

Systematic Instruction: Task Analysis, Task Design, and Strategies to Teach to Independence

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TWO YEARS OF
ONE TO ONE
SUPPORT

236 HOURS OF
SUPPORT

HOW DO YOU
SOLVE A \$17,760
PROBLEM?

6 HOURS = \$450

SYSTEMATIC INSTRUCTION AND LONG TERM SUPPORTS

- **Task Analysis Thinking**
- **Task Design**
- **Teaching Strategies**
- **Tools for long term supports**



Task analysis is the process of breaking down a task into smaller, more manageable components

Szidon, K., & Franzone, E. (2009). Task Analysis. Madison, WI: National Professional Development Center on Autism Spectrum Disorders, Waisman Center, University of Wisconsin.

When have you
used this?

THE CHECKLIST MANIFESTO

HOW TO GET THINGS RIGHT





Cues

Steps

- 20
- 19
- 18
- 17
- 16
- 15
- 14
- 13
- 12
- 11
- 10
- 9
- 8
- 7
- 6
- 5
- 4
- 3
- 2
- 1

step /step/:

An action that one does to complete a task or a link of a skill chain

INSERT VIDEO HERE

step

Call out name of coffee or customer

place cup on bar

immediately pour coffee onto hot water in cup

push stop on both timer and coffee machine

run machine until timer shows 30- seconds

at same time, push timer and coffee machine ON

put Porto filter on machine

use tamper to give one push into coffee grounds in Porto filter

turn grinder on and hold filter until machine stops

hold Porto filter under grinding machine spout

turn coffee machine on, cycle hot water

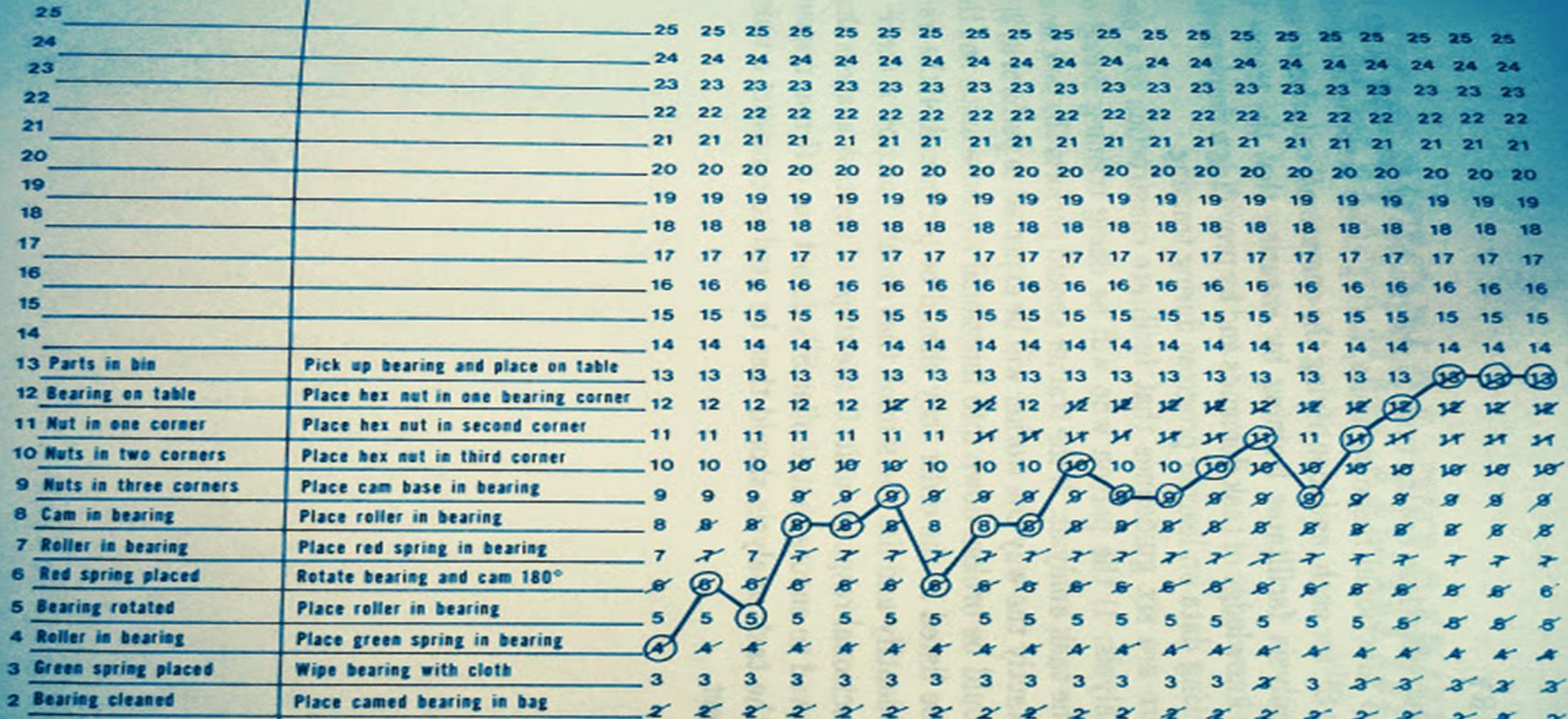
Empty and clean Porto filter

Fill cup with hot water, put next to coffee machine

cue /kyōō/:

