



Considerations in Vocational Training for Individuals with an Autism Spectrum Disorder

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Learning Objectives

- To increase participant knowledge of...
 - characteristics of individuals with autism spectrum disorders (ASD) and learning styles.
 - considerations in vocational training of individuals with ASD.
 - strategies to enhance vocational training to improve outcomes.

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A brief overview of.....

AUTISM SPECTRUM DISORDERS

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Autism Spectrum Disorders

- Refers to a group of *neurodevelopmental* disorders characterized by...
 - Social impairments
 - Communication impairments
 - Restrictive, repetitive, & stereotyped behaviors & interests
- Lifelong impairment for many.
 - Wide variability in development and symptoms.
 - Difficult to predict needs across the lifespan.

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Autism Spectrum Disorders

- High rate of co-occurring disorders.
 - Cognitive & neurocognitive.
 - Emotional & behavioral (anxiety/depression).
 - Medical (e.g., seizure, GI, sleep).
 - Sensory-motor.
- Significant impairments in functional life skills....
 - all areas of personal and social self-sufficiency needed for employment and independent adult living.

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Autism Spectrum Disorder

- ASD and related delays and impairments can affect...
 - expectations for learning.
 - participation and engagement in learning.
 - opportunity for learning.

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IMPLICATIONS

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Implications

- Goal of vocational training....

EMPLOYMENT

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Implications

- 50-75% of ASD unemployed.
 - 121% increase in Vocational Rehabilitation services in past 5 years.
 - Generic services
 - Costly
 - Many denied services due to severity of disorder.
- Many underemployed.
- Often experience job instability.
 - Social, behavioral and mental health problems.
- Often earn less than peers, even compared to other disability groups.

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Implications

- Several reasons often cited for employment outcomes...
 - ASD and related impairments.
 - Less than effective transition preparation.
 - Less than effective vocational preparation.

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ASD & Related Impairments

- | Social | Possible Affect |
|--|---|
| <ul style="list-style-type: none">• Non-verbal behaviors<ul style="list-style-type: none">– Eye contact– Gestures– Body position• Social interest<ul style="list-style-type: none">– Some may have little interest in others and their activities– Some may be overly interested in other's activities• Social & emotional reciprocity<ul style="list-style-type: none">– Social understanding– Perspective taking | <ul style="list-style-type: none">• May appear odd, aloof, and/or unsocial.• May not establish cooperative working relationships<ul style="list-style-type: none">– "Difficult to work with"• Viewed as too direct.• May be unaware when behavior is perceived as offensive.• May not recognize/follow organizational policy/procedure without direct instruction.• Not motivated by social factors. |

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ASD & Related Impairments

- | Communication | Possible Affect |
|---|--|
| <ul style="list-style-type: none">• Limited functional communication• Poor conversational skills• Unusual or repetitive language or vocalization• Limited social or leisure skills | <ul style="list-style-type: none">• May not communicate support needs or need for assistance.• May not bring issues or ideas to supervisor or project team.• May exhibit vocal behavior that is hard for others to understand or is disruptive.• May not communicate with co-workers when needed—may not initiate.• May not engage in appropriate behavior during 'down time' or 'break time.' |

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ASD & Related Impairments

Repetitive Behavior

- Repetitive and restrictive patterns of behavior and/or interests.
- Routines and rituals.
- Stereotypic motor movements.
- Preoccupied with parts of objects.

Possible Affect

- Behaviors may interfere with task initiation and completion.
- Interruption of rituals/routines may cause personal distress and behavior problems.
- May have difficulty with object use due to over focus on parts of objects.

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ASD & Related Impairments

Neurocognitive

- Intellectual Disability.
- Memory impairments.
- Executive function.
- Information processing.

Possible Affect

- Difficulty listening to and understanding directions.
- Difficulty remembering multi-step directions.
- Difficulty organizing multiple pieces of information.
- Difficulty initiating & completing tasks.
- Difficulty planning out scope of work.
 - Time management
- Difficulty with learning new tasks.

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ASD & Related Impairments

Neurocognitive

- Intellectual Disability.
- Memory impairments.
- Executive function.
- Information processing.

Possible Affect

- May not take in all the information presented.
- May miss relevant stimuli or stimulus characteristics because of over focus on irrelevant stimulus components.

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ASD & Related Impairments

Emotional & Behavioral

- Anxiety
- Mood
- ADHD
- Oppositional Defiant
- Adjustment Disorders

Possible Affect

- Low motivation.
- Low frustration tolerance.
- Poor coping skills.
- Poor problem-solving skills.
- Easily stressed.
- Self-injury.
- Explosive.
- Agitation.

