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LEADERSHIP: SUPPORTING STUDENTS WITH ASD AND THE SCHOOL WIDE

COMMUNITY

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Leadership: Supporting Students with ASD and the School Wide Community

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  Leaders work collaboratively with all stakeholders to help understand what systems and supports need to be put into place to meet individual needs. School leaders must create continuous learning opportunities and reinforcement systems for educators in the areas of evidence-based practices, individualized teaching strategies, and student transition plans. Students with Autism Spectrum Disorder (ASD) require consistent and structured programming starting in preschool and carrying through to post-secondary education. It is imperative that school leaders provide the appropriate training and supports to educators and specialists in relation to executive functioning skills and evidence-based practices to best support students with ASD. This literature review dissects evidence-based teaching strategies that support executive function skills, systematic implementation programs to support school transitions for student with ASD, and breaks down how school leaders can support students, education professionals, and families throughout the process

Educational leaders are the agents of change within a school organization. School leaders have the opportunity to create systematic change that supports growth and success for all students within a school community. Change occurs when the learning community is committed to the common goals they have chosen collectively. Common goals created by a school community must support all students, especially those with disabilities. Leaders work collaboratively with all stakeholders to help understand what systems and supports need to be put into place to meet individual needs. School leaders must create continuous learning opportunities and reinforcement systems for educators in the areas of evidence-based practices, individualized teaching strategies, and student transition plans. Students with Autism Spectrum Disorder (ASD) require consistent and structured programming starting in preschool and carrying through to post-secondary education.

Executive Function Defined

"The term executive functions refers to the hypothesized brain processes that control other brain processes" (Ward & Jacobsen, 2014, p. 72). Metaphorically speaking, the executive functions are the brain's chief executive officer. Executive functions include inhibition, flexibility, problem solving, planning, and memory. "Most researchers agree that the term executive function (EF) is exceedingly broad, and there is little consensus on a definition" (Granpeesheh, Tarbox, Najdowski, & Kornack, 2014, p. 355). Ward and Jacobson (2014) emphasized it is widely agreed that the activities to which the term executive function refers are critical to everyday functioning in life. "People who have difficulty with inhibition, remembering things, planning, problem solving, and or being flexible, will present with major deficiencies in school, academic and vocational functioning" (Granpeesheh et al., 2014, p. 355).

Executive Function skills help increase personal freedom and self-determination for a child to help them become the master of their own environment.

A student with effective executive function skills is able to read a room, comprehend important information, and identify key elements or zones of the room. They are able to visualize themselves completing a task in a variety of spaces and in no particular order. A student with effective executive function skills can imagine the "big picture" when asked to complete a task or activity. Meaning, they are able to envision what the end result looks like and how they are going to get to the end result. They are able to understand the passage of time and how long it may take to complete different tasks within an activity. Students with executive dysfunction are often misunderstood. Ward and Jacobson (2014) stated many students who struggle with executive functioning skills are referred to as the ones that do not care about school or rules, refuse to complete tasks, or are the students that want to gain control.

Barkley, Edwards, Laneri, Fletcher and Metevia (2001) mentioned that individuals with weak executive functioning (EF) skills exhibit reduced visual imagery to see the future, a weak ability to control and sustain this visual representation over time, limited self-directed talk, disinhibition, a limited or absent ability to pre-experience the emotion of the future, disorganized planning, weak initiation, and reduced sustained attention. Students that lack executive functioning skills struggle with knowing where to begin a task, managing time, understanding what steps are most important, and have a difficult time comprehending the final expectation. According to Barkley et al. (2001), in order to develop or rehabilitate EF skills, individuals need to repeatedly practice: self-monitoring, self-stopping, seeing the future, saying the future, feeling the future, and playing with the future so as to effectively 'plan and go' toward that future.

Executive Function for Students with ASD

The American Psychiatric Association (2018) defines Autism Spectrum disorder (ASD) as a neurodevelopmental disorder characterized by deficiencies in social interaction and communication, as well as the presence of behaviors, activities, and interests that are repetitive and restrictive. Factors contributing to the increased prevalence of ASD include changes in diagnostic criteria, heightened public awareness, and improved ability to diagnose ASD among individuals that do not have an intellectual disability. Specific impairments in ASD have been connected with Executive Function (EF) in the areas of social impairment, social cognition, repetitive and restricted behavior patterns, and overall quality of life. "EF encompasses a broad range of purposeful higher order neuropsychology domains, including goal-directed behavior, abstract reasoning, decision making, and social regulation" (Demetriou, Lampit, Quintana, Naismith, Song, Pye, & Guastella, 2018, p. 1). EF difficulties have an important role in ASD such as integration of prefrontal executive processes that affect social and emotional circuits. "Given the stability of EF performance in ASD across neurodevelopment, early intervention may provide the best opportunity to alter trajectories over the lifetime to improve outcomes for people with ASD" (Demetriou et al., 2018, p. 6).

