well as future research.

## Interventions Used Among School-Based Occupational Therapy Practitioners to Promote Student Performance

### **Literature Review**

#### **Scope of Occupational Therapy in School-Based Practice**

Occupational therapy is a profession designed to help individuals “engage in occupations that are purposeful, significant, and important for them by enabling participation in daily life activities as a basis for their health, well-being, safety, and quality of life” (AOTA, 2013; Weintraub et al., n.d.). Occupations describe the variety of different activities that are carried out each day including self-care, work, school, and/or leisure (*Occupational therapy in the school setting*, 2011). The role of an occupational therapy practitioner is to enable individuals to participate in their daily lives to the standard of themselves or others through occupation-based interventions (*Occupational therapy in the school setting*, 2011). Therefore, occupational therapy practitioners have the opportunity to work with individuals and/or groups of all ages, abilities, roles, values and cultural backgrounds who may experience various challenges and barriers in a multitude of settings (AOTA, 2013; *Occupational therapy in the school setting*, 2011; Weintraub et al., n.d.).

#### **School-Based Occupational Therapy**

##### **What is the role of school-based occupational therapy practitioners?**

School-based occupational therapy practitioners are unique in their contribution related to enhancing a student’s ability to be successful in the learning environment (*Occupational therapy in the school setting*, 2011). Two of the most important occupations for children and adolescents during this time in their lives are to attend and participate in activities at school (Pape, Ryba, &

Case-Smith, 2004). Therefore, the aim of occupational therapy practitioners in the school-based setting is to actively engage students in learning, especially through participation so they can increase and reach their performance and overall potential within the academic setting (*Occupational therapy in the school setting*, 2011). Through this, occupational therapy practitioners “support a student’s ability to participate in desired daily school activities or occupations” (The American Occupational Therapy Association, 2016).

Within the academic setting, occupational therapy practitioners may address physical, cognitive, social/emotional, sensory, and other aspects of performance (AOTA, 2013). Their focus is based on helping children fulfill their role as students which can include support in academics such as math, reading, and writing; play and leisure such as recess and participation in sports; social participation such as building up relational skills and behavior management; self-care skills such as activities of daily living; and transition/work skills upon reaching graduation (AOTA, 2013; Causton, 2014; The American Occupational Therapy Association, 2016). According to Benson (2013), research has found that by increasing the opportunity to engage in occupations, children at risk, along with those diagnosed with disabilities are able to increase their level of independence. This not only benefits them in the school setting but also at home and in the community (Benson, 2013).

### **Who is eligible to receive occupational therapy services?**

School-based occupational therapy services are available to students who are eligible for special education which is determined through the Individuals with Disability Education Act (IDEA). This Federal law provides a formal process for assessing children with disabilities and providing them with services and programs needed for school success. Through this law, school districts are required to ensure that children receive a free, appropriate public education

(Causton, 2014; Koscinski, 2016; Smith, 2002). Students must be eligible for special education or a Section 504 plan before they can be provided with individually direct occupational therapy services (Smith, 2002). The Americans with Disabilities Act (ADA), in turn, was created to prevent discrimination against children with disabilities (Koscinski, 2016). Some examples of federally recognized disabilities that require academic settings to offer student services include autism, deafness, blindness, emotional disturbance, intellectual disability, multiple disabilities, orthopedic impairments, speech and language impairment, and traumatic brain injury. The degree to which students' function is impacted by their disability will impact the amount and type of services, including occupational therapy interventions, they receive (Causton, 2014).

#### **What is unique about school-based interventions?**

Occupational therapy practitioners design and implement interventions and programs to address improvement in these areas where they focus on the strengths of the student to enhance participation and outcomes (The American Occupational Therapy Association, 2016). Services take place in the school setting during the natural routines of the day as research has demonstrated that students are most likely to reach success when they practice skills in the environment in which they occur (AOTA, 2013). In this setting, occupational therapy practitioners may serve individual students, groups of students, whole classrooms, and whole school initiatives with the goal of optimizing performance through adaptations and accommodations (The American Occupational Therapy Association, 2016).

#### **What is the role of the occupational therapy practitioner as a member of the educational team?**

Occupational therapy practitioners are important in contributing not only to the success of student's individually, but also within the educational team itself. Collaboration with other

members involved may include parents, educators, administrators, and other support staff members which is beneficial in providing the best support to promote success. Through collaboration and occupational therapy involvement, a student's ability to participate in the school setting will likely improve, overall contributing to greater performance and success (The American Occupational Therapy Association, 2016).