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ASD & Related Impairments

Adaptive Skills

- All areas of independent living.
 - Personal
 - Domestic
 - Social
 - Leisure
 - Community

Possible Affect

- Poor 'work survival skills'
- Poor/less than adequate grooming.
- Poor/less than adequate hygiene.

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Transition Preparation

- Inadequate or less than effective transition preparation....
 - Lack of evidence-based transition guidelines for ASD.
 - Personnel may lack of knowledge of ASD and how to modify transition practices to improve outcome.
 - Current models may not be most effective for ASD.
 - Limited opportunity to develop essential employment skills.
 - Professional, parent, and/or student may not be knowledgeable of strategies and/or resources to assist in vocational preparation.

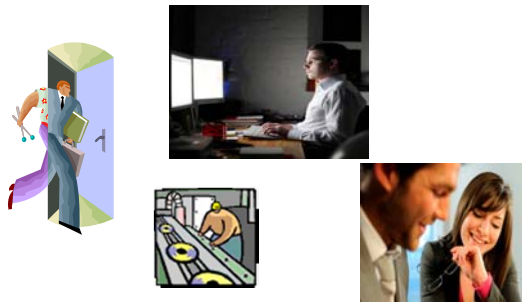
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Vocational Training

- Insufficient capacity in state/regional vocational rehabilitation services.
 - Limited personnel to meet need.
 - Personnel may lack knowledge of current recommendations for ASD vocational preparation practices.
 - Student, parent, and/or personnel not knowledge of resources to assist in vocational preparation.
 - Reduced opportunity to develop skills.

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ASD & Employment



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Considerations in Vocational Training for ASD

Considerations

- May require enhanced transition preparation.
 - Begin early and focus on increasing student participation and engagement.
 - Reduce barriers.
 - Develop, implement and evaluate comprehensive preparation plan.
 - Ensure multiple opportunities for learning and use of evidenced-based instructional methods.
 - Professional development and parent education and training.

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Considerations

- May require enhanced vocational training practices....
 - Ecological Model.
 - Accommodations to reduce barriers to participation & supports to increase engagement and learning.
 - Professional development.
 - ASD and evidenced-based training methods.
 - Comprehensive training plan.
 - Needed skills using evidence-based methods.
 - Multiple opportunities for learning.
 - Progress monitoring and team meetings for planning & problem-solving.

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Ecological Model



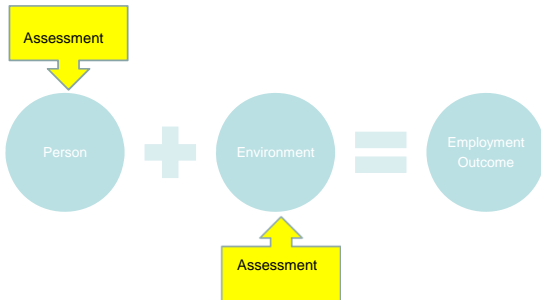
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Considerations

- Descriptive/clinical reports recommend the following.....
 - Ecological Assessment
 - Identify interests, preferences, and barriers to participation in training.
 - Comprehensive Training Plan
 - Learning objectives.
 - Structured Training Environment-accommodations & supports.
 - Evidence-based instructional methods & multiple opportunities for learning skills.
 - Progress Monitoring
 - On-going problem-solving and plan adjustment

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Ecological Assessment



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Ecological Assessment

- | Person | Environment |
|---|---|
| <ul style="list-style-type: none"> • Autism Spectrum Disorder. • Cognitive profile. • Adaptive Skills. • Social & Communication. • Mental Health Status. • Vocational Interests & Skill Set: <ul style="list-style-type: none"> – Preference Assessment – Situational Assessment | <ul style="list-style-type: none"> • Contextual assessment <ul style="list-style-type: none"> – Identify barriers & needed accommodations and supports. – Identify skills needed for each context. • Job analysis <ul style="list-style-type: none"> – Identify specific skills needed to complete task. |

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Comprehensive Training Plan

- Training Objectives.
 - Specify work tasks & job related survival skills.
- Specify accommodations & supports needed.
 - To increase participation and engagement in learning.
- Specify instructional methods.
 - Use methods demonstrated to be effective in teaching individuals with ASD.
- Specify the training format.
 - When, where, who, how often etc.