Evidence Based Strategies that Support Executive Functioning for Students with ASD

"The Space, Time, Objects, People (STOP) and Read the Room strategy supports situational awareness/intelligence" (Baker, n.d., slide 7). This strategy is taught through pictures, video, and physical tours through the environment being reviewed. For example, if a teacher is prepping a student for their transition into a new classroom, the teacher could take pictures of the classroom, label important areas or space in the classroom, and follow up with conversations

about what is expected in each space. "Space" teaches students to navigate through the room they are working in and prompt questions such as "What is going on in the room? What is expected or unexpected? Are there pathways used to navigate different areas within the space?" "Time" reinforces students to get on a similar timeline as peers. Students learn to pay attention to the pace of an activity, what is happening at "this moment in time", and learn a sequence of actions. "Objects" explicitly teaches the organization of a space, the location of objects, and the purpose or relevance of the space and objects. "People" dives into how to read a person based on their facial expressions, body language, appearance, mood, tone of voice, or pace of movement.

The MIME strategy is used to help improve non-verbal working memory. MIME stands for "Make a future picture, Imagine what it will look like, Motions-what movement is required, Emotions-how will I feel" (Baker, n.d., slide 17). MIME is essentially a mental dress-rehearsal to help teach and reinforce routines and planning skills. MIME dives into the importance of flexible thinking and teaches students to imagine situations in multiple ways. MIME skills include walk it out, map it out, draw it out, tap it out. Walk it out targets motor memory and involves students physically walking through their space or routine. This is especially helpful for students in middle or high school who are going to a new school and need to practice getting to classrooms across the building. Map it out is just as it sounds, a visual support that students can use to get around a building or area. Tap it out breaks apart routines or tasks into single steps onto flash cards are visual cue cards to support sequencing of events. Wild cards could be added to the flash cards to represent situations that may occur within a routine and supports flexible thinking.

Get Ready, Do, Done is a strategy used to support students who struggle with sequencing. Baker (n.d.) stated the strategy is broken up into three columns, the first column is labeled "3. Get Ready", the middle column is labeled "2. Do", and the last column on the right is labeled "1. Done". This visual chart creates episodic future memory or the ability to "see yourself" and what it looks like in the future. In this strategy, students start working from right to left. In the "1. Done" column by sketching an image of what the final product will look like. From there students move to "2. Do" where they explicitly write down or draw all the steps it would take to get to the final product. The last column "3. Get Ready" is where a list of all items and materials needed to complete the task would go. This strategy teaches students to imagine what the task will look like when they are finished. "The emphasis is placed on working backwards when planning and using an outcome to determine the relevant steps to achieve the visualized end result" (Ward & Jacobsen, 2014, p. 73).

Baker (n.d.) described the implementation of visual strategies in a variety of ways by using highlighters, markers, crayons, colored pens, etc. Highlighting or underlining visually represents important information or can help students prioritize steps within a project. For example, a section highlighted green needs to be completed first, yellow second, red last. When students are reading long passages, a student could use a pink highlighter to underline sections of the reading that brought about questions. A purple highlighter could be used for answers found in the passage that are needed for an assignment. Color choices can be individualized for each student. The key is to keep the colors and what they represent consistent. A card could be taped near a work space or in a planner for students to reference if they forgot what each color represents. Post-It's are considered another visual strategy to be used with students that need help with sequencing or prioritizing.

Ward and Jacobsen (2014) mentioned how mental imagery helps students organize themselves and teaches them how to plan ahead. Visual pictures of the student in action would be the most effective way to support this practice. For example, a picture is posted on a student's locker of what they look like when they are fully dressed for recess. When the student goes outside for recess they can reference the picture before getting dressed and can check the picture afterwards to make sure they have all the correct clothing items on. Mental imagery can work in the classroom space such as what a student's desk should look like, what each learning center should look like after being used, etc.

The most effective way to teach pace and time is through the use of an analog clock. Analog clocks provide students a visual representation of how much time is left and teaches them to increase or decrease pace when planning. Ward and Jacobsen (2014) stated many students benefit from seeing how time fills up on an analog clock. A dry erase marker can be used to shade or erase slices of time to visually show how much time is left to complete or end a task. Drawing on a clock not only helps with teaching pace and awareness of time, it also teaches self-awareness and brings about discussions of time passed or time wasted. "Students can see visual markers of the time that has passed and then determine if they have used time effectively or had any "time robbers" (Ward & Jacobsen, 2014, p. 5). Time robbers can be explained as distractions like television or daydreaming. Incorporating checkpoints for students within a timed period helps students determine if they are on track to complete their task on time. Students set a timer half way through an assignment and check to see how their pace is and determine what steps they need to take to complete the assignment. The purpose of the timer is to improve self-monitoring and an awareness of how time is used, not how quickly they can complete an assignment. Ward and Jacobsen (2014) emphasized students who set timers for the

end of a task frequently experience more stress, whereas a time set for check-ins midway through a task provides opportunities for problem solving.

