

NCSC Communication Tool Kit

Module 7

Monitoring Progress

Jacqui Kearns, Ed.D.

Jane O'Regan Kleinert, Ph.D., CCC-SLP

Judith L. Page, Ph.D., CCC-SLP

Lou-Ann Land, M.S.Ed.

Katie Rush, B.H.S.

McKenzie Calhoun, B.H.S.

Produced by:

University of Kentucky,

in partnership with the National Center State Collaborative (NCSC)

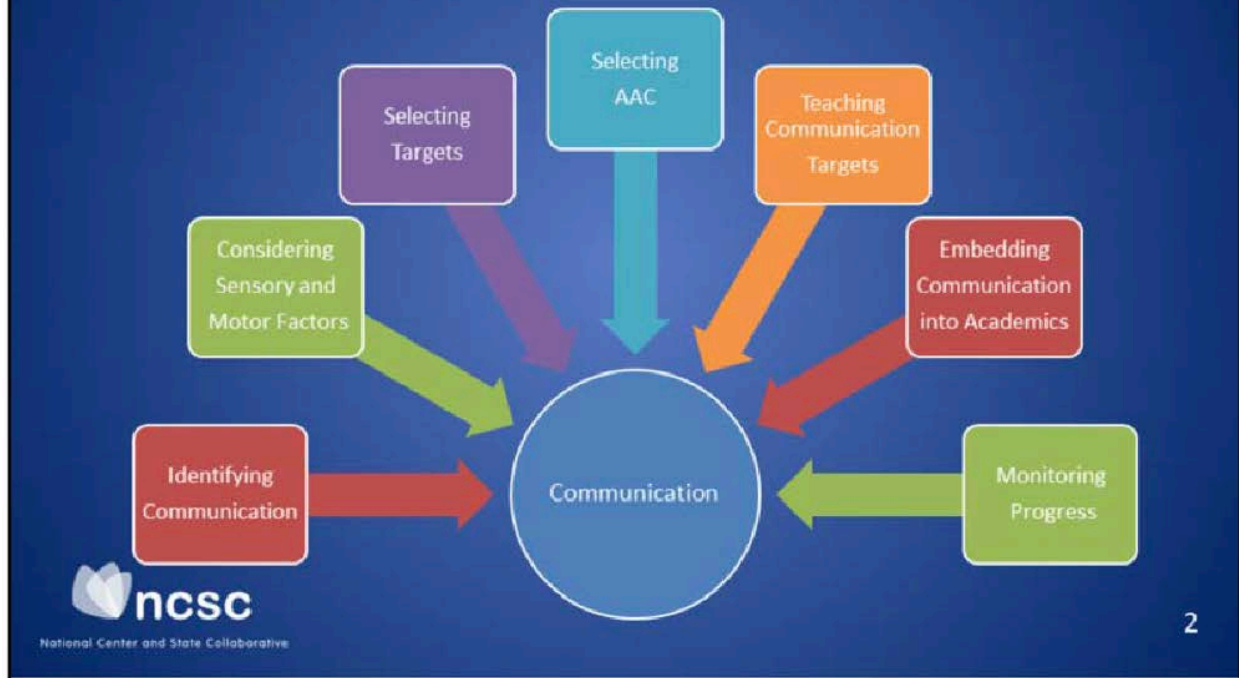
The contents of this product were developed under a grant from the Department of Education (PR/Award #:H373X100002, Project Officer, Susan.Weigert@Ed.gov). However, the contents do not necessarily represent the policy of the Department of Education and no assumption of endorsement by the Federal government should be made.



National Center and State Collaborative

Welcome to the NCSC Communication Tool Kit module seven on monitoring communication progress.