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Training Objectives

- State in objective and measurable terms.
 - Work Task Skills.
 - Task analysis, based on assessment data.
 - Job Related Skills.
 - Use assessment data to identify social, communication and behavior regulation skills needed.
 - Establish benchmark performance criteria for each task and job related skill you are targeting.

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Accommodations & Supports

- Structure the work training environment.
 - Physical lay out should support task initiation and completion.
 - Activity Schedule/Task Lists posted.
 - All materials available.
 - Social-communication support available and visual supports posted.
 - Expectations posted (where appropriate).
 - Support personnel contact name and number.

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Accommodations & Supports

- Scheduling systems.
 - Daily Schedule.
 - Depicts work training activities for the day and other relevant activities.
 - Can build in scheduled breaks to maximize participation.
 - Format based on developmental levels.
 - Post in appropriate location(s).

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Accommodations & Supports

- Scheduling systems (cont.).
 - Activity Schedule/Task List (for work tasks).
 - Should align with task analysis.
 - Format based on developmental levels.
 - Post where training is occurring.

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Accommodations & Supports

- Social-Communication Supports.
 - Joint Action Routines.
 - Identify and create opportunities for social-communication to occur during work routines.
 - Place visual prompts into Activity Schedule(s)/Task List(s).
 - Social and communication scripts.
 - Communication needed for work task(s) & setting.
 - Complexity based on developmental levels.

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Accommodations & Supports

- Social-Communication Supports (cont.).
 - Social Stories & Social Skill Stories.
 - Provides description of relevant work environment and social expectations.
 - Embed scripts into story to prompt for understanding when skills will be needed.
 - Incidental teaching methods.
 - Model-prompt/coach-error correct-reinforce.
 - Choice or Leisure Board.
 - Visual depiction of activities for downtime.

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Accommodations & Supports

- Behavior Supports.
 - Clear behavioral expectations (work rules).
 - Post and review regularly.
 - Reinforcement system(s).
 - Contingency Management.
 - Specify work rule and consequence for meeting/not meeting the rule/expectation.
 - Differential reinforcement schedules.
 - Reinforce appropriate work behaviors.

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Common Training Methods

- Task Analysis.
 - Break task down into steps.
 - Number of steps should be based on individual developmental ability.
 - Use assessment data.
- Chaining.
 - Forward
 - Backward
 - Full task presentation

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Common Training Methods

- Prompting & Fading.
 - Most to least
 - New skill
 - Least to most
 - Acquired skill
 - Shadowing & graduated guidance
 - Acquired skills & maintenance.
- Direct Instruction & Coaching
 - On-site and/or simulation.
 - Instruct-model-rehearse-error correct/reinforce.

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Training Format

- Location
 - On-site and/or simulation.
 - For simulation training, include common stimuli in training format.
- Trainer(s)
 - Specify who will train what skills.
- Frequency & Duration.
 - Specify when and how often training will occur and for how long.

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Progress Monitoring

- Formalized data collection system.
 - Method(s) and frequency based on the individual's rate of learning.
- Team meetings.
 - Regular schedule to review data.
 - Planning for additional training needs identified by data.
 - Problem-solving for learning and other problems.

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PUTTING IT ALL TOGETHER

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ASD & Vocational Training: *Summary*

- Poor adult employment outcomes.
 - Nature of ASD and related impairments.
 - Current transition and vocational training practices.
 - Lack of evidence-based guidelines.
 - Less than adequate capacity.
- Require consideration for enhancing current practice based on guidance from the field.

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Resources

- Alpine Learning Group.
 - Download a free copy of their supported employment guide.
 - <http://www.alpinelearninggroup.org/>
- Missouri Disability Policy & Studies.
 - Download a free copy of their Adult Autism & Employment guide.
 - <http://dps.missouri.edu/Autism.html>

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Resources

- Autism Speaks
 - Multiple resources including a Transition Toolkit, Visual Supports, & an Autism Apps listing.
 - <http://www.autismspeaks.org/>
- Organization for Autism Research
 - Multiple resources including a Guide to Transition.
 - <http://www.researchautism.org/>

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Resources

- Geneva Center
 - Various tip sheets for visual supports and choice board (see Visual Aids Gallery).
 - <http://www.autism.net/>
- Rochester Regional Center for Autism
 - Training DVD for Schedules & Direct Instruction for Social Skills.
 - Various links to other resources.
 - <http://www.urmc.rochester.edu/childrens-hospital/developmental-disabilities/RRCASD.aspx>

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Question & Answer

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