Supporting Students with ASD and the School Community through Transformational Leadership

Improving organizational effectiveness within a school community is a gradual process that requires a school administrator to have the skills and qualities of a transformational leader. "The more a principal engaged in transformational leadership, the more likely teachers were to take risks in developing and implementing new knowledge and practices" (Moolenaar, Daly, & Sleegers, 2010, p. 655). Supporting students with ASD within the school community is a collaborative process that requires consistent communication with all service providers and family members, an instructional model that effectively meets the individual needs of students, resources to support evidence-based practices that support executive functioning, social/emotional learning, sensory needs, academic skills, and self-help independence skills.

Bass & Riggio (2006) noted that leadership is important in both developing and sustaining the climate and condition for innovation to occur. Rost (1991) emphasized that leadership is an influential relationship among leaders and followers who intend real changes that reflect their mutual purposes. Transformational leaders bring people in school together to create a common vision and goals to support the school community as a whole. "A principal who is close to staff may have a greater opportunity to collectively share and develop the school's vision as well as provide timely access to the resources necessary in realizing that vision" (Moolenaar et al., 2010, p. 656). Generating a mission and vision is a collaborative process that gives all members the opportunity to speak, share, and plan towards a common goal.

"In leadership writ large, mutual purposes help people work for the common good, help people build community" (Rost, 1991, p. 124). The changes that followers and leaders intend must align with their mutual purpose. Mutual purpose is developed over time and is done when both the leaders and followers work together. Developing mutual purpose can happen systematically through a staff meeting, led by the school administrator, that is tailored to a topic such as executive function or strategies that support students with ASD. Developing mutual purpose can also happen organically through conversation and interaction throughout the school year. The mutual purposes have an impact on the changes that leaders and followers intend. Foster (1989) stated leadership takes on a new meaning as a community of believers and as a communal relationship when mutual purposes become more common among the followers and the leaders.

"Teachers cannot bring about necessary changes without organizational and systemic change" (Collinson, Kozina, Kate Lin, Ling, Matheson, Newcombe, & Zogla, 2009, p. 4). This means that members within an organization "require advanced continuous learning as well as opportunities to engage in dialogue and inquiry to create new knowledge" (Collinson et al., 2009, p. 4). The amount of learning opportunities presented to educators is often dependent on the school administrator. Leaders who support consistent growth through various avenues are considered transformational leaders. "Transformational leaders encourage teachers to spend more time on training and professional development" (Collinson et al., 2009, p. 630). Feldhusen and Eng Goh (1995) pointed out that training may increase teachers' knowledge and skills, broaden their horizon with a variety of experiences and perspectives, teach them innovative teaching strategies, and increase their confidence and comfort with the implementation of new ideas. "Moreover, to support the development of new ideas, organizations need to foster an open orientation towards innovation in a climate in which creative efforts and the distribution of new

knowledge and practices are encouraged" (Collinson et al., 2009, p. 6). Collinson & Cook (2007) highlighted that members need opportunities to work collaboratively, disseminate their learning, and contribute to their own, their colleagues', and the organization's continuous improvement. "Education is slowly absorbing the new shift in thinking and is beginning to implement changes that encourage teachers and principals to engage in learning together for the purpose of improving teaching and learning for the children in their care" (Collinson et al., 2009, p. 5).

Professional Development- Evidence Based Practices

Professional development to support students with ASD must be systematic, collaborative, and continuous. Leaders must support school professional development by strategically planning and providing continuous training throughout the school year. Research concerning best practices in professional development identified four critical components of any professional development activity. The four components are; relate to school improvement plans, support sustained adult learning, support long-term focused efforts, and connect professional development and everyday classroom needs. In order for professional learning to be effective, educators must be committed to the growth of all students and ready to learn and participate. "Involvement is the key to implementing change and increasing commitment." (Covey, 1991, p. 217). Glickman, Gordon, and Ross-Gordon (2001) broke down professional development into three stages; orientation, integration, and refinement. Orientation provides teachers the opportunity to express concerns or ideas in related to the topic presented. Integration is a process that assists teachers with integrating new learning and strategies into their

classrooms. Refinement is when teachers progress from the initial orientation to the integration of new learning to reflection.

