Project TEAM: Transition-Age Youth With Intellectual and Developmental Disabilities Problem-Solve Environmental Barriers to Participation

Jessica M. Kramer, OTR/L, PhD,
Assistant Professor, Department of Occupational Therapy, Boston University

Melissa Levin, MSW, LICSW,
Clinical Social Worker & Transition Specialist, Newton Public Schools

Ariel Schwartz, MS, OTR/L, PhD
Program in Rehabilitation Sciences, Boston University

Rachel Pollard, OTS,
Boston University

This CE Article was developed in collaboration with AOTA's Developmental Disabilities Special Interest Section.

ABSTRACT
Environmental modifications support transition-age youth with intellectual and developmental disabilities (I/DD) to participate at school, at work, and in the community. As youth transition to adulthood, it is critical that they learn the skills needed to advocate for environmental modifications that support full participation. Many of these advocacy skills are related to the skills, behaviors, and beliefs associated with self-determination and social-emotional competencies. This article describes a multicomponent intervention, Project TEAM, that teaches transition-age youth with I/DD how to identify and resolve environmental barriers to participation and subsequently foster their self-determination and social-emotional competencies.

LEARNING OBJECTIVES
After reading this article, you should be able to:
1. Identify the federal policies that address environmental barriers to participation and inclusion for youth and young adults with I/DD during and after transition to adulthood, and discuss the implications of those policies for transition-age youth
2. Differentiate the views of the medical model versus the social model of disability with regard to participation challenges experienced by transition-age youth with I/DD
3. Describe the key components of the Project TEAM intervention and the steps of the Game Plan problem-solving process
4. Identify how Project TEAM can foster self-determination and social-emotional learning competencies in transition-age youth with I/DD

INTRODUCTION
Occupational therapy practitioners strive to empower their clients to access their communities, participate in valued activities, and establish personal meaning in their lives. Within occupational therapy, the physical and social environments are a central focus of intervention. Practice models commonly adopted by occupational therapy practitioners—including the Person–Environment–Occupation Model (Brown, 2014), the Model of Human Occupation (Kielhofner, 2008), and the International Classification of Functioning, Disability, and Health (World Health Organization, 2001)—recognize that disability and participation limitations occur when a poor fit exists between an individual and the demands of the environment. Working within these models, occupational therapy practitioners analyze the effects of the environment on an individual’s participation and intervene to remove environmental barriers and optimize environmental supports. However, when occupational therapy practitioners make environmental modifications on behalf of transition-age youth with intellectual and developmental disabilities (I/DD), the youth do not have the opportunity to learn about and practice identifying and responding to the environmental barriers they encounter during participation. Without this practice, transition-age youth with I/DD may not be equipped with the various skills and competencies needed to advocate for environmental modifications to support independence in adulthood. In fact, a survey conducted by youth board members of the National Youth Leadership Network found that youth with disabilities assigned a high level of importance to environmental modifications, yet rarely requested needed
accommodations (Powers et al., 2007). This problem is even greater for youth with I/DD, who reported significantly fewer opportunities to request accommodations compared with youth with other disabilities, such as physical and sensory disabilities (Powers et al., 2007). Therefore, transition-age youth with I/DD could benefit from explicit training and practice in identifying and requesting accommodations using an intervention approach that considers their unique learning needs.

This article describes a multi-component intervention, Project TEAM, which teaches transition-age youth with I/DD how to systematically identify barriers in their physical and social environments, generate solutions to resolve barriers, and request modifications to increase their participation at school, work, or other places in the community.

Policies and Theories Informing Project TEAM
Throughout a child’s public school education, laws are in place that protect students with disabilities from experiencing discrimination at school and guarantee access to a free and appropriate education: the Individuals with Disabilities Education Act (IDEA) and Section 504 of the Rehabilitation Act. As such, teachers and other school professionals must provide an individualized education that meets the needs of each student who has a disability and provide supports that enable students with disabilities to access the curriculum in the least restrictive environment (National Center on Secondary Education and Transition, 2004). To meet this mandate, educational professionals, including occupational therapists, make task and environmental modifications to ensure the curriculum and school environment are matched to the unique abilities of each student. Although students and their families may advocate for improvements to their curriculum and school environment, the educational system is responsible for identifying students with disabilities and the types of modifications that will meet their developmental and educational needs (Department of Education & Office of Special Education and Rehabilitation Services, 2017; Shogren & Plotner, 2012). However, the IDEA only applies to students with disabilities while they are in primary and secondary education, up to the age of 22 years.