### **The OT Process and Occupational Therapy Services**

In the school setting, occupational therapy practitioners move through a process (Occupational therapy in the school setting, 2011). This begins with understanding and evaluating a student's potential difficulties in the academic setting. Practitioners then facilitate the fit between the student's skills and abilities with the expectations or curriculum of the educational setting. It is also pertinent to identify the dynamic that exists between the student themselves, and the school's physical, social, and cultural environment. This process also includes supporting student performance in school to not only manage their own functions, but also, to promote learning (Occupational therapy in the school setting, 2011).

#### **OT process - assessment.**

According to Boyt Schell, Gillen, Scaffa, & Cohn, (2014), the occupational therapy process includes evaluation, intervention, reevaluation. Occupational therapy practitioners first complete assessments when given a referral by teachers or parents which are performed through observations of the student in the setting in which they function (Weintraub et al., n.d.). These assessments represent a baseline to determine therapy intervention along with the request if additional services are needed. Questionnaires, interviews, and standardized assessments may be completed in collaboration with the student, teachers, parents, physical therapist, speech-language pathologists, school psychologists, school social workers, and/or paraprofessionals.

The primary goal is then to identify students who are facing difficulties in one or more occupational areas. Based on these results and compilations, it is determined what help is needed for a student to receive a free, appropriate public education in the least restrictive environment (Boyt Schell et al., 2014; Causton, 2014; Weintraub et al., n.d.).

**Collaboration and targeted outcomes.**

Following assessment, occupational therapy practitioners collaborate with the educational team, the student, and their family. This includes developing an educational intervention plan by incorporating short and long-term goals along with ways to achieve them (Rens & Joosten, 2014; Weintraub et al., n.d.). Collaboration among the team leads to identified annual goals for a student. This then determines the services, supports, modifications, and accommodations that are required for the student to increase achievement. These goals are incorporated into each student's Individualized Education Plan (IEP) where the effectiveness of the intervention is determined by the way in which the goals are achieved. Therefore, the goals initially set must reflect the student within the educational setting (Case-Smith & O'Brien, 2015; The American Occupational Therapy Association, 2016).

**OT analysis.**

A comprehensive understanding of the student's current functional levels, enabling and limiting factors, and the current environmental set-up are all looked at. It is then determined the influence these areas have on the ability of the student to perform the occupations and activities they need or want to perform in the school setting (Case-Smith & O'Brien, 2015; Weintraub et al., n.d.). A final report is created of the factors that enable and limit the student's functioning along with the help that is needed for a student to receive a free, appropriate public education in



the least restrictive environment (The American Occupational Therapy Association, 2016; Weintraub et al., n.d.).

### **Data collection and review for future action.**

Student progress documentation toward IEP goals is required by the occupational therapy practitioner and other team members. Various data collection such as work samples, teacher reports, standardized test assessments, and/or observed student performance are included in the overall report (AOTA, 2013). Prior to data collection, a school is then required to send home reports of the student's progress. They also participate in holding group team meetings to discuss the current standings of the student along with to plan for future success (AOTA, 2013).

### **Interventions**

#### **What do school-based interventions address?**

According to AOTA, interventions in the school-based setting are established to enhance the “functional performance and/or participation in the school environment or curriculum” (Causton, 2014). In this setting, they may include conducting activity and environmental reviews to make recommendations that improve the fit for greater access, progress, and participation; reducing barriers that limit student participation within the school environment; providing assistive technology; supporting the needs of students with significant challenges; increasing independence in daily living skills; increasing attention; addressing sensory, cognitive, and motor needs; helping to plan instructional activities for ongoing intervention in the classroom; and preparing students for the process of transitioning into employment, independent living, and/or further education (Cohn & Lew, 2010; Piller & Torrez, 2018; The American Occupational Therapy Association, 2016).

