Task Analysis

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ATM4RC

AUTISM TRAINING MODULES FOR REHABILITATION COUNSELING

DEPARTMENT OF EDUCATION · UNITED STATES OF AMERICA

EMPORIA STATE UNIVERSITY

Module Objectives

By the end of this module, participants will be able to:

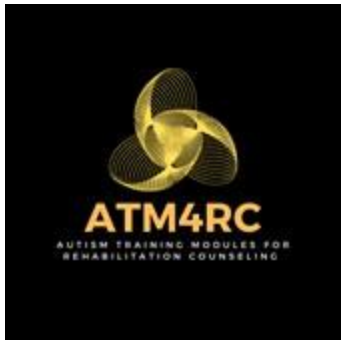
1. Define Sensory Task Analysis
2. Identify where Task Analysis is applicable in your work
3. Identify which other Evidence Based Practices may be used with Task Analysis
4. Complete a task analysis of a selected job skill

Task Analysis Introduction (1 of 2)

- Task analysis is a process of dividing a task into component steps
- It can be utilized to
  - teach new skills
  - to evaluate performance on individual parts of the overall skill

(National Professional Development Center on ASD, NAPDASD, 2015; Sam & AFIRM team, 2015; Szidon & Franzone, 2009; Virginia Commonwealth University, VCU, 2015)

Task Analysis Introduction (2 of 2)



- Task Analysis can be completed by
  - Watching someone else that is proficient do the task
  - Doing the task yourself (the provider)
  - Engaging an expert in the task in developing steps

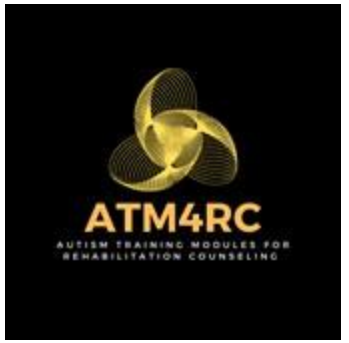
(National Professional Development Center on ASD, NAPDASD, 2015; Sam & AFIRM team, 2015; Szidon & Franzone, 2009; Virginia Commonwealth University, VCU, 2015)

Task Analysis and other EBPs

- Visual supports can be developed from task analysis
  - Each step becomes an image on a visual support system
- Specific Prompts can be tailored based on the component steps identified
- Reinforcement timing may be influenced by task analysis
- Video modeling and modeling can also be used with task analysis, modeling each step individually
- Peer mediated instruction and intervention may also be used in on the job training

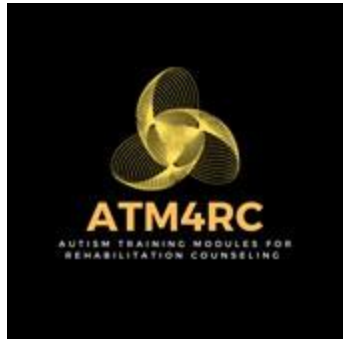
(NAPDASD, 2015; Sam & AFIRM team, 2015; Szidon & Franzone, 2009; VCU, 2015)

Task Analysis: An Evidence-Based Practice for Persons with Autism



- Based upon the 2023 updated review (Steinbrenner, et al.), task analysis has been studied and shown effective for ages 12 to 22 in Vocational settings.
- Bennet, Ramasamy, and Honsberger (2014) assessed the effectiveness of Covert Audio Coaching (CAC), a type of Task Analysis (and prompting) to teach clerical skills- they found improvement in photo-coping skills in study participants
  - For more on their study, read https://worksupport.com/research/documents/pdf/2013_BennettAudioCoahingASD.pdf

Writing a “Good” Task Analysis



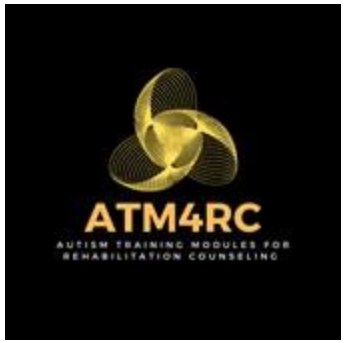
- Virginia Commonwealth University (2015) recommends

the following steps for creating a “good” task analysis:

1. State steps in terms of observable behaviors.
2. Test the task analysis to ensure that each step results in a visible change in the task or process.
3. Write steps in adequate detail with only one behavior per step.
4. Consider efficiency; use both hands with the least amount of movement.
5. Phrase steps as verbal cues.
6. Build natural cues and [artificial cues] into the task analysis.
7. [Build] quality [standards] into the steps of the task.

(VCU, 2015, 1-2)

Writing a “Good” Task Analysis



- Read: https://worksupport.com/documents/Using_Task_Analysis_for_Instruction11.pdf (VCU, 2015)

- View: https://www.youtube.com/watch?v=QuVNyuVOBi8 (Pastore, 2022)

Task Analysis: Making Photocopies

Excerpted from Bennet, Ramasamy, and Honsberger (2013, p. 587)

1. Open folder
2. Take the original from the folder
3. Place the original in the copy feeder
4. Press the reset button
5. Enter the number of copies to be made
6. Press the start button
7. Take the originals from the machine and place them in the folder
8. Take the copies from the machine and place them in the folder
9. Press the reset button
10. Put the folder

Task Analysis: Setting the Table

Excerpted from Goodson, Sigafoos, O'Reilly, Cannella, and Lancioni (2006) as cited in Szidon and Franzone (2009, p. 4 and 5)