After transitioning out of the educational system at age 22, young adults with I/DD are ensured access and nondiscrimination through protections provided by the Americans with Disabilities Act (ADA) and the Rehabilitation Act. These laws provide equal opportunities for people with disabilities to access governmental services, transportation, employment, and community-based accommodations (Hammel, Charlton, Jones, Kramer, & Wilson, 2014). However, unlike the IDEA, in which the school system is responsible for identifying needed accommodations, the ADA requires the person with a disability to initiate the process of identifying their need for an accommodation (Barnard-Brak, Lechtenberger, & Lan, 2010). Yet many factors influence when and if an individual with a disability requests accommodations, including an unwillingness to identify as a person with a disability, the desire to avoid negative social reactions, and insufficient knowledge (Baldridge & Swift, 2013; Barnard-Brak, Sulak, Tate, & Lechtenberger, 2010; Marshak, Van Wieren, Ferrell, Swiss, & Dugan, 2010). Services, including occupational therapy, must prepare transition-age youth with I/DD to enact their rights under the ADA and the Rehabilitation Act by providing them with the knowledge, skills, and attitudes needed to request accommodations. However, services provided to youth with disabilities often focus on changing the youth's underlying impairment or skills, rather than environmental modification. Often referred to as the “medical model,” this approach to intervention assumes that differences in body structures and functions, such as difficulties with comprehension, movement, hearing, or vision, are the primary cause of participation restrictions. Therefore, efforts are made to remediate those impairments. Examples include teaching youth with autism social skills, developing the mobility skills of youth with cerebral palsy, or teaching strategies to support executive functioning of youth with cognitive impairments. Services under IDEA, beginning with early intervention, often adopt an intervention approach informed by the medical model of disability, based on the underlying goal of enabling youth to complete the same tasks as their peers without disabilities. However, a recent literature review found that interventions targeting changes in body structures and functions did not increase participation (Adair, Ullenhag, Keen, Granlund, & Imms, 2015). Further, a medical model approach may lead youth with I/DD to attribute participation limitations to their own impairments, rather than to the environment, leading to further exclusion and feelings of difference (Kramer, Olsen, Mermelstein, Balcells, & Liljenquist, 2012).

An alternative to the medical model is the “social model” of disability. The social model posits that participation restrictions are a direct result of social and physical environments that are a poor match with individuals’ abilities and their body structures and functions. For example, others’ lack of awareness about the strengths and needs of individuals with autism may negatively affect social interactions, or a lack of curb cuts prevents wheelchair users from getting around their community. Because the social model attributes participation restrictions to environmental barriers, practitioners working within a social model of disability may view environmental barriers and supports as the primary target of intervention. This approach is aligned with foundational assumptions in occupational therapy regarding the reciprocal relationship...
between individuals' abilities, environmental factors, and occupational performance (American Occupational Therapy Association [AOTA], 2014).

Occupational therapy practitioners are trained to analyze how the environment affects clients' occupational performance and to make needed modifications and accommodations. However, transition-age youth with I/DD may not be familiar with an environmental approach to examining participation restrictions. Therefore, youth with I/DD may benefit from formal opportunities to learn this new way of thinking about the relationship between their participation and the environment. An environmental approach and learning about disability rights policies that address the environment can also introduce youth to a more positive conceptualization of disability, as it highlights that negative participation experiences are a consequence of environmental barriers and not inherent in their personal differences (Caldwell, 2011). Thus, learning about the effect of the environment on participation may support youth to both advocate for their needs and to develop a more positive identity.

Having knowledge about the social and environmental origins of participation is not enough. Even when transition-age youth with I/DD understand the social and environmental origins of participation restrictions, they need opportunities to develop the range of skills required to successfully enact self-advocacy skills and request reasonable accommodations. These skills include self-awareness, goal-directed problem solving, and social awareness (Gold, Oire, Fabian, & Wewiorski, 2012; Marshak et al., 2010), and are commonly associated with social-emotional learning (SEL) and self-determination (SD). As SEL and SD are already common targets of intervention for transition-age youth, incorporating SEL and SD principles into interventions addressing environmental barriers for transition-age youth may optimize their abilities to successful advocate for supportive environments.

What is Project TEAM?