**Individual vs. group interventions.**

In the school setting, occupational therapy practitioners may serve individual students or groups of students. For individual students, intervention addresses occupational performance areas of concern. Examples of interventions that address these include: organizational skills (organizing and using objects such as notebooks, pencil cases, book bags, work materials, assistive devices, and games; organization of time including a daily schedule and organization of space such as in the classroom and overall school environment); sensory regulation strategies (incorporating different seating, encouraging items with different tactile qualities such as clay or sand and adjusting the lighting); handwriting (practice forming letters, increasing/decreasing spacing, organizing the words onto paper, adjusting inappropriate pressure, and addressing writing speed); balance and coordination (using playground equipment, participating in yoga and gym classes); anxiety and behavioral management (developing coping skills, recognizing triggers, and learning to control anger); and self-care issues (toileting, dressing, eating, mobility, use of money, along with communication) (Hofmann, 2016; Occupational therapy in the school setting, 2011; Smith, Mruzek, & Mozingo, 2016; Weintraub et al., n.d.).

For groups of students, intervention may address positive peer interaction through a social group environment which contributes to engagement and participation along with the ability for students to develop and practice interpersonal skills. Examples of skills that interventions for groups address include listening, turn taking, problem solving, teamwork, respect and responsibility, making choices, equality, and positive self-image. These skills may be developed through activities that incorporate several students in crafts, gross motor physical games, board games and/or play groups (Occupational therapy in the school setting, 2011; Smith, Mruzek, & Mozingo, 2016; Weintraub et al., n.d.).

**Where and how does service delivery occur?**

Occupational therapy intervention varies in schools including the place of delivery, how these services are delivered, and scheduling of services which can include direct and indirect intervention (Case-Smith & O'Brien, 2015). In direct intervention, the occupational therapy practitioner and student (one on one) or group of students (small or large) work directly together. This intervention may be carried out in a therapy room, a classroom, on the playground, the cafeteria, or any other place where educational activities take place throughout the school day. According to a review completed by Kennedy et al. (2018), on school-based rehabilitation specialists, it is common for an occupational therapy practitioner to provide direct services to a student after evaluation for intervention purposes.

In indirect intervention, the occupational therapy practitioner may guide one or more educational staff/team members on how to reach the student's or groups goals such as through consultation or monitoring. Adapting the educational environment such as assisting in evaluation, recommending changes that will meet the personal needs of the students, and increasing the opportunity for participation in different activities are also main areas under intervention. Adapting assistive devices and personal assistive technology may also fall under occupational therapy intervention within the school setting with the purpose to increase independence and functioning (Case-Smith & O'Brien, 2015; Weintraub et al., n.d.).

**Summary of school-based interventions.**

In different academic settings, some intervention areas mentioned previously may be used more commonly than others based on the level of need and disability along with the amount of other services offered in a school system. Overall, however, occupational therapy interventions are carried out with the purpose to encourage engagement in school routines in

some way that meets the needs of the student. The goal is to ultimately promote performance, and in turn, foster learning (Cohn & Lew, 2010; The American Occupational Therapy Association, 2016).

### **Performance in the School Setting using the PEO Model**

“Occupational performance results from the dynamic relationship between people, their occupations and roles, and the environments in which they live, work, and play” (Law, Cooper, Strong et al., 1996, p. 9). The Person-Environment-Occupation Model of occupational performance can be used by occupational therapy practitioners to form the basis for practice in a school setting. This model can depict a student’s performance in purposeful tasks and activities related to self-care, productivity, and leisure tasks in the school-based setting which is influenced by the student's personal characteristics along with the academic environment (Law, Cooper, Strong et al., 1996).

#### **Overview of PEO model.**

The development of the PEO Model is relevant to occupational therapy as it provides a foundation for application to practice. The model itself depicts three components: person, environment, and occupation all as inter-related circles. Occupational performance is then represented among the overlap of the three components. Different interactions and forces at play in each of the three areas is also depicted which describes the developmental phase of the person and variations in the person, environment, or occupation at any one time. Through the inter-related inner circles, the influence of occupational performance is represented while the outer area represents the context within which person-environment-occupation interactions take place (Law, Cooper, Strong et al., 1996).

**PEO model related to school-based practice.**

In relation to the school-based setting, the person would be the student as they bring a set of performance components and life experiences that include self-concept, personality style, cultural background, and personal competencies that influence their daily life. Also, a student's motor performance, sensory capabilities, cognitive abilities, and general health are important to consider through occupational therapy services. The environment includes the student's cultural, socio-economic, institutional, physical, and social considerations which all impact the person, even in the primary school setting. It is important to consider that the use of the environment impacts the behavior of the student which will therefore impact their learning. Lastly, the model combines the concepts of activity, task, and occupation within each other. Occupations are important for the student as they engage in the participation of tasks and activities to meet their intrinsic needs for self-maintenance, expression, fulfilment, and overall learning (Law, Cooper, Strong et al., 1996).