A signal to a performer to begin an action, a hint or indication about how to behave in a particular interaction, or a reminder to do something.

number	cue	step
13	Customer takes coffee	Call out name of coffee or customer
12	coffee is ready, waiting for customer	place cup on bar
11	crème on coffee	immediately pour coffee onto hot water in cup
10	timer stops, coffee stops	push stop on both timer and coffee machine
9	coffee shot full, timer says 30- seconds	run machine until timer shows 30- seconds
8	timer is counting, coffee is dripping	at same time, push timer and coffee machine ON
7	machine set and ready for operation	put Porto filter on machine
6	no loose grounds	use tamper to give one push into coffee grounds in Porto filter
5	grinder stops, Porto filter full	turn grinder on and hold filter until machine stops
4	Porto filter, empty and clean, under spout	hold Porto filter under grinding machine spout
3	water is running through machine	turn coffee machine on, cycle hot water
2	Clean Porto filter in hand	Empty and clean Porto filter
1	Cup filled, next to coffee	Fill cup with hot water, put next to coffee machine
	Customer orders coffee	



The Task Analysis: Self graphing magic!



Task Design Considerations

When do we start
considering Task
Design?



The Purpose of Task Design: To determine the most appropriate way for the learner to complete the task

-Teri Johnson

Purpose of Task Design: Determining the most appropriate method for completing task

“Most appropriate” will depend

- What is current design? Has work been standardized?
- Changes to accommodate physical ease and efficiency?
- Designed to support learning and independence?
- Opportunity to determine performance standards: What are expectations for accuracy, productivity, conduct?

Performance standards establish clear expectations

- **Identified tasks are completed on time and accurately?**
- **With level of supervision as agreed upon; including reasonable accommodation ?**
- **While maintaining Service Standards / Code of Conduct**

CAUTION: Avoid setting higher standard – look closely at the workplace culture.

A large, translucent jellyfish with a prominent, rounded bell and numerous long, thin, reddish-brown tentacles is shown swimming in clear blue water. The jellyfish is illuminated from above, creating a bright, glowing effect. The background is a deep, clear blue, suggesting an underwater environment. The jellyfish's body is semi-transparent, revealing internal structures. The tentacles are long and delicate, extending downwards and outwards. The overall scene is serene and captures the graceful movement of the jellyfish in its natural habitat.

WHAT ABOUT
SENSORY ISSUES?

Research:

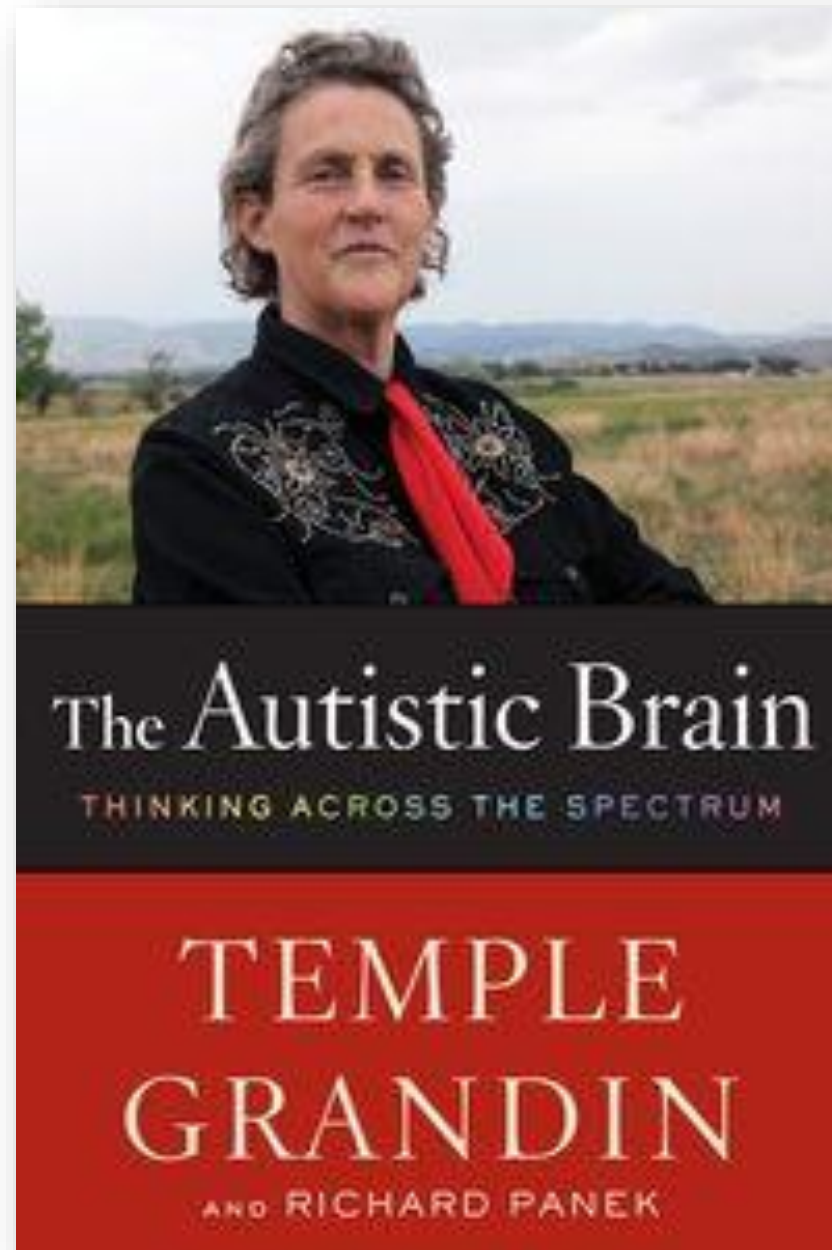
Researchers at Vanderbilt University Medical Center finds that children with autism live in a world that resembles a badly-dubbed foreign movie. They struggle to integrate what they see and what they hear.