Project TEAM (Teens making Environment and Activity Modifications) is a multi-component intervention for transition-age youth 14 to 21 years old with I/DD. It teaches these youth how to systematically identify barriers in their physical and social environments; generate solutions to resolve barriers; and request modifications to increase their participation at school, work, or other areas in the community. Project TEAM was developed in collaboration with a team of young adults with I/DD (Kramer et al., 2012); they contributed to the design of Project TEAM learning activities and materials to ensure the curriculum is enjoyable and relevant to the everyday lives of transition-age youth.

Project TEAM includes three components: a group curriculum, peer mentoring by young adults with I/DD, and a community-based trip. These components work together to support youths’ attainment of an individualized participation goal. Project TEAM is primarily delivered by a licensed professional, who could include an occupational therapist or occupational therapy assistant, but it may also be delivered by other professionals working with transition-age youth, including social workers or special education teachers. A self-advocate with a disability co-facilitates the group curriculum with the licensed professional.

Individualized participation goal: Before the start of Project TEAM, the youth meet individually with the licensed professional to identify an individualized participation goal. If they need support identifying goals, some helpful strategies include reviewing personal photos; looking at pictures of their neighborhood or school; and talking with trusted adults, such as parents or teachers. Participation goals focus on the youth's engagement in valued everyday life situations, rather than skill building, such as:

- Pre-vocational exploration or employment. Examples include volunteering in a setting that is aligned with future employment goals (e.g., childcare setting, animal shelter), completing a job application, and arranging an informational interview with a potential workplace.
- Community and social participation. Examples include going to a concert, visiting a new restaurant with a friend, and seeing a movie with a date.
- Community mobility. Examples include using paratransit to go to a physician’s appointment and taking a bus to get to a favorite restaurant.
- Educational. Examples include participating in an after-school club like theater or an intramural sports team, applying for a college dual enrollment program, and touring a local college.
- Independent Living. Examples include opening a bank account and touring an apartment building.

The youth then works toward their individualized participation goals during Project TEAM, which harnesses their motivation and has been associated with positive outcomes (Vroland Nordstrand, Eliasson, Jacobsson, Johansson, & Krumlinde Sundholm, 2016).

Game Plan and Group Curriculum

The Project TEAM group curriculum includes eight modules that teach a specific problem-solving process for identifying and resolving environmental barriers, called the “Game Plan.”
The Game Plan incorporates evidence-based problem-solving processes and self-monitoring (Meichenbaum, 1977; Polatajko et al., 2001; Shogren, Wehmeyer, Burke, & Palmer, 2017). The Game Plan uses activity analysis (AOTA, 2014) to break down the problem-solving process into four steps: Goal, Plan, Do, and Check (see Table 1 on p. 5). Each step is associated with a “self-talk” question that directs the youth to consider how the environment is affecting attainment of their participation goal. Youth first practice these self-talk questions in structured learning activities in the group curriculum sessions, and then apply them to real-life learning experiences during a community-based trip. The internalization of these self-talk questions shifts the youth’s attributions of participation difficulty away from their disability and toward environmental barriers (Meichenbaum, 1977). Each Game Plan self-talk question is associated with content (e.g., 11 parts of the environment) and processes (e.g., using a checklist) that further break down the decision-making process to identify environmental barriers, generate solutions, and determine how to advocate for change.

The Game Plan problem-solving process is depicted on a worksheet that incorporates Universal Design for Learning standards (National Center on Universal Design for Learning, 2014); each step incorporates symbols, pictures, and movements to enhance comprehension. Further, these visual and movement cues support the youth’s independent recall and use of the Game Plan.

The eight modules that make up the group curriculum also adopt a universal design for learning approach, and include multi-modal learning activities that include didactic discussions, interactive visual slide presentations, games, and role playing. An intervention manual provides detailed directions for each learning activity and the key elements that facilitate learning. The modules progressively introduce the youth to the concepts used in the Game Plan problem-solving process. At the conclusion of each module, the youth apply these concepts by completing one additional step of the Game Plan to work toward their individualized participation goal. Delivering the intervention in a group context gives the youth opportunities to talk about environmental supports and barriers with others who can relate to their experiences as a person with a disability. These shared experiences create a safe environment to discuss frustrating experiences, work together to problem solve, and feel comfortable taking risks. As a result of working with other youth with I/DD who have encountered and/or resolved similar problems, the youth acquire new skills and insights (Mejias, Gill, & Shpigelman, 2014; Powers et al., 2007; Schuh, Sundar, & Hagner, 2015).