"Increasing prevalence of Autism Spectrum Disorders (ASD) has intensified the need to provide high-quality educational services in public school settings through the implementation of evidence-based practices (EBPs)" (Odom, Cox, & Brock, 2013, p. 233). Evidence-based practices related to supporting students with ASD may be addressed through professional development. "The National Professional Development Center on ASD (NPDC) professional development program provides an example of how implementation science can enhance program quality and teachers' use of EBPs for students with ASD" (Odom et al., 2013, p. 233). Odom et al. (2013) stated that such a system requires identifying the content, commitment and support at the state and community levels, direct training for service providers, and ongoing coaching and technical assistance to support teachers and other service providers in their quality improvement and use of EBPs.

Yell, Katsiyannis, Drasgow, and Herbst (2003) found that school systems often did not provide evidence of quality features of programs such as appropriate development of individualized education programs (IEPs), staffing, and appropriate public education learning environments. Evidence-based practices are focused interventions that show evidence of efficacy. "To assist in improving the quality of special education services for children and youth with ASD, much work has gone into identifying EBPs" (Odom et al., 2013, p. 235). Fixsen, Naoom, Blase, Friedman, and Wallace (2005) suggested that identifying "best practices" and even introducing practices through workshops and classes does not necessarily lead to the use of such practices in applied settings. "Professional development that builds on the principles of

implementation science is most likely to lead to the adoption and use of innovations necessary to improve the quality of special education services and use of EBPs with students with ASD" (Odom et al., 2013, p. 235). Implementation science is "the scientific inquiry into questions concerning implementation — the act of carrying an intention into effect, which in health research can be policies, programmes, or individual practices (collectively called interventions)" (Peters, Adam, Alonge, Agyepong, & Tran, 2014, p. 1). At the Global Implementation Conference, Fixsen et al., (2005) noted that implementation science is at a "tipping point," as reflected in its emergence as a topic of interest in such a range of disciplines. Odom, Collet-Klingenberg, Rogers, and Hatton (2010) stated that common features of implementation science include high quality materials that describe and document the practice being implemented, early and joint planning by a team of professionals or other individuals involved in implementation, availability and quality of technical support, assessment of implementation readiness, and unique contextual variables. This model of implementation builds from the top down (e.g., a team of state-level organization leaders) and the bottom up (e.g., training teachers and other service providers). "You need ownership for fundamental change, but you can't get it on a large-scale by relying on bottom up strategies" (Fullan, 2003, p. 33). The larger infrastructure really is crucial for systemic change. Fullan (2003) stated if strategies are only based on investing in local development, not much of the bottom moves, good ideas don't get around, nor do they persist very long.

Fixsen and colleagues (2005) identified phases in the implementation process that they believe lead to successful implementation. The science of implementation includes; exploration, installation, initial implementation, and full implementation. School administrators are heavily involved in all four stages, leading, and supporting staff throughout. Exploration involves

purveyors sharing information about the innovation to be implemented, the resources required, and the match of innovation to the identified needs. The School team, administrator, or teacher choosing to implement curriculum, an educational model, or a specific intervention, gathers data to analyze the needs of a specific student, group of students, or school community as a whole. The installation process happens once a team has made the decision to move forward with the program. School leaders should not independently make the decision to move forward with the program. Decision making should be a collaborative process that involves members of the school team. Decisions made collectively will support higher teacher commitment and engagement levels than if a school administrator chose the program on their own. "This stage includes identifying the necessary support personnel, creating institutional supports, identifying sites for implementation, and securing the interest and cooperation of personnel, as well as sharing and reviewing materials and providing training" (Odom et al., 2013, p. 240). Adopters of the program begin the use the innovation in their setting within initial implementation. This process often requires support from an implementation team due to the complexity of using a new procedure in a setting where systems and procedures are already put into place. Full implementation happens when the practice becomes the standard way of operating in the systems.

The NPDC designed a model of professional development that builds on scientific literature about effective intervention practice and tenets of implementation of science to improve the quality of educational programs for students with ASD and to increase teacher's use of EBP's. "To accomplish its goal of promoting program quality and teachers' and service providers' use of EBPs for students with ASD, the NPDC developed a school/building/district level program, the Evidence-Based Individualized Program for Students with Autism" (Odom,

Hume, Boyd & Stabel, 2012, p. 240). The components of the program include; goals, selection of focused intervention practices, implementation, and program quality. EBIPSA is applicable for students in Pre-K to end of high school.

Goals are desired student outcomes that are specific to the student's individual needs. "Such goal specification would be generated from multiple sources of information, such as the individuals' current functioning level, families' concerns and priorities, and students' concerns and priorities if he or she can indicate them" (Odom et al., 2012, p. 288). Selection of focused intervention practices are based on the characteristics of the student and the students current learning environment. "The measurement of implementation and fidelity in programs for children and youth with ASD has been a weakness in the autism intervention literature" (Odom et al., 2012, p. 289). NPDC designed implementation checklists for all practices to support fidelity. Odom et al. (2012) described program quality as features of a program, such as team collaboration, program ecology, and family participation, which apply to all learners with ASD in the program. Examples of quality include program structure, social climate, communicative environment, opportunities for independence, assessment, family participation, and teaming.