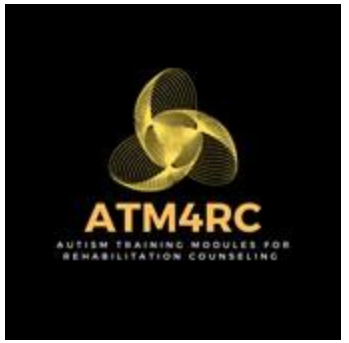
1. Puts down the placemat
2. Places the largest plate in the center of placemat
3. Puts the smaller plate in the upper left-hand side of the placemat
4. Puts butter knife on the small plate
5. Places the napkin to the left of the large plate
6. Puts the knife and spoon to the right of the large plate
7. Puts the fork to the left of the large plate on the napkin
8. Puts the dessert spoon and fork horizontally at the top of the large plate
9. Puts the glass to the upper right of the large plate near the tip of the knife

Three Task Analysis Procedures for Teaching Skills (1 of 3)

- Forward Chaining
  - Begin teaching skills with first step, when that step is mastered continue one by one until all steps are mastered.
  - Provide reinforcement after each successful step.
  - Example https://www.youtube.com/watch?v=WclsgR3KH3w

(NAPDASD, 2015)

Three Task Analysis Procedures for Teaching Skills (2 of 3)



Backward Chaining

- Begin teaching skills with last step (instructor completes all but last step and individual then does that step), when that step is mastered continue one by one backward until all steps are mastered.
- Example https://www.youtube.com/watch?v=eFsMMLl6C1k
- Provide reinforcement after each successful step.

(NAPDASD, 2015)

Three Task Analysis Procedures for Teaching Skills (3 of 3)

- Total Task Presentation
  - Do each step in sequence, reinforcing after each step, using most desirable reinforcer for last step.
  - Example https://www.youtube.com/watch?v=6cUZwRU4cxI (NAPDASD, 2015)

- As stated in prompting module, avoid hand over hand/physical prompting whenever possible due to touch sensitivity in many with autism. Never attempt physical intervention before explaining to individual you serve and obtaining affirmative consent.

Implementation Steps

Plan	Use	Monitor
• Identify target skills	• Determine chaining procedure, prompts, reinforcers and other relevant EBPs	• Collect Data on chaining/task analysis
• Create task analysis	• Begin instruction through chaining and follow procedure	• Adjust procedures an add steps as needed
• Collect baseline data/assess client existing skills	• Fade prompting as soon as possible	• Determine next steps

(Sam, A., & AFIRM Team, 2015; Szidon & Franzone, 2009)

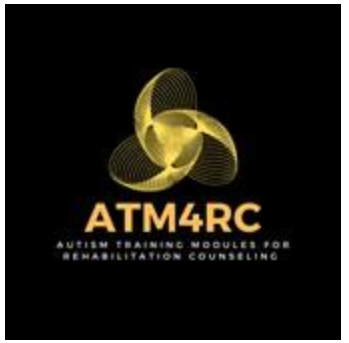
Implementation Steps

- Review the Task Analysis Step by Step Guide from AFIRM (2015)
  - https://afirm.fpg.unc.edu/sites/afirm.fpg.unc.edu/files/imce/resources/TA%20Step-by-Step.pdf
- Review The Task Analysis Steps for Implementation from Szidon and Franzone (2009)
  - https://autismpdc.fpg.unc.edu/sites/autismpdc.fpg.unc.edu/files/TaskAnalyis_Steps_0.pdf

Data Collection Chart

Goal or Task	Type of and # Prompt	Other EBPs used	Successful

Task Analysis Activity



Directions:

1. Select one of your clients for whom you think would benefit from task analysis and chaining.
2. Identify a work task that client has to/had to learn.
3. Complete a task analysis for that task with one of the methods discussed on slide 4.
4. Consider the client's baseline skills, do they have the component skills to learn the task? If not, are there other tasks you need to develop first?
5. Determine which type of chaining, reinforcers and any other EBPs you will use in conjunction in instruction.
6. Create a plan detailing how you would complete the process with your client.

References (1 of 4)

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- National Autistic Society. (2020). Visual supports for autistic people. https://inspire.org.mt/wp-content/uploads/2020/04/visual-supports.pdf
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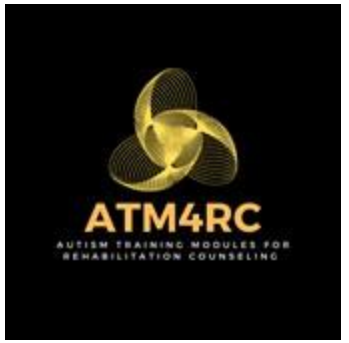

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- Szidon, K., & Franzone, E. (2009). Task Analysis. Madison, WI: National Professional Development Center on Autism Spectrum Disorders, Waisman Center, University of Wisconsin. https://autismpdc.fpg.unc.edu/sites/autismpdc.fpg.unc.edu/files/TaskAnalysis_Steps_0.pdf

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- Virginia Commonwealth University (2015). Autism q & a: Using task analysis for instruciton. Autism Practice Brief. https://worksupport.com/documents/Using%5FTask%5FAnalysis%5Ffor%5FInstruction11.pdf

Additional Resources: AFIRM

Autism Focused Intervention Resources & Modules (AFIRM) Task Analysis

https://afirm.fpg.unc.edu/task-analysis

Additional Resources: Websites

- Virginia Commonwealth University https://vcuautismcenter.org/resources/factsheets/content.cfm/1018
- Occupational Therapy Task Analysis: A Simplified Guide https://learningforapurpose.com/occupational-therapy-task-analysis-2/

Additional Resources: Apps

The following apps have preloaded task analyses or allow for creation of task analyses and can be used to teach skills

- Task Analysis Life
  - http://clemsonlife.org/TaskAnalysis/
- TaskAbile
  - https://play.google.com/store/apps/details?id=it.task.abile&hl=en_US&pli=1