Peer Mentoring: Each youth in Project TEAM receives weekly peer mentoring calls (through phone or video chat) from another youth or young adult with I/DD (Kramer, Ryan, Moore, & Schwartz, 2017). Repeated contact between youth and mentors is more likely to lead to meaningful relationships that expand the youths’ social networks and further supports increased participation (DuBois, Portillo, Rhodes, Silverthorn, & Valentine, 2011). Youth are matched with mentors who have expertise or skills related to their participation goal. For example, a youth with a goal to record a rap in a recording studio may be matched with a mentor who plays the guitar at coffeehouses. Mentors can draw on their lived experiences to suggest environmental modification strategies that may help the youth attain their participation goals.

To facilitate transfer of learning and support generalization of the Game Plan to additional participation contexts, each peer mentoring call is guided by a participation topic, such as eating at a favorite restaurant, being a part of school activities, or having a job (Kramer et al., 2017). With the support of the peer mentor, youth apply Game Plan concepts to these additional participation contexts. Our research found that with appropriate supports, peer mentors with I/DD could successfully implement these mentoring calls, modify their approach in response to the youth’s individual learning needs and interests, and build positive connections with the youth (Kramer et al., 2017; Ryan, Kramer, & Cohn, 2016; Schwartz & Kramer, 2017).

Community-Based Trip: Project TEAM uses an experiential learning approach (“learning by doing”), in which youth apply the concepts they learn in the group curriculum and the Game Plan to real life experiences (King et al., 2015; Kolb, 2015). This approach views learning as a process that occurs when the learner confronts and resolves problems in the context of real life; this approach is aligned with a central tenet of occupational therapy in which occupations are used as the means for change (AOTA, 2014).

As youth with I/DD progress through the group curriculum, they work with the co-facilitators to plan a community-based trip related to their individualized participation goal. During the trip, the youth identify and resolve environmental barriers with the support of the Project TEAM facilitator and their peer mentor. During this trip, the facilitator uses a scaffolded, structured prompting approach to help the youth problem solve environmental barriers (Levin & Kramer, 2015). The prompts progress from open ended, such as repeating the Game Plan self-talk question, to more structured, such as suggesting a specific modification strategy to resolve a barrier. These community-based trips provide the youth with the opportunity to apply strategies and skills introduced during the group curriculum and to achieve their individualized participation goals.

Project TEAM and Self Determination

SD has many definitions, each identifying a different set of associated skills, behaviors, and personal beliefs (National Gateway to Self-Determination, 2012; Shogren, Wehmeyer, Palmer,
<table>
<thead>
<tr>
<th>Project TEAM “Game Plan” and Self-Talk Question</th>
<th>Description of Problem-Solving Tasks Embedded in Each Self-Talk Question</th>
<th>Universal Design for Learning Features</th>
<th>Related Self-Determination Actions and Beliefs</th>
<th>Related Social-Emotional Learning Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal: What activity would I like to do?</td>
<td>Youth identify an individualized participation goal based on their personal interests as well as short- and long-term aspirations</td>
<td>Shoulder shrug, asking question</td>
<td>Self-direction</td>
<td>Self-awareness</td>
</tr>
<tr>
<td>Plan Step 1: What parts of the environment help me or make it hard for me?</td>
<td>Youth identify their functional strengths and needs Youth learn to evaluate how 11 environmental demands interact with their abilities and act as barriers or supports: things; inside places; outside places; people; services and organizations; rules; technology; ground; entrances and exits; signs and information; light, sound, and smell</td>
<td>Thumbs up and down</td>
<td>Self-realization</td>
<td>Self-awareness</td>
</tr>
<tr>
<td>Plan Step 2: What strategy can I use to change the environment?</td>
<td>Identify and problem solve the environmental modification strategy that is best suited to reduce and/or remove the specific barrier(s) and is most feasible and effective for their goal: • Make a direct change in the environment (change the rules, change spaces), or • Modify the youth’s response to the barrier (teach others about abilities and needs, ask for help, use technology or things, plan ahead)</td>
<td>Pointing to head in thinking motion</td>
<td>Pathways thinking</td>
<td>Self-management</td>
</tr>
<tr>
<td>Plan Step 3: Would using this strategy change this activity for other people?</td>
<td>Youth consider if family, friends, co-workers, supervisor or boss, teachers or staff, or other community members, are involved in their environment and activity goal Before using a strategy, youth first determine how others may be affected by their strategy usage, and then make a decision to proceed or not in using the strategy</td>
<td>Gesturing/pointing to others</td>
<td>Pathways thinking</td>
<td>Social awareness</td>
</tr>
<tr>
<td>Do: Who do I talk to about making this change?</td>
<td>Youth learn about disability rights laws that provide legal protections for people with disabilities in accordance with the type of environment that they are in and their role in that environment (e.g., high school student, college student, employee, customer) Youth identify the primary decision maker and/or person in power in the specific situation, and direct their request to this designated person</td>
<td>Hand making talking motion</td>
<td>Self-direction</td>
<td>Relationship skills</td>
</tr>
<tr>
<td>Check: Can I do this activity now?</td>
<td>Youth reflect on their overall goal attainment upon completion of Project TEAM, including identifying barriers that may still exist and future strategies that can be applied</td>
<td>Make a check with finger</td>
<td>Self-regulation</td>
<td>Self-management</td>
</tr>
<tr>
<td>Across all steps of the Game Plan</td>
<td>Youth engage in activities that foster peer-to-peer problem solving and support Youth are encouraged to problem-solve with a peer before approaching an adult for assistance Youth receive feedback from their peers and facilitators regarding their goal attainment progress, and they also provide constructive feedback to their peers Youth continuously monitor their progress toward reaching their participation goal, and they reflect on their overall progress upon completion of Project TEAM</td>
<td>Make a check with finger</td>
<td>Self-regulation</td>
<td>Self-awareness</td>
</tr>
</tbody>
</table>