How Executive Function Skills Affect Student Transition From One Educational Placement to the Next.

Transitioning to a new school is often a difficult process for students that lack executive function skills. This is especially true for students with ASD. The transitions to primary school on younger students' places demand on attention skills, social-emotional, and pre-literacy skills. The middle school and high school transition creates more pressure on academic workload and social pressures. School transitions place enormous pressure to adapt and be flexible.

Dijkhuis, Sonneville, Ziermans, Staal, and Swaab (2020) emphasized current transition programs around the country may not adequately address the needs of students that struggle with executive function skills and students with ASD. Many individuals with ASD are able to navigate intellectual demands of schools but they may struggle with other critical factors that contribute to academic success. "Difficulties with social communication, peer relationships, resistance to change and intolerance of uncertainty may make new school transitions particularly worrisome for students with ASD and their parents" (Boulter, Freeston, South, & Rodgers, 2014, p. 1). Boyd, McDowall, and Cooper (2002) described contributing factors to unsuccessful transitions may include late placements in the new school setting, gaps in organized support provided by their child's school, and limited communication about their child's interventions. Dynamic school–home partnerships are critical to promoting positive outcomes for all students.

There are three main areas that can make transitions difficult for school staff. The first is the characteristics of the school such as location, district support for students with ASD, and special education models within the building. The second area of difficulty can be the amount of knowledge staff have about resources or support for students with ASD and general knowledge about executive function skills and how they affect students with ASD. The last area of difficulty is communication between school and home before, during, and after a student transition. Studies reported that some teachers in specialized classes lacked knowledge about ASD and executive function. Cridland, Jones, and Caputi (2014) stated that studies reported that some teachers in specialized classes lacked knowledge about ASD and that no training opportunities were provided for any school staff member to learn about ASD and executive function. Guardians felt their children were not receiving accommodations or modifications individualized to their student's needs due to knowledge gaps amongst teachers. One parent

explained, "Some teachers don't recognize that he requires a few extra minutes so they are not prepared to meet his needs" (Barber & Olsen, 2004, p. 6). Parents correlated lack of knowledge to behavioral problems in the classroom and less willingness to engage with the school.

Strategies to Support Transition and Executive Function Skills

Student Strategies- described four strategies to assist in executive function skills for students with ASD during the transitions process. Transitions include; preschool to elementary, elementary to middle school, middle school to high school, and high school to post-secondary education. In order for these strategies to be effective, school administrators must create and foster a positive and supportive culture within the school community. This includes positive relationships with teachers, students, and student guardians. "The basic role of the leader is to foster mutual respect and build a complementary team where each strength is made productive and each weakness made irrelevant" (Covey, 1991, p. 246). School wide strategies that administrators and teachers should incorporate include; social supports (peer buddies, safe person or space, recess/lunch time structure, and staff relationships), visual supports (school map, photos/pictures of school or teachers, checklists, and schedules/calendar), planning (visit new school, include students), and self-regulation (coping strategies and emotion thermometer). H. Nuske, McGhee, Bronstein, Hauptman, Aponte, Levato, and Smith (2019) recalled student strategies from studies with the highest evidence ratings which were: (a) a visit to the new school before the start of the new school year, (b) with pretransition teachers and/or parents and multiple times if possible, (c) schedules or timetables, (d) a peer buddy system, (e) safe person or space, and (f) coping strategies. School administrators can support school visits by planning and facilitating the event. The event should be a collaborative endeavor and include the teachers

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involved in the process. "School visits alleviated student and guardian anxiety by allowing them to walk the school building in advance in addition to meeting their teachers" (A. Nuske, Rillotta, & Bellon, 2019, p. 281). Meeting in advance gave guardians and students the opportunity to establish relationships with teachers. A. Nuske et al. (2019) mentioned the highest evidence rating was the transition binder given to the students and families before the transition process began. The transition binder was used in many studies to help guardians stay on top of the many steps related to the transition process by providing information and an organizational system.

Teacher Strategies- H. Nuske et al. (2019) described four strategies teachers stated would support them through the transition process. The first strategy was communication with all transition members involved. Team transition planning involves a pre- and post- transition meeting for students, guardians, teachers, and school administrators. The second strategy is planning the actual transition in advance. This includes giving the student the opportunity to go into the new classroom to explore and learn the new space. The third strategy that teachers expressed would be beneficial is training. Training or professional development related to ASD, executive function, and classroom supports would be most appropriate. The final strategy is having student accommodations ready before the student is placed in the new classroom or setting. This would include sensory tools, adaptive equipment, communication devices, or preferred snacks.