**PEO model, occupational performance, and the school setting.**

Occupational performance is the result of the interaction of the person, environment and occupation. It is defined by Law, Cooper, Strong, et al. (1996, p. 16) as the "dynamic experience of a person engaged in purposeful activities and tasks within an environment." It requires the ability to balance occupation and self-views within an environment, which may be constantly changing. In the school setting, it is important to consider the PEO fit of a student, especially for an occupational therapy practitioner providing intervention. Strategies, activities, education, and interventions that maximize the fit for the student will in turn maximize occupational performance, positively impacting the student in the school setting. This not only contributes to a student's performance within the school setting, but with the skills and techniques learned and

acquired, will likely impact their life at home, in the community, and possibly even the future workplace (Law, Cooper, Strong et al., 1996).

### **Summary of literature review.**

In summary of previous literature, occupational therapy practitioners serve a specialized role in the school-based setting. Through interaction with students, they address skill deficits and underlying issues, initiated by the OT process that affect involvement in the academic arena (AOTA, 2013; Causton, 2014; Law, Cooper, Strong et al., 1996). Interventions based on evidence are implemented according to each student's needs. This can include 1:1 or group services along with delivery in a variety of school locations. Each intervention is chosen with the purpose to address student function and increase performance in the academic setting (Hofmann, 2016; Occupational therapy in the school setting, 2011; Smith, Mruzek, & Mozingo, 2016; Weintraub et al., n.d.). The PEO model is applicable as it results from the interaction between the student, school environment, and student occupations. Therefore, this model ties in with the role of school-based occupational therapy practitioners (Law, Cooper, Strong et al., 1996).

### **Purpose**

There is a need to expand the knowledge on school-based occupational therapy practitioners' perceptions in relation to what interventions impact student performance in the academic arena. Compiled research from this review has indicated that a student's performance impacts their learning. Therefore, occupational therapy interventions can encourage engagement and participation in completing academic requirements. This can overall contribute to a student's performance and success while part of the school setting (The American Occupational Therapy Association, 2016; AOTA, 2013).

As a current occupational therapy student, I am exploring the scope and role of occupational therapy practice. Therefore, my goal in conducting this study was increase my knowledge of the specialized area relating to school-based practice. I found that further research can be conducted on the role of occupational therapy practitioners in contributing to each student's life through interventions that promote performance. Therefore, the purpose of this study was to explore the relationship between perceptions of the role of school-based occupational therapy, interventions used most frequently, and the impact on student performance. To address these components, the following research questions were created:

- What is the role of a student and of an occupational therapy practitioner in the school setting based on practitioner perceptions?
- What interventions do occupational therapy practitioners use most frequently?
- What medical and educational conditions, diagnoses, and disabilities does occupational therapy intervention address?
- How is the intervention implemented for each student based on clinical reasoning?
- What effect does each chosen intervention have on student performance in the school setting?

## **Methods**

### **Study Design**

A qualitative methodological approach was chosen as the foundation for this study based on perceptions of practitioners. The goal of this study was to collect data from school-based occupational therapy practitioners regarding current interventions used and the relationship between student performance. Permission to conduct this research was granted by the Elizabethtown College Institutional Review Board.

**Participants**

A non-probability purposive sampling method was utilized through a local, rural school district consisting of elementary, middle, and high schools. Inclusion criteria for participants included they must be employed through the district and certified as an occupational therapist or occupational therapy assistant.

**Data Collection**

An online survey with an email link was created using Microsoft Forms. The link was sent to the Department Chairperson from the Occupational Therapy Department in the school district. Distribution of the link was then emailed to all available and potential participants during week one. Participants used the attached link to access the survey and complete it thoroughly, taking approximately 20 to 30 minutes. At the beginning of week four, a reminder was sent asking the Department Chairperson to email out the link again. Each survey began with a participant informed consent including a statement to withdraw at any time during the survey along with the researcher's contact information in case any questions or concerns arose.