Table 1: Social-Emotional Learning Competencies, Self-Determination Skills, and Associated Project TEAM Experiences
Forber-Pratt et al., 2015; University of Kansas, 2015). All these definitions highlight the importance of individuals identifying their preferences and goals and taking actions to attain them. One definition describes specific skills, behaviors, and beliefs associated with SD that are aligned with those addressed in Project TEAM. The following describes these actions and beliefs (Shogren et al., 2017):

- Self-regulation: Managing your actions as you work toward a goal—having systems for keeping track of process and evaluating outcomes
- Self-direction: Freely choosing your own goals and recognizing and responding to challenges and opportunities
- Pathways thinking: Being able to identify many ways to solve problems and reach your goals
- Self-realization: Using what you know about your personal strengths and weaknesses to act in the best way for you
- Control expectancy: Believing that you can use your skills and the people around you to influence your environment and reach a goal

The capacity and opportunity to develop and enact self-determined skills and behaviors during the transition period is consistently associated with positive adult outcomes. For example, high SD has been associated with employment, independent living, community access, enrollment in postsecondary education, and social inclusion (Shogren, Wehmeyer, Palmer, Rifenbark, & Little, 2015). These outcomes highlight the crucial responsibility of occupational therapy practitioners to foster these skills, behaviors, and beliefs and provide opportunities to enact these skills and behaviors for transition-age youth with I/DD.

Supporting SD in transition-age youth with I/DD also helps them realize their rights throughout their lives. For example, the IDEA mandates that youth be involved in transition planning and that this process is “based on the individual [youth’s] needs, taking into account the [youth’s] strengths, preferences, and interests” (National Center on Secondary Education and Transition, 2004). Self-determined youth may be more likely to actively participate in and influence this planning process than youth who are not. Additionally, the transition process provides an opportunity to develop and bolster the youth’s SD. Advocating for one’s interests and needs during individualized education program meetings can prepare youth to advocate for their rights under other disability rights laws, such as the ADA, upon graduation.

Because identifying goals and preparing for them are critical elements of transition planning, many special education curricula focus on supporting the development of SD and providing youth with I/DD with opportunities to act self-determined (National Gateway to Self-Determination, 2012). One curriculum, the self-determined learning model of instruction, draws on the definition of SD described above and uses a “goal, plan, check” format similar to Project TEAM, in which students learn to “set a goal,” “take action,” and “adjust [their] goal or plan” (Shogren et al., 2017). Although the planning stage of this process includes a general identification of barriers, there is no explicit recognition of environmental barriers and supports to goal attainment. Project TEAM can be used to complement this curricula, and may be more appropriate for youth with I/DD who need additional support for the abstract thinking and problem solving required to optimize their fit with various environments. Table 1 on page 5 illustrates how Project TEAM’s Game Plan problem-solving process can further foster skills, behaviors, and beliefs that support SD. For example, in Plan Step 2, when youth identify a strategy that will resolve an environmental barrier to goal achievement, they use problem-solving skills and gain experience changing the environment to resolve challenges. Therefore, this step of the Game Plan supports the development of pathways thinking and control expectancy.