School administrators can support teachers through this process in a magnitude of ways by first facilitating and scheduling time out on the school calendar to make these meetings possible. Second, arranging substitutes in advance so that both teachers can be involved in the transition process. Continuous professional development, informal observations, mentoring, or

book clubs can be facilitated by leader administrators to support teacher training. Lastly, school administrators can show the greatest support by creating and maintain positive relationships with the families within the school community. Trusting and supportive relationships with family members allows the team to work more closely together to create an individualized plan that meets the best interest of the child. When families and schools can come together, the transition process will be the strongest. Having insight and consistency from all sides makes for the best transition process.

Post-Secondary Transition for Students with ASD

In order to support a successful transition, all stakeholders must be involved in a systematic and organized plan. Stakeholders in a transition plan are the student, student's guardian, service providers such as occupational, physical, and speech therapist, school counselor, principal or vice principal, general education teacher, and any other staff members that work within the student's school day. Halbesleban, Novicevic, Harvey, and Buckley (2003) mentioned that setting clear goals toward outcomes can help leaders manage time frames of complex innovation projects. Organizational climates that are open to innovation, in which members are willing to take risks and to continuously learn to improve the organization, are more successful at implementing actual innovations than organizations with less innovative climate (Moolenaar et al., 2010, p. 627). The process of a successful transition stems back to everyone being on the same page and having mutual purpose. Rost (1991) reiterated the process of change or transformation reflect the mutual purposes of the people engaged in the process. Change happens in organizations or groups when common purposes are developed. Transitioning students from high school to post-secondary school should involve both the

student's current service provider and the future service providers. Finding the appropriate team members may be difficult, especially if a student is going out of state or to a new town. In order to make the transition as structured as possible, no matter where the student transitions to, the school administrator must have an organized transition program that involves all stakeholders.

Barnhill (2014) stated with the improved identification of ASD among individuals with no intellectual disability, it is assumed that the number of college students diagnosed with ASD will continue to increase even further. Even though students with ASD have the potential to perform well academically, they are at a heightened risk for academic failure at the university level. Gelbar, Smith, and Reichow (2014) reported challenges related to executive function such as difficulties with organization, social skills, time management, sensory overload, and lack of self-advocacy skills. To address these challenges, universities and colleges must provide appropriate support and interventions that meet the needs of students with ASD that struggle with executive function.

"With the introduction of disability discrimination legislation, institutions have put a lot effort into making their education and activities more accessible for students with disabilities by providing them an equal opportunity to participate" (Pillay & Bhat, 2012, p. 141). Pillay and Bhat (2012) mentioned many universities are skillful at making appropriate modifications or accommodations for students with specific learning disabilities. Universities continue to struggle with how to appropriately support the population of students with ASD. Cox, Nachman, Ranon, Thompson, Dawson, Edelstein, and Breeden (2020) emphasized as more students with ASD enroll in higher education and since they are at a heightened risk for academic and personal

failure, there is an urgent need for evidence-based interventions so that these students can successfully navigate college life.

Student life at the university level consists of three major domains; daily independent living, academics, and student life. Van Hees, Moyson, and Roeyers (2015) conducted a study sampling students with ASD between the ages of 18 and 25 attending a university or college. In order to be chosen for the study, students needed to fulfill a formal diagnosis by an multidisciplinary team of experience clinicians, meet the DSM-IV criteria for ASD, and no diagnosed intellectual disability. The results of the study discovered five challenges for students with ASD in relation to executive function skills. The five challenges were; struggling with new situations and unexpected changes, exhausting but necessary social contacts, processing information and time management in fits and starts, doubts and disclosure, and mental health issues.

Challenge 1: Struggling with New Situations and Unexpected Changes.

"During the transition to higher education, students experienced difficulties in overseeing the large amount of choices, and faced challenges estimating the consequences of the choices made" (Van Hees et al., 2015, p. 1678). Students were reported searching for new routines and structures within all three life domains; daily independent life, academics, and student life. The lack of structure and predictability made daily organization and time management difficult at the higher education level. The need for predictability and structure made students re-evaluate what structure normally looked like. "They 'trained' themselves to cope with unexpected things and live with less planning in order to handle unexpected occurrences better and make it further in life" (Van Hees et al., 2015, p. 1678).

Challenge 2: Exhausting but Necessary Social Contacts.

Van Hees, et al., (2015) mentioned students expressed a clear need for relationships and friendships. They realized the importance of having friendships or a support network to feel a sense of belonging. Students reported memorizing scripts or conversation cards to assist in participating in small talk during the courses unstructured time. They described how difficult it was to identify an appropriate time to ask questions, how to address professors during or after class, and sustaining conversation during group projects. "Awareness of their social problems, the fear of saying wrong things and the need to recover from anxiety, had a negative impact on students' confidence to socially engage with others and to invest further in maintaining contact and friendships" (Van Hees et al., 2015, p. 1679).

