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# PRECISION TEACHING



Precision teaching is an effective intervention for monitoring the progress of a child or young person who is having difficulty acquiring and maintaining educational skills. It can be used in early years, primary and secondary settings and can be applied to areas of the curriculum that can be broken down into clear objectives, eg: numeracy and literacy skills.

## INTRODUCTION

**Precision Teaching** is a method of planning a teaching programme to meet the needs of an individual child or young person who is experiencing difficulty with acquiring some skills. It has an inbuilt monitoring function and is basically a means of evaluating the effectiveness of what is being taught.



## WHY USE PRECISION TEACHING?

Children and young people vary in their rate of learning, how much they remember over time and in their ability to use these skills in new situations.

Some children pick up new skills almost 'incidentally' whilst others need intensive adult support which involves breaking down the tasks into small steps and delivery through repetition or 'over learning'.

Successful learning involves acquisition of skills so that they are automatic and, can be remembered the following day-week-year. These skills also need to be applied to new or novel situations. This process is described by Haring and Eaton (1978) as the '**Learning Hierarchy**'

## THE LEARNING HIERARCHY

### STAGE 1: ACQUISITION

The child or young person learns a skill to accuracy. The best teaching methods for accuracy building are: modelling, imitation, cueing, visual prompting and drills.

### STAGE 2: FLUENCY (PROFICIENCY)

In this process the child or young person reaches accuracy with the skill to the level where they are unlikely to forget it. This is in effect 'over learning' the important thing about this stage is speed and automaticity. The best teaching methods are: drills, repetition and timed tasks.

### STAGE 3: MAINTENANCE

By the end of this stage a level of proficiency is reached in terms of accuracy and fluency. The skill is retained and available for the child to use when needed and over time. The best teaching method is providing opportunity to use the skill over and over of intermittent testing of the skill.

### STAGE 4: GENERALISATION

Under instruction the child or young person can apply the skill under different conditions or in novel situations. The best teaching methods are discrimination training and differentiation training.

### STAGE 5: ADAPTION/DISCRIMINATION

In this stage the child or young person can apply their skills to new situations or under different conditions without the need for specific instruction. They do it naturally. The best teaching methods are; problem solving and simulation exercises.

Children and young people who have problems developing basic skills usually have difficulty with the **ACQUISITION** or **FLUENCY** stages, so they cannot remember what to do to get it right or they cannot do it fast enough to be able to do it automatically.

### HOW TO USE PRECISION TEACHING

To use it means “ to carefully evaluate the effects of a Chosen teaching method on the learning outcomes for a child or young person”.

Precision Teaching helps you find out what teaching methods are best for teaching this particular skill to the child or young person. Precision Teaching does this by using daily measurements of the number of times that a certain task is performed.

You can see from the evidence on the chart or graph whether or not progress is being made.

The measurements are on a daily basis because of the need for a sensitive measure of small changes.

The essential element is to break down each task into small portions or steps. You then teach the small steps in sequence. The best way to do this breakdown is to write your **LEARNING OBJECTIVE** and then do a **TASK ANALYSIS**

### WRITING LEARNING OBJECTIVES

Start with a clear Learning Objective which describes what the child or young person is going to DO. This is not a statement of what you are going to teach.

For Example: (Child/young person) is to write their full name from memory correctly, using capital and lower case letters, on lined paper on the instruction:

“ Look at your name, remember how to write it. Write it from memory”

<b>MATERIALS</b>	<b>INSTRUCTIONS</b>	<b>CHILD/YOUNG PERSON'S RESPONSE</b>	<b>SUCCESS CRITERIA</b>
Capitals and lower case letters, printed name, lined paper, pen or pencil	“ look at your name, remember how to write it. Write it from memory”	Child/young person looks at their name and writes it from memory	5 correct responses on 2 occasions.

### TASK ANALYSIS

The next stage is to set out a sequence of steps that lead to this target. This is **TASK ANALYSIS**.

## PROBES

The test sheets in Precision Teaching are called **PROBES**. There are templates for making your probes or you can use a website which makes it easier to do. [www.Johnandgwyn.co.uk](http://www.Johnandgwyn.co.uk)

### DESIGNING A PRECISION TEACHING PROBE

Write a list of no more than 5 items you want the child or young person to learn. 3 of these can be known to them and the other 2 should be new or very difficult.