**Project TEAM and SEL**

SEL approaches identify five competencies that promote social and emotional development (Anderson & Grinder, 2017; Oberle, Domitrovich, Meyers, & Weissberg, 2016):

- Self-awareness: Ability to recognize one’s own thoughts, feelings, interests, and values, and how these factors affect one’s actions
- Self-management: Ability to cope with a range of emotions, thoughts, and behaviors across environments, and the ability to create personal goals
- Social awareness: Ability to engage in perspective taking, recognize social norms and nuances, and treat others with respect
- Relationship skills: Ability to initiate and maintain relationships, engage in conflict management, and work collaboratively
- Responsible decision making: Ability to recognize and analyze problems, and to demonstrate thoughtful, ethical judgment when making a decision

These competencies lead to changes in behavior and attitudes that facilitate positive outcomes in areas beyond mental health. Increases in SEL competencies have been associated with improved academic performance (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011) and positive social behavior (Taylor, Oberle, Durlak, & Weissberg, 2017). These SEL competencies could similarly facilitate the success of youth with disabilities in a wide range of participation contexts, including postsecondary education, employment, and independent liv-
ing—all of which are identified by the IDEA as key components in transition planning (Department of Education & Office of Special Education and Rehabilitation Services, 2017). These SEL competencies may be essential for navigating socially complex processes associated with requesting accommodations at work and postsecondary education (Gold et al., 2012; Marshak et al., 2010). Therefore, incorporating emotional well-being and relationship skills is a crucial component of effective programs for transition-age youth with I/DD.

Interventions that target the development of SEL competencies are especially needed to support transition-age youth with I/DD with associated behavioral and emotional challenges. Recent research indicates that SEL programs can significantly decrease negative behaviors in the classroom (e.g., disruptiveness; Motoca et al., 2014; Reinke et al., 2014). Moreover, SEL programs can decrease emotional distress such as anxiety (Durlak et al., 2011) and improve overall well-being (Taylor et al., 2017). These outcomes associated with SEL programs are particularly pertinent to youth with disabilities, considering that youth with developmental disabilities also have mental health conditions (Levy et al., 2010; Schieve et al., 2012).

Occupational therapy has a unique role to play in developing SEL competencies, especially through interventions such as Project TEAM. These competencies foster not only improved social relationships, but also overall mental health. The AOTA School Mental Health Toolkit (2015) notes the importance of promoting self-awareness and self-management strategies to support mental health, such as those incorporated in the Game Plan problem-solving processes. When occupational therapy practitioners use strengths-based approaches that help youth shift attributions of participation challenges away from personal impairments to environmental barriers, they may support the development of youths’ self-esteem, an important component of mental health. Additionally, Project TEAM can equip youth with the problem-solving strategies needed to reduce the stress experienced when they are confronted with environmental barriers to their participation (Kramer et al., 2012).

**CASE EXAMPLE**

Steven, a 20-year-old man, attended a public school’s post-graduate transition program for students with I/DD. He was in his third year of the program. In the program, he engaged in life skills activities (e.g., shopping, cooking, budgeting), community mobility training (e.g., taking public transportation to his college class), and vocational preparation (e.g., volunteering at local municipal offices, applying for jobs). He was charismatic and passionate. He expressed difficulties associated with being the target of school bullying, which had led to concerns about coping in a broad range of social situations. Steven had an affinity for sports and sports broad-
opportunities to engage in self-awareness as well as enhance his social awareness.

Plan Step 1: What parts of the environment help me or make it hard for me?
By learning to identify unique supports and barriers in his environment, Steven began to engage in self-awareness and self-realization. When reflecting on his strengths and difficulties in the group curriculum, Steven identified that he had difficulty with attention, concentrating, and managing emotions. When he thought about what made it hard for him to participate in activities, he explained, “It is fear, worry, and terror.” In response to “What parts of the environment help me or make it hard for me?” Steven identified that too much noise and unfamiliar people made him uncomfortable and decreased his willingness to engage.

Given Steven’s experience of anxiety, he tended to first focus on aspects of his environment that felt out of his control. He believed that interacting with the TV station employees (“people”) may be a barrier because it was difficult for him to know what to say in novel social situations. He thought that “rules” at the TV station to be quiet during filming may be challenging because he had a loud voice, particularly when excited. Using the Game Plan cued Steven to also consider environmental supports. He envisioned Caitlin (“people”), would be helpful because he could speak with her if he felt anxious. He hypothesized that “technology” may be a support because he could avoid talking with a stranger on the phone by arranging a visit through email. Steven reported that the Game Plan helped him consider barriers in a concrete way instead of worrying about the range of things that he might encounter; he realized that this worrying often prevented him from taking steps to achieve his goals. The Game Plan also allowed Steven to consider the positive aspects of the environment and the parts of the environment that supported his current abilities and values.