Demographic questions including age, gender, and race were included followed by open-ended questions pertaining to the current school(s) they were practicing in, the role of occupational therapy and of students in the school setting, interventions used, and the relation to student performance. After completion, participants submitted their responses where the information and data were made available to only the researcher and faculty advisor, anonymously.

**Data Analysis**

I analyzed the survey data using thematic analysis following the submission period. Each response was reviewed where common themes that existed throughout the responses were



identified for each research question (Gibbs, 2007). The results of each survey question were analyzed to look for relationships between occupational therapy in the school setting, interventions stated by participants most commonly used, and the impact on student performance.

### **Results**

Data was collected over a six-week period. Five out of eight distributed surveys with complete responses were submitted and used for analysis. Through this data, four participants were registered as occupational therapists and one was certified as an occupational therapy assistant. All the participants identified as Caucasian women ranging in age from 25 to 43. In relation to the current school setting, several participants worked in a variety of locations, providing services for students in multiple schools each day. Five participants reported currently working in elementary schools, three in middle schools, and one in high school.

Analysis of responses from the participants were based on each practitioner's perceptions. They began with the role of occupational therapy in the school setting, the role of the student, interventions used most frequently based on what they treat, how and where each intervention is carried out and the clinical reasoning behind it, and the impact of intervention on student's performance in this setting.

#### **Research Question #1: What is the role of a student and of an occupational therapy practitioner in the school setting?**

The common theme that emerged from the responses included that the role of the student was to learn, which was expressed in four out of the five responses. Participants felt students should learn various skills including self-help, social, self-care, advocacy, vocational, and academic skills. Quotes from participants to support this theme describing the role of the student

included: Participant one, “Achieve their maximum ability and potential as a learner”; Participant three, “Learn various skills, as well as self-help skills and to connect with others”; and Participant five, “Be an active member of his/her classroom and learn to the best of their ability.” Through learning these skills, it was expressed that students can follow school rules, achieve their maximum ability, participate in instruction, exhibit appropriate behavior, and connect with others.

For the role of the occupational therapy practitioner, participants responded in relation to the students they worked with. There was a large overlap among the participants responses which included helping, assisting, and providing support for students to achieve maximum ability and independence in the school setting through services and interventions. Participants expressed they wanted to help students with disabilities or those struggling to access their education through areas including self-care, fine motor, visual motor, perceptual skills, ADL’s, writing, and self-regulation.. Quotes from participants to support this theme include: Participant one, “To help students achieve their maximum ability and independence despite their disability in the school setting”; Participant two, “Assist the student in accessing their curriculum and school environment”; and Participant three, “Provide support and evidence based interventions to students and staff to better enable and maximize student participation.”

**Research Question #2: What interventions do occupational therapy practitioners use most frequently?**

The data revealed the most frequently reported interventions were handwriting and fine motor, expressed by four of five practitioners. Next, self-regulation and sensory processing interventions were reported by three of five practitioners. Visual motor, adaptations/compensations, ADL/self-help skills, hand strengthening, and assistive technology

were among the next interventions which were reported by two out of five practitioners. Lastly, perceptual motor was reported as a frequent intervention by one out of five practitioners.

**Research Question #3: What medical and educational conditions, diagnoses, and disabilities does occupational therapy intervention address?**

All interventions were found to address autism and Down syndrome. Practitioners also reported using interventions that address fine motor delays, developmental delays, specific learning disabilities, multiple disabilities, dyslexia, ADHD, cerebral palsy, and intellectual disabilities.

**Research Question #4: How is the intervention implemented for each student based on clinical reasoning?**

For occupational therapy practitioners in the school setting to choose an intervention, it was found they first focus on what underlying skills need to be improved and what level the student is currently at. Participant two specifically described this is achieved through observations, evaluations, and informal assessments. Following these, interventions to carry out for a student are then based on evidence-based research along with observation as Participant one stated, "I observe the intervention I use in practice working with students effectively many times over the years."

In relation to where and how each intervention is carried out, participants responses also showed similar trends among themselves. All participants reported that most students are seen 1:1 or in occasional small groups as this allows for more direct treatment. In relation to push in vs pull out services, all participants also reported they use both due to dependent factors where two quotes to describe this include from participant five, "I do either pull out or push in, it often depends on the students ability to focus, what is going on in the classroom and what goal I need

to work on” along with participant three, “Some are within the student’s classroom and some are pulled out to the therapy room. Location depends on student’s needs, attention, ability to focus, and type of intervention for that day.”