Challenge 3: Processing Information and Time Management in Fits and Starts.

Van Hess et al. (2015) stated students faced daily and academic challenges due to their diverse ways of processing information, sensory overload, and difficulties with time management. Students with ASD tend to focus on little details and require processing time to put together all the information they have received. Some students meticulously planned everything and some were unable to make an organized time schedule which resulted in procrastinating tasks.

Sensory overload caused by the sound of laptop keyboard, bright lights, flickering lights, etc. had a negative impact on students with ASD. Students shared avoiding the cafeteria, bars/restaurants, the university library, and would choose to sit in the front of the classroom to help decrease sensory overload. Students also reported that sensory overload would cause stress, fatigues, and required recovery time to gain energy back in order to be productive again.

Challenge 4: Doubts and Disclosure.

To continue to receive related services or academic support under the Americans with Disabilities Act, from a postsecondary institution, students must disclose their disability, provide appropriate documentation regarding their disability and must self-advocate. Students with ASD often do not disclose to social contacts or professors that they are diagnosed with ASD. "The reasons behind resistance to disclose are doubts concerning privacy, a lack of understanding regarding ASD, lack of supportive policies, and the hope that they will get a fresh start in a new setting" (Van Hees et al., 2015, p. 1681). Van Hees et al. (2015) mentioned students who disclose their disability before the end of their first year in college have been found more likely to graduate college than students who disclose later during their college tenure. "Students would only disclose their ASD when they felt safe, when they could not cope with the stress any longer, or when they experienced a specific support" (Van Hees et al., 2015, p. 1681). Many did not share their diagnosis of ASD to their professors or fellow students. "Students disclosed their ASD to the Disability Office to apply for 'reasonable accommodations', but did not disclose their ASD during contact with peers and academic staff" (Van Hees et al., 2015, p. 1680). Reasoning behind not disclosing their disability stems back from previous trauma. "Due to negative perceptions or comments in the past, fear of rejection, or prejudice, students would not disclose to their professors" (Van Hees et al., 2015, p. 1681).

Challenge 5: Mental Health Issues.

Van Hees et al. (2015) stated students felt isolated, overwhelmed, depressed, stressed, and anxious. Many students with ASD would move back home and complete coursework online to alleviate the stressors of having to participate in person. "The stress, anxiety and fatigue often

became so overwhelming that students genuinely became worn out, causing a disturbance of balance between studies, student life and daily living" (Van Hees et al., 2015, p. 1681).

These five challenges are clearly linked to the unique cognitive style of individuals with ASD and the core features of ASD. Individuals with ASD continue to struggle with social skills, communication, repetitive behaviors, executive function, sensory challenges, and resistance to change. "Support must extend beyond academic interventions, and also offer transitional support, support in student life and daily living." (Van Hees et al., 2015, p. 1682). Van Hees et al. (2015) formulated five recommendations for higher education institutions to better support students with ASD. The five recommendation are; providing a more personalized approach, a safe and transparent environment with sufficient planning and clear communication academic accommodations, coaching in education, student life and daily living, adequate psychosocial support, and leisure activities and a sufficient amount of rest.

In all three domains, students prefer individual coaching on a regular basis in academics, independent living, and student life. A coach's role may vary depending on student needs but essentially provides feedback, advice, and monitors student's mental health. Students in the Van Hess et al. (2015) study suggested a campus support group be created for students with ASD. This would give students the opportunity to meet other students, share experiences, and proactively discuss how to help solve problems or support each other through school. "Finally, there is a need for a better awareness among staff and students about ASD, and the way in which it can affect navigating in college" (Van Hees et al., 2015, p. 1683). Awareness breaks stereotypes and creates a safe environment in which students feel encouraged to be themselves.

Stepped Transition in Education Program for Students with ASD

Programming to support students with ASD transition to college is imperative. To address this need, The Stepped Transition in Education Program for Students with ASD (STEPS) was created. "STEPS is individualized and person-centered. There are core content modules but implementation is flexible so that the program can be individualized to the student's interests, challenges, and goals" (White, Elias, Capriola-Hall, Smith, Conner, Asselin, Howlin, Getzel, & Mazefsky, 2017, p. 3073). STEPS incorporate a cognitive-behavioral approach to make progress towards student transition goals and help support students to develop self-regulation (SR) and self-determination skills (SD). Step one of the program supports students in high school. Step two supports students in postsecondary education. Self-regulation and self-determination are the two main actions within the STEPS program. "STEPS targets self-determination and self-regulation, which are hypothesized to mediate positive outcomes such as college adjustment, academic performance, and healthy independent living" (White et al., 2017, p. 3074).