Plan Step 2: What strategy can I use to change the environment?
Steven had previously felt that challenges he experienced during participation were insurmountable because of his autism and anxiety. However, with the support of Caitlin and co-facilitators, Steven focused on how environmental barriers created challenges to his participation. He addressed what he perceived to be the most challenging issue: rules. He had several ideas of how to resolve these barriers using pathways thinking through the support of the Game Plan. First, he used the Game Plan strategy “plan ahead” to gather information about the TV station to reduce uncertainty about what may happen during his visit. He researched tour availability and shows he could see being filmed. He also role-played with a peer to practice how he would ask the TV station employee for clarification about rules during filming. Prospectively selecting strategies to overcome barriers allowed Steven to exercise SD skills associated with control expectancy and pathways thinking and the SEL competency of self-management.

Plan Step 3: Would using this strategy change the activity for other people?
Asking the question, “Would using this strategy change the activity for other people?” alerted Steven to the notion that his own personal decisions affect others. The Game Plan helped Steven consider how his use of strategies might influence whether or not other people at the TV station would have an easier or harder time participating and whether the activity would remain fun for other people. Moreover, when responding to this question, Steven used pathways thinking and self-direction to prospectively identify potential responses to challenges he might experience during participation. Considering this question before his visit also promoted responsible decision making and social awareness. This further fostered his belief that he could negotiate his environment to support his successful participation in his desired activity (control expectancy). Steven believed the following consequences would most likely result from his strategy usage: Planning for the visit rather than just showing up at the TV studio would likely contribute to an enjoyable experience for himself and Caitlin (relationship skills), and better prepare TV employees for the visit. Steven hypothesized that if he asked questions about rules (e.g., when is it OK to speak while on set?), he would be more likely to follow them, which would make work easier for the TV employees.

Do: Who do I talk to about making this change?
Steven identified three people to speak to regarding his goal: Caitlin, TV station employees, and the Project TEAM licensed professional. He felt most comfortable seeking help from Caitlin, given their relationship and ability to work cooperatively together. He also acknowledged that it was important to direct questions to people with authority—specifically, the TV station employees, even if he did not know them. Understanding to whom to direct questions and modification requests supports social awareness and relationship skills and fosters self-directed behaviors. Understanding who to talk with about needed modifications supported Steven’s sense of control expectancy. While on his outing, Steven spoke directly with the film crew to learn about TV studio rules. He also talked with the studio manager about employment in the media industry, which was one of the purposes of his visit.

Check: Can I do this activity now?
Steven believed he successfully planned and participated in his goal of touring a TV station. On arriving to the studio, Steven spoke with the front desk receptionist to provide his name and reservation for a tour. During the visit, he observed a show being filmed and also requested to see the control room. While in the
control room, he told the TV station employees that he intended to be the first sports broadcaster with autism. He received overwhelmingly positive responses to this goal. At the end of the outing, Steven asked himself, “Am I able to do this activity now?” This step of the Game Plan promoted self-regulation and self-management by prompting Steven to consider whether his plan had worked or whether he would need to revise it in the future. He reported that he felt happy with the way he did the activity, noting that planning ahead helped him to cope more effectively with environmental barriers (e.g., self-management).

The positive self-appraisal and feedback from others throughout Steven’s experience reinforced his belief that he had the ability to cope with new experiences and related environmental barriers. Moreover, his experience using pathways thinking to successfully develop and execute his plan fostered his overall sense of control expectancy. His mother noted that Steven’s relationship skills dramatically improved through the blossoming friendship with Caitlin, who was someone with whom he may not have initiated a friendship in the past because of her disability. This friendship also helped Steven develop a more positive self-awareness about his own disability.