In relation to intervention implementation, participants responded by describing what a session typically looks like where the theme included using an activity that address skill deficits. Participant three stated, “I start with a warm up exercise, implement an activity that addresses the underlying skills required for a certain task, and carry over learned skills into functional activity.” Participants also reported that in their activities, the occupational therapy practitioner provides direct instruction where the student has the opportunity to complete the activity first together and then independently. The level that requires assistance is then revisited until mastery is met.

**Research Question #5: What effect does each chosen intervention have on the student performance in the school setting?**

The theme related to the impact of intervention on student performance was that by occupational therapy practitioners focusing on underlying skills and issues first, this then contributes to student performance. Participant three stated, “Interventions are targeted to address the underlying skills/issues. As underlying skills improve, student’s performance and independence will improve.” Participants reported that through the interventions, optimal alertness level of learning increases, contributing to the performance of students in completing school-based tasks including handwriting, fine motor, self-care, organization, sensory, and self-regulation skills which is demonstrated through occupational therapy documentation in student’s meeting their goals. A quote to summarize the overall impact on intervention in relation to

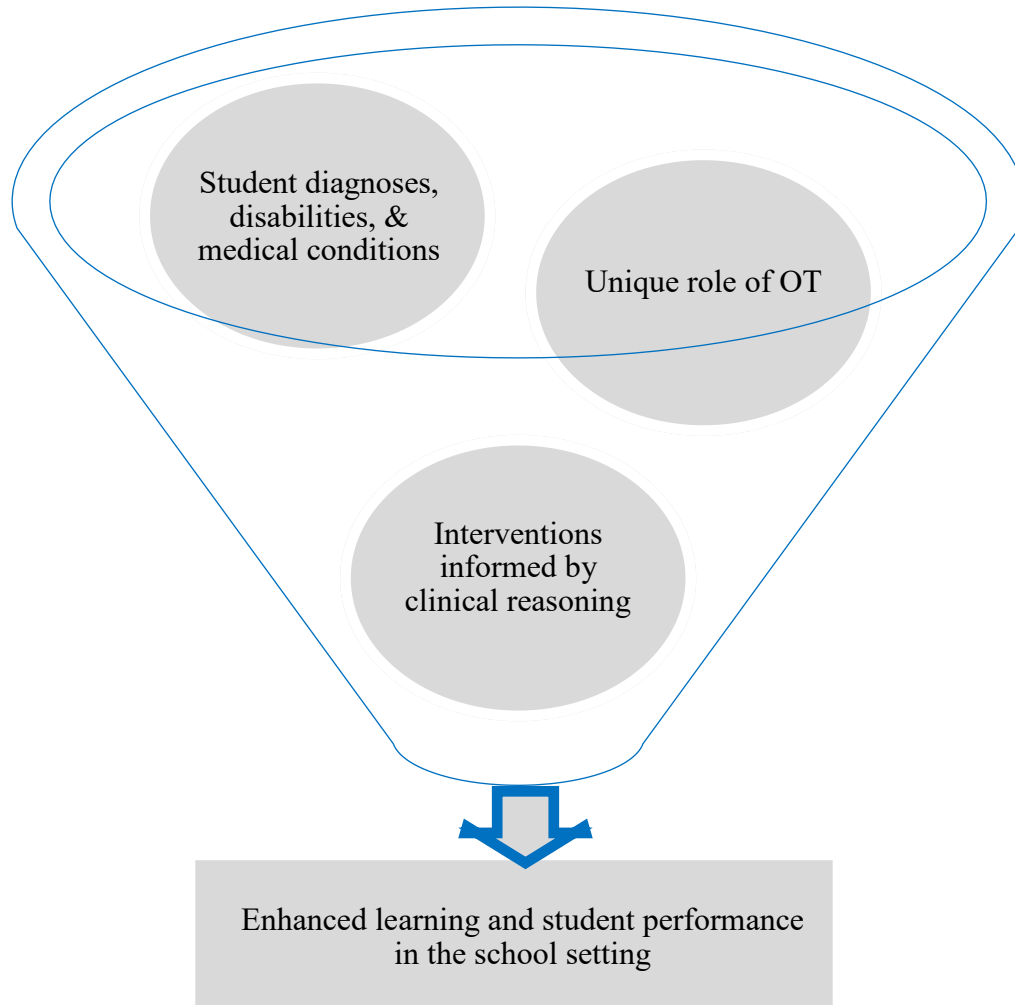
performance came from participant five where she stated, “The intervention improves the specific skill deficit thus improving the student’s ability to perform in their role as a student.”