You can make up a **PROBE** using one of the templates. To do this you need to produce each item a number of times in a random manner until you have filled all the spaces. (Alternatively you can go on line at [www.Johnandgwin.co.uk](http://www.Johnandgwin.co.uk))

Fill in the following details on the top of the sheet:

**Child/Young Person's name, Name of probe administrator,**

**Programme** (your Learning objective) and **The probe type** (this is a description of what the child/young person has to do when presented with the probe-chose one of these classifications: SEE-SAY, HEAR-WRITE, SEE-WRITE).

You need a timer with a seconds function (your timing must be precise and accurate), your PROBE sheet and some teaching materials.



### WHAT TO DO

Spend 5 to 10 minutes teaching the child/young person the 2 new items using whichever teaching method you think is best.

Using the probe, ask the child/young person to see how many they can get right in 2 minutes. This should be a fun activity.

TIP: for a child who is really struggling or has a very low concentration span do the probe for 1 minute.

If they finish the probe before the two minutes they need to go round again starting with item 1.

Explain to them that they have to do it as fast as they can and as accurately as they can.

Whilst the child/young person is doing the probe you need to make note of:

The number of correct items,

The number of errors

A note of the errors made so you can target these for your next round of teaching.

TIP: make two copies of the probe, one for the child/young person and one for you to make your notes on.

Record the correct responses and errors on the **PRECISION TEACHING CHART**.

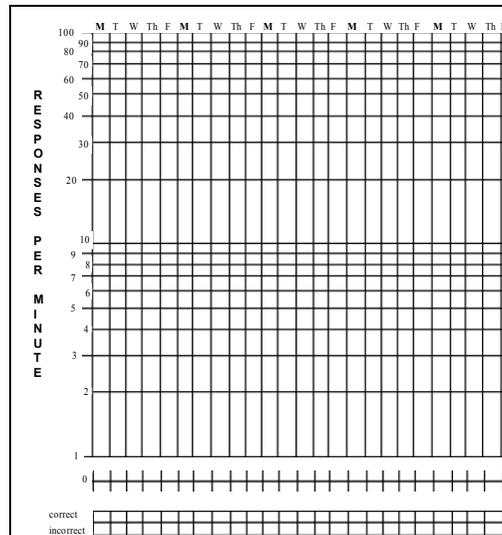
## FILLING IN THE PRECISION TEACHING CHART (GRAPH)

The graph paper is different to the type children and young people are used to. It is called semi-logarithmic graph paper. On the top line are the days of the school week, **M, T, W, T, F**

Time in days is plotted along the bottom and responses are plotted along the side.

### KEY

Correct responses =  $\odot$   
Errors =  $\times$



## SETTING THE FLUENCY RATE

You are aiming for a speed or fluency rate of 50 per minute with a maximum of 2 errors on a SEE-SAY probe of one minute duration.

If you run the probe for 2 minutes remember to divide your results by 2

## CHECKING PROGRESS and MAKING CHANGES TO THE PROGRAMME

### THE 3 DAY RULE

The first 3 days results can tell you if the learning objective is appropriate. If it is clear that the child/young person is not making sufficient progress then one of the following may be needed:

**MAKE THE TASK EASIER** by: Reducing the number of items to be learned and or reducing the complexity of the task.

**CHANGE THE TEACHING METHOD** by: Trying some new materials and or increasing the amount of teaching

**SEE IF THE CHILD/YOUNG PERSON IS STRUGGLING WITH EARLY SKILLS** eg can they tell left from right? Is speech proving difficult? Do they need a hearing or eyesight test?

### THE 8 DAY RULE

If the child/young person is not close to reaching the aim rate after 8 days of precision teaching then make the following changes that should help with MOTIVATION.

Lower the aim rate by 5 or 10

Increase the rewards and give further incentives

Praise small steps to achievement

Try alternative teaching methods or change the materials. Change the time of day or the room arrangements to meet the child/ young person's learning preferences.

## IF THE CHILD/YOUNG PERSON ACHIEVES THE FLUENCY AND ERROR RATE AND MAINTAINS PROGRESS AT THIS LEVEL FOR 3 DAYS

A new probe can be made using 3 of the original items and 2 new ones and so on. Once 10 or 12 items are known, a probe with more randomised items can be administered.

The Precision Teaching process so far has taught the skills to acquisition, fluency and maintenance. To teach generalisation and adaptation you would use methods such as trying different fonts and sizes and presenting stimulating problem solving exercises.

**Once you are satisfied the child/young person has learned the skill you set out to teach you can go on to the next skill in their INDIVIDUAL EDUCATION PROGRAMME AND CONTINUE THIS PROCESS FOR AS LONG AS REQUIRED.**