REFERENCES


Department of Education & Office of Special Education and Rehabilitation Services. (2017). A transition guide to postsecondary education and employ-


### Final Exam

**Article Code CEA0118**

**Project TEAM: Transition-age Youth With Intellectual and Developmental Disabilities Problem-Solve Environmental Barriers to Participation**

**January 2018**

**To receive CE credit, exam must be completed by January 31, 2020**

**Learning Level:** Intermediate

**Target Audience:** Occupational therapists and occupational therapy assistants

**Content Focus:** Domain of OT: Context and Environment Process of OT: Intervention

1. **Youth with intellectual and developmental disabilities (I/DD) report fewer opportunities to identify and request accommodations compared with youth with other disabilities (e.g., physical, sensory disabilities).**
   - A. True
   - B. False

2. **Which best describes the primary difference between how transition-age youth with I/DD can access their rights under IDEA versus the ADA?**
   - A. The IDEA requires schools to accommodate people with disabilities, but the ADA does not require that people with disabilities receive accommodations.
   - B. The IDEA requires students to advocate during transition planning, and the ADA requires individuals to advocate for their rights.
   - C. Under the IDEA, schools have primary responsibility for identifying and accommodating students with disabilities up until age 22. Under the ADA, individuals with disabilities must initiate requests for accommodations and access.
   - D. The IDEA only applies to people with disabilities under the age of 22, and the ADA only applies to people with disabilities over the age of 22.
3. Which of the following reflects a “social model” approach to addressing participation restrictions?
   A. Provide strengthening exercises so youth who use mobility devices (e.g., wheelchairs, walkers) can engage in more sports activities.
   B. Hold a social skills group so youth with autism can learn how to initiate social conversations appropriately with peers.
   C. Practice self-care skills so youth experience less stigma when engaging in the community.
   D. Provide inclusion training to a city recreational department and suggest program modifications that increase access for youth with physical and cognitive disabilities.

4. What are the three components of Project TEAM?
   A. Individualized goal setting, group curriculum, community-based trip
   B. Group curriculum, the Game Plan, community-based trip
   C. Individualized goal setting, group curriculum, the Game Plan
   D. Group curriculum, peer mentoring, community-based trip

5. How does shifting youth’s attributions of participation challenges from personal impairments to environmental barriers support mental health?
   A. It can support self-awareness.
   B. It can support self-esteem.
   C. It can lead to self-advocacy.
   D. It can increase social isolation.

6. Project TEAM uses a structured problem-solving approach to help transition-age youth with I/DD identify and resolve environmental barriers to participation. What are the steps of this approach?
   A. Set a goal, take action, adjust the plan or goal.
   B. Goal, plan, do, check.
   C. Self-awareness, pathways thinking, self-monitor.
   D. Set a goal, plan, take action, self-monitor.

7. Which is not a justification for the group curriculum and peer mentoring approach incorporated in Project TEAM?
   A. Reduce social isolation and provide opportunities to build relationships.
   B. Problem-solve environmental barriers with peers who have similar experiences or learn from peers who successfully resolved similar problems.
   C. Create a safe environment in which youth feel comfortable discussing frustrating experiences and taking risks.
   D. Increase efficiency and cost effectiveness when providing the intervention to multiple youth.

8. Which of the following is not an example of self-determined actions and behaviors developed by using the Game Plan?
   A. Youth select and work toward a goal that matches their interests.
   B. Youth learn to use socially appropriate behaviors when interacting with others.
   C. Youth identify modification strategies that may work best for them, given their unique strengths and limitations, and the environmental barrier encountered.
   D. Youth use a systematic problem-solving approach to take steps to achieve their goal, and resolve barriers to their goals.

9. Project TEAM’s group curriculum begins by helping transition-age youth with I/DD identify their strengths and limitations. Given these unique strengths and limitations, the environment may pose barriers or supports. When transition-age youth complete this process, what social-emotional learning competency is developed?
   A. Self-management
   B. Social awareness
   C. Self-awareness
   D. Responsible decision making

10. When the Game Plan helps transition-age youth with I/DD consider how their choices to modify or respond to environment barriers may affect others, which social-emotional learning competency is fostered?
    A. Self-management
    B. Relationships skills
    C. Self-awareness
    D. Responsible decision making

11. What is the primary purpose of Project TEAM’s community-based trip?
    A. Apply concepts from Project TEAM and the Game Plan to real-life experiences.
    B. Expose community members to the Game Plan problem-solving approach and transition-age youth with I/DD.
    C. Identify modifications that may benefit other people with disabilities.
    D. Build vocational skills or clarify vocational interests.

12. What is an example of pathways thinking fostered by Project TEAM?
    A. Working with a facilitator and a peer mentor to select a goal that matches one’s interest.
    B. Using the Game Plan problem-solving process to identify environmental barriers, generate strategies to resolve those barriers, and determine the effect of the strategies on others.
    C. Learning about the Game Plan during the group curriculum sessions.
    D. Determining whether one was able to meet their goal.