

Autism Practice Brief

Autism Q&A: Using a Task Analysis for Instruction

Designing an instructional program to teach a student with Autism Spectrum Disorder (ASD) a new skill includes selecting an instructional strategy, reinforcement procedures, and data collection that will be used. In addition, the teacher will need a task analysis of the skill to collect data and ensure that instruction is provided systematically. A task analysis is basically a list of the steps that a student must perform in sequence for the skill or task to be completed successfully. For students with autism, a task analysis will be one of the most valuable strategies in the educator's tool box. Students with autism often need complex skills broken into small, learnable steps and a task analysis is the strategy needed to do this. A task analysis can be used to teach virtually any skill including self-help, academic, social, and communication skills.

QUESTION: How does the teacher develop a Task Analysis?

ANSWER:

The best way to develop a task analysis is to perform the skill and write down the steps that are involved as the task is completed. Each step in the task analysis should consist of one discrete "behavior." After the step is completed, a visible change in the task or skill should be observed. Writing a task analysis requires knowing the student's skills and abilities. Usually, it is best to customize or individualize a task analysis to each student who is learning the skill. In addition, there are a number of "tips" for writing a task analysis that might facilitate skill acquisition. Some of these tips are presented in this Autism Q and A.

QUESTION: How many steps should be in a Task Analysis?

ANSWER:

The number of steps in a task analysis will depend on how complicated the skill is that the student is to learn. For instance, the number of steps in a task analysis for opening a door may be less than a task analysis for learning how to play a computer game. In addition, the abilities of each student will impact the number of steps needed to teach a skill. A student with more intensive support needs may need to have a task broken down into smaller steps.

The teacher may not know when first developing the task analysis how many steps are needed. Collecting data during instruction can provide information on whether the number of steps is adequate or if the task needs to be broken down further. The data can pinpoint

where the student is having difficulty learning specific steps in the task. Once identified, a step can be divided into smaller component steps to better facilitate skill acquisition.

For instance, a student may be learning to purchase a snack at the snack bar. One of the steps in the task might be, "get your change." During the course of instruction, the data collected shows that the student always needs the most intrusive prompt to complete this step in the task. In which case, the step may be broken down into smaller component steps such as 1) reach in your back pocket, 2) take out your coin purse, 3) open the purse, 4) select two quarters.

QUESTION: How can the use of a Task Analysis prevent students from developing error patterns of performance?

ANSWER:

A task analysis provides structure ensuring that the skill is taught the same way each time the student engages in the activity or task. Without a task analysis, different instructors, such as the teacher or paraprofessional, may have two very different ways to break down a skill into its component steps. This can create confusion for the student when different instructors train him or her to complete the skill in slightly different ways. Requiring the student to perform the task in the same way each time can provide the consistency that is needed for skill acquisition.

In addition, the student should be required to perform the task when it is being learned exactly as the steps are written. If a step is not completed correctly, the teacher needs to provide instruction as specified in the instructional program. It may be tempting to accept an approximation of the step if the student performs without prompting. However, the student may then learn the error rather than the correct way of completing the step. If the student is performing a step more efficiently or effectively than as written, the task analysis can be modified to match the student's abilities. This task analysis then becomes the one that is used for instruction.

QUESTION: Are there any tips on how to write a "good" Task Analysis?

ANSWER:

There are a number of tips for writing task analyses that can facilitate learning. Some of these may seem obvious but if a teacher or paraprofessional is unfamiliar with writing a task analysis, this

information may be useful. These tips follow as well as additional detail for clarification.

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. Word steps as verbal cues.
6. Build natural cues and compensatory strategies into the task analysis.
7. Eliminate discrimination by building quality judgments into the steps of the task.

State steps in terms of observable behaviors.

Writing steps in terms of observable behaviors is critical to the development of a good task analysis. The student must do something that can be seen by the teacher or paraprofessional in order for a visible change in the completion of the task to occur. As an example, the teacher is developing a task analysis for the student to leave the cafeteria and go to class, which includes finding an empty seat in the room. The teacher includes a step in the task such as, “look for an empty seat.” However, this step may be a very difficult one to observe or see if the student is actually scanning the room for an empty seat. While the student may turn his head, he could be looking at anything in the classroom. A better option for this step might be, “walk to an empty seat.” Testing the task analysis will assist the teacher in determining if there are steps in the task that do not result in a visible change in the task or process that can be easily observed.

Consider efficiency; use both hands with the least amount of movement.

When writing a task analysis, consider if using both hands will result in the task being completed more efficiently and quickly. For instance, a student is putting away toys after a leisure time activity. The task could be completed by picking up one toy at a time using only one hand. However, if the toys are small, the student could pick up a toy in each hand and place them into the storage area completing the task more efficiently. Picking up one toy at a time would lengthen the amount of time that it takes to complete the task as well as require more physical effort than using both hands simultaneously.

Word steps as verbal cues.

Writing steps as verbal cues can assist with providing consistent prompting during instruction. In other words, the teacher uses the wording for the step as the verbal prompt. This is particularly useful if a system of least prompts is being used as the instructional strategy. Please refer to the ACE Q and A on using least prompts for instruction that can be located on the ACE website for additional information on least to most prompts. In addition, teachers should try to keep the verbal cues as short and concise as possible. Students who have difficulty with comprehending language or attending

to the teacher may respond better to short concise verbal cues. Long verbal cues as steps may be confusing and actually slow down progress rather than facilitate learning. In addition, the longer the verbal instruction, the more likely that more than one observable behavior is being included in a step.

Build natural cues and compensatory strategies into the task analysis.

Students with ASD may not attend to the cues that are part of a task such as the beeping on a PDA that alerts the student it is time for class. These cues should be part of the task analysis so that instruction is provided, and the student learns to attend to the cues as he or she learns to perform the skill. This is true for any added cues or compensatory strategies that are given to a student to assist in skill acquisition. For instance, if color cues are added to an activity, then the task analysis needs to include steps that alert the student to attend to the added cues.

Eliminate discrimination by building quality judgments into the steps of the task.

Completing a task to a specific quality standard may also be difficult for some students to learn. For instance, the student is learning how to brush her teeth but does not really know how to complete the task so that the end result is clean teeth. Using this example, the steps in the task analysis could be written so that if completed successfully, the student’s teeth are clean to a quality standard. This might involve teaching the student a specific pattern of brushing each area of her mouth. In this instance, it is very important to make sure that the student is completing the task as written. As previously mentioned, it may be tempting to accept an approximation of the steps in the task analysis, but this does not result in successful completion of the activity.

SUMMARY

A task analysis is one tool or component of an instructional program. The teacher also needs to identify a prompting procedure that is used along with the task analysis to provide instruction. The task analysis also can be used to collect data on the student’s performance in order for the teacher to know when he or she has reached skill acquisition. Please refer to other resources available on the VCU-ACE website regarding instructional programming.

ADDITIONAL RESOURCES

- Autism Q and A: Designing Instructional Programs for Skill Acquisition
- Autism Q and A: Using Prompts to Promote Skill Acquisition
- Autism Q and A: Using a Least to Most Prompts Teaching Strategy

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