Baumeister, Schmeichel, and Vohs (2007) noted self-regulation as a multifaceted construct that involves monitoring, oversight, modulation of behavior, emotion, and cognition. Self-regulation is closely related to executive functioning capacity and the ability to adapt and modify one's emotional response in the area of identified goals or regulate one's emotions. STEPS targets SR in a variety of ways such as training individuals in goal-setting and problem-solving practices related to student goals and teaching effective stress management techniques.

STEP One of the STEPS Program actively involves the collaboration of members involved with the student's education plan at school. Members may include the student's

general education teacher, special education teacher, guardian, principal, counselor, and school specialists such as occupational or physical therapist. A member within the team will be identified as the main resource for students. This member is often the special education teacher or case manager. STEP One consists of six counseling sessions about every other week. Sessions will include various participants that are involved in the student's education plan. The counselor assigns the student activities related to transition goals and monitors student progress. The school counselor also does regular check-ins to scaffold and ensure the student is on the right track. After the six sessions are complete, students participate in an immersion experience depending on where the student plans to go post-graduation. The immersion experience is planned and facilitated by the counselor and school administrator. First, students and guardians attend a tour of the campus. Next, the student and counselor continue to the facilities Disability Support office, eats lunch in a campus dining facility, and attends an in-person course on campus. "During the immersion experience, the counselor coaches the student on skills related to behavioral and emotion regulation and self-advocacy" (White et al., 2017, p. 3073). Student skills include discussion around time management related to the demands of school, reviewing a class syllabus, how to use a planner to help organize tasks, and how to ask questions to an instructor or classmate when something does not make sense.

STEP Two of the STEPS Program includes one-on-one counseling for about 12 sessions, online content over a 12-16 week period, and community-based outings. All of these interventions are completed before the student transitions to a post-secondary placement. During the 12-16 week time frame the counselor coaches the student throughout the process. The high school counselor consistently communicates and checks-in to make sure that the student is working toward identified goals. Guardians, the general education teacher, and case manager

also have access to online content to help with the process. Guardians are actively involved in STEP One and are asked to gradually fade out their participation in STEP Two. This phasing process is used to help foster student independence. STEP Two targets self-regulation and self-determination with an emphasis on social integration on campus. "The purpose of the community-based practice outings is typically to encourage social involvement that is goal-directed" (White et al., 2017, p. 3076). Campus outings are individualized to meet the student's needs. A counselor may help a student practice transitioning from one building to another while looking for specific classrooms, eat with the student in various campus dining halls, or tour the dorms and discuss what a morning or night routine would look like with a roommate.

The STEPS program requires high school and post-secondary administrative support in order to be implemented effectively. There are many meetings which require advance scheduling and staff coverage for the team members involved. It requires the high school administrator to plan, coordinate, and collaborate with post-secondary administrators and team members within the high school. School counselors are heavily involved in the program. This means there needs to be a plan in place for when the counselor is unavailable. High school personnel who are part of a student's transition team attend two-half day training sessions prior to assisting a student through the STEPS process. School administrators must plan for additional substitutes in the building when staff are being trained. Training revolves around how to effectively implement STEPS and how to appropriately support students with ASD during their transition. Small group activities and case studies are used to foster an active learning environment for the training. Lastly, high school administrators must be aware of the cost of the STEPS program and budget funds appropriately to accurately allocate funds.

The student population with ASD continues to grow across the country. Supporting students with evidence-based teaching strategies that align with executive functioning skills, will foster lifelong independence and assist students when transitioning to post-secondary education. Transition programs are imperative for the success of students in post-secondary education. School leaders around the country need to advocate and work towards implementing more transition supports for the ASD population. It is imperative that school administrators and leaders build strong relationships with students, staff, and family members to support growth towards student goals and to best support students through the transition process from high school to post-secondary education. The Montana PEPP Standard (1)(d) states principal's "collaborate with families and other community members, respond to diverse community interests and needs, including American Indians and tribes in Montana and mobilize community resources in order to fully develop the educational potential of each person" (ARM 10.58.705., 2021, (1)(d)). School administrators and leaders must continue to provide learning opportunities for educators through avenues such as professional development and mentoring to ensure best practice for students with ASD. Shalley and Gilson (2004) mentioned transformational leaders may increase a team's orientation towards innovation by providing a vision for school improvement through supporting a risk-tolerant climate, providing opportunities for learning and professional development, and challenging team members to invent new solutions to old problems by thinking "out of the box". The Montana PEPP Standard (1)(b) states principals promote the development of the "full educational potential of each person by advocating, nurturing, and sustaining positive school culture and instructional program conducive to student learning; staff professional growth based upon current brain-based research for effective teaching and learning; and exhibiting genuine concern for students" (ARM 10.58.705., 2021, (1)(b)).

School leaders continue to be the driving force of change within the school community and community at large. Students with ASD need strong advocates as leaders and educators to support their individual needs in a way that will foster lifelong independence helping them to be a contributing member within their community.

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