### **Summary of results.**

To summarize the data collected from my results, I created *Figure 1*: Summary of study results to display the relationship. Through this, I show the connection between the major themes pulled from each research question. At the top of *Figure 1*, the circle titled, “Student diagnoses, disabilities, & medical conditions,” summarizes the overall requirement for students in order to access occupational therapy services. Through diagnoses, disabilities, and medical conditions, students often have skill deficits or issues that impact learning or function in the school setting which is where an occupational therapy practitioner begins in determining needs and services. Second in the middle of *Figure 1*, the circle titled, “Unique role of OT,” displays the importance of occupational therapy within the school setting. After determination of services, an occupational therapy practitioner can then intervene on the student’s behalf, addressing needs and skills involving handwriting, fine motor, sensory processing, self-regulation, visual motor, adaptations/compensations, ADL/self-help skills, hand strengthening, assistive technology, and perceptual motor.

Third, the circle in *Figure 1* titled, “Interventions informed by clinical reasoning,” reflects chosen occupational therapy services that are based on reasoning and evidence-based practice. In contributing to student’s lives, occupational therapy practitioners reflect on what interventions have been proven to work with previous students along with what type of delivery best fits the student’s needs. This could include 1:1 or group intervention along with delivery in the classroom or separate therapy space. Lastly, at the bottom of *Figure 1*, the three circles are tied together as they contribute to overall, “Enhanced learning and student performance in the

school setting.” Through student abilities and skills, the unique role of occupational therapy, and interventions informed by clinical reasoning, occupational therapy practitioners contribute to the lives of student’s by increasing their ability to learn and perform in the school setting.



**Figure 1:** Summary of study results.

## Discussion

### How my Study Findings Compare to Other Research

School –based occupational therapy practitioners choose interventions based on underlying skill deficits of students that need addressed in this setting. This relates to research by

Causton, 2014 and AOTA, 2013 who described the importance of interventions effectively addressing the needs of a student.

### **Prevalent Interventions**

The results from my research are consistent with other research. For example, my study and several other findings have revealed that handwriting and fine motor are commonly used interventions in the school-based setting (Piller & Torrez, 2018; The American Occupational Therapy Association, 2016). Also, regarding other research, addressing fine motor deficits in early elementary school has been shown to contribute to success in later elementary school and beyond. Therefore, by occupational therapy practitioners focusing on fine motor skills and handwriting, their level of student performance will likely increase and be positively impacted (Cohn & Lew, 2010; Hofmann, 2016; Occupational therapy in the school setting, 2011; Piller & Torrez, 2018; Smith, Mruzek, & Mozingo, 2016; Weintraub et al., n.d.).

### **Delivery and Location of Intervention**

My findings about the delivery and location of therapeutic interventions is also supported by a larger body of evidence. Research studies by Case-Smith & O'Brien, 2015 and Kennedy et al., 2018 have discussed the importance of intervention location of delivery and how these services are implemented. First, their studies reflect intervention delivery often taking place in the classroom or a separate therapy room, supported through the results of my study. Second, their studies highlight the impact of direct intervention where occupational therapy practitioners provide services 1:1 or in a group. Based on my participant responses, direct intervention was found to be the most common, including the use of pull out services in a separate school space or therapy room. These research studies discovered that push in services are less restrictive but how occupational therapy practitioners often use pull out based on the setting.

The importance of providing intervention 1:1 was also discussed through previous research. It is found to be common for occupational therapy practitioners to provide individual intervention more often than group based on the students (Case-Smith & O'Brien, 2015; Kennedy et al., 2018). In relation to my study, participants reported that working with students individually allows for increased opportunities to address specific skills which supports this previous research.

### **Clinical Reasoning**

My findings about the role of evidence in clinical reasoning was also supported by other authors. Occupational therapy as a profession is known for its practice in using evidence-based research along with observations of interventions that are working with clients (Causton, 2014; Weintraub et al., n.d.). In relation to my study, participant responses supported this area of occupational therapy as they described the importance in using research to back up their chosen interventions for each student. Three out of the five participants mentioned using interventions that are evidence-based when working with their students. Through research and observation, practitioners can see and implement interventions they find are appropriate and that will address the needs and goals of each student, as supported through previous research by Rens & Joosten, 2014.