[MARK JOHNSON, MILWAUKEE JOURNAL SENTINEL/MCT](#) January 16, 2014

Stevenson, R. A., Siemann, J. K., Schneider, B. C., Eberly, H. E., Woynaroski, T. G., Camarata, S. M., & Wallace, M. T. (2014). Multisensory Temporal Integration in Autism Spectrum Disorders. *The Journal of Neuroscience*, *34*(3), 691-697.

Sensory Analysis

Chapter 4 “Hiding and Seeking” in Temple Grandin’s book: “The Autistic Brain”





Teaching to independence (or interdependence?)

WHY IS SUPPORT NEEDED AT WORK?

- 1) The person needs help learning the job.**
- 2) The person needs help communicating on the job.**
- 3) The person needs help understanding social rules on the job.**
- 4) The person needs help in adjusting and accommodating the environment or task to meet individualized needs.**

WHAT ARE SOME REASONS THAT SOMEONE COULD LOOSE THEIR JOB?

- 1) The person can not do the job.**
- 2) The person no longer wants the job.**
- 3) The person's accommodations do not fit the job as tasks or environments change.**

THE POWER OF VISUALIZING COMMUNICATION

.15 seconds

It takes about 0.15 seconds from the moment light hits the retina to when the earliest recognition of basic object identity can occur

9 Seconds

.15 seconds

It takes about 0.15 seconds from the moment light hits the retina to when the earliest recognition of basic object identity can occur

9 Seconds

It can take unexpected textual info 9 seconds to process through the brain. We process visuals **60,000 times faster than text**

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The American attention span in the year 2000

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The American attention span in the year 2000

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The American attention span in 2016

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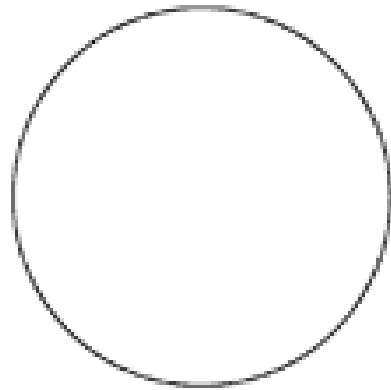
9 Seconds

The goldfish attention span

Textual Description


a curved line with every
point equal distance
from the center

Graphic Description



Textual Description

a curved line with every
point equal distance
from the center

- 
- Complete more tasks by themselves therefore increasing their independence
 - Learn more rapidly
 - Demonstrate decreased levels of frustration, anxiety, and aggression related to task completion
 - Adjust more readily to changes in their environments

Koyama & Wang, 2011; Savner & Myles, 2000

WHY VISUAL SUPPORTS?



THE WORLD IS FULL OF
SUPPORTS





WHAT IS YOUR FAVORITE THING AT THE
NORTH DAKOTA STATE FAIR?

↓ FOOD ↓

↓ RIDES / ENTERTAINMENT

(LAST WEEK PIZZA WITHOUT RANCH WND)

Cookie
Butter
Sandy Bar

09

5

CIOUS

5

MADE

MADE

MADE

MADE

MADE

MADE

MADE

MADE

MADE

SOME TOOLS TO CONSIDER:

- **Social Narratives: Social stories, social comics, power cards**
- **Schedules: Individualized and sometimes never have been used before**
- **Visual Supports: we are playing catch-up**
- **Self- Monitoring or gamification: Loves video games? GREAT!**
- **Universal apps: 40%, 35%; focus on general applications, not disability specific**