### **Intervention Impact on Student Performance**

Lastly, my findings support the idea that student performance improves through intervention by addressing underlying skills/issues, increasing independence, and enhancing a student's ability to participate in their role as a student. According to research conducted by Pape, Ryba, & Case-Smith (2004), one of the most important occupations for children during this time in their lives is to attend and participate in activities at school. Through occupational



therapy interventions, whether addressing handwriting and fine motor as most commonly stated by participants, or other areas such as self-regulation, sensory processing, visual motor, adaptations, and ADL/self-help skills, students are provided with the opportunity to engage in learning, increasing performance, and overall potential within the academic setting.

### **Interpreting my Findings Using the PEO Model**

My findings apply back to the PEO Model where it is important to reflect on the relationship between school-based occupational therapy with each student's role. A student's performance in purposeful tasks and activities in the academic arena is influenced by the person themselves, which would include their skill set, the environment such as the specific classroom the student attends or the school setting as a whole, and lastly the occupations in which they engage to meet school requirements and enhance learning. Therefore, as occupational therapy practitioners, it is necessary that interventions address skill deficits and areas that need improved during service delivery by maximizing the PEO fit for each student (Law, Cooper, Strong et al., 1996). In turn, this contributes to increasing the opportunity for enhanced occupational performance leading to independence, therefore leaving a positive impact on the student in the school-based setting.

### **Limitations**

As this study was based on a qualitative research method and process, bias and subjectivity of each participant responding were aspects upon conducting the research. Along with this, the findings are difficult to extend to wider populations due to lower degrees of certainty through data collection. Participants located in one school district were also used where the sample size only consisted of five participants responses. Therefore, the transferability of results was limited as the sample was based on the local geographic area.

### **Future Research Suggestions**

First, conducting extended member checks with participants in the study would allow for increased feedback and validation to improve the credibility of the study. Second, if completing this study again, it would be important to include more questions in the survey that would provide additional background information on participants including years of practitioner experience and age of students on a practitioner's caseload.

Third, it would be interesting to conduct a similar study comparing current study findings across various geographical areas. This would explore similarities and differences of school-based practice throughout different regions and areas of the United States. Fourth, additional research could be conducted related to perceptions of current occupational therapy services in the school setting from teachers, parents, and student's themselves reporting on the relationship between occupational therapy, interventions, and the impact on performance. This would allow for increased information and feedback for school-based occupational therapy practitioners that could influence future service decisions and delivery.

### **Conclusions and Implications for Practice**

As an emerging occupational therapy practitioner, the research conducted through this study enabled me to further explore and understand occupational therapy in the school-based setting. Through the integration of practitioner perceptions and using the PEO lens, this research can provide insight and knowledge for other new occupational therapy practitioners as well. In addition, this research also builds on the efficacy of existing studies and literature. In relation to future implications for occupational therapy practitioners in the school setting, there are several ways this study can apply that is consistent with previous literature.

First, it is necessary to recognize and highlight the need for occupational therapy within the school setting. This is important in advocating for the rights of students with disabilities/conditions/skill deficits that hinder or impact their ability to fully participate and perform in the academic setting. Second, occupational therapy practitioners should choose interventions that address student's underlying skills/deficits. This is consistent with previous literature where by focusing on interventions that target needed areas of students, it creates the opportunity for occupational therapy practitioners to improve access, increase progress, reduce barriers, and address specific areas. Overall, these interventions contribute to student goals and current educational abilities in order to learn.

Third, interventions and method of delivery should relate to increasing a student's ability to perform in the school setting. Chosen activities and service delivery including 1:1, group, push in, or pull out should best serve the student in relation to their ability to perform within the academic setting. I found it interesting that through my study results, 1:1 intervention was the most reported method of delivery as it increases direct contact with each student. The goal is that these learned skills through interventions will also carry over to life in the community. Fourth, occupational therapy practitioners should provide students with services that enable them to strive for academic success. Through occupational therapy intervention and services provided in the school setting, students can increase their ability in striving for academic success which was supported by both my study results and supporting literature. Overall, this can contribute to student learning and performance, preparing each individual for the future in the school setting.

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