Module #7: Monitoring Progress

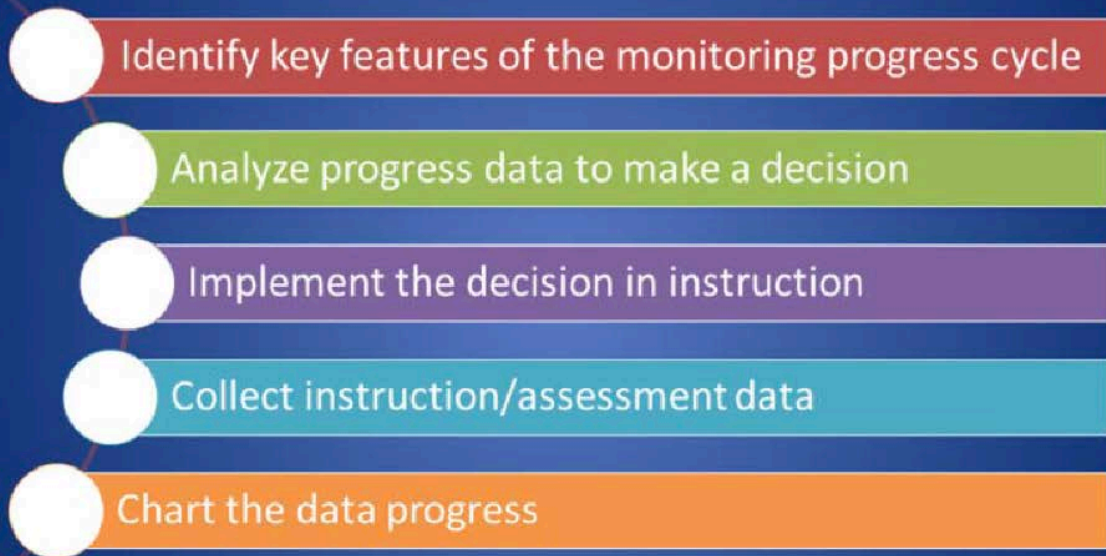


In this module, we discuss monitoring communication progress the final step in the Communication Tool Kit.

Module 7 Monitoring Progress builds on a foundation of features from previous modules. Monitoring progress depends on

- selecting appropriate communication learning targets presented in Module 3,
- scheduling opportunities to teach communication targets found in Module 3,
- and using evidence-based systematic procedures to teach communication targets found in Communication Tool Kit Modules 3 and 5.

Module 7 – Outcomes



In this module, we

- identify key features of the monitoring progress cycle.
- analyze progress data to make a decision about instruction to improve student results
- implement the data decision
- collect the instruction/assessment data
- chart the data progress

Let's get started!



The monitoring progress cycle begins with determining appropriate instructional targets and continues through the implementation of data decisions.

First we: Determining Targets

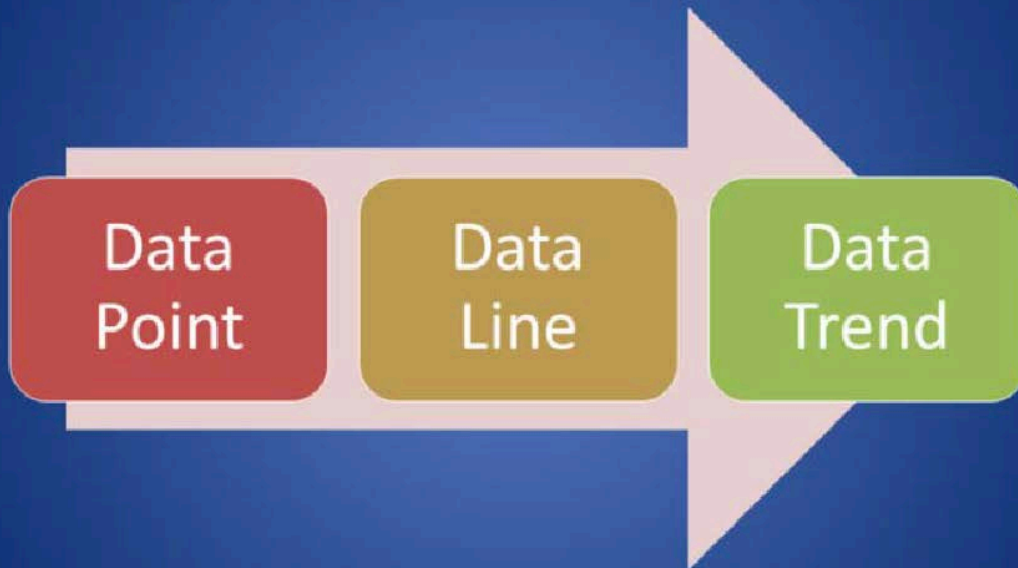
- Determining criteria for success
- Determine data collection schedule
- Design a tool to collect the data
- Teach the target
- Collect and chart the data from instruction
- Conduct an analysis of the data
- Implement any data decisions that our data suggests

We discussed the first three components of the cycle selecting targets, determining a criteria for success, and data collection schedule in the first modules. We also discussed strategies for teaching in modules 5 and 6. In this module we will reverse the order.

First we will:

- Conduct an analysis of data – We will look at some data charts, analyze the data, and determine any instructional decisions.
- Implement data decisions – We will review our systematic procedures in order to improve student results.
- Monitoring Progress Cycle. There are eight steps in the monitoring progress cycle, and one step leads to the next. Details are in the notes that follow.
- Collecting and charting data – Finally, we will discuss some tips for when and how to manage the task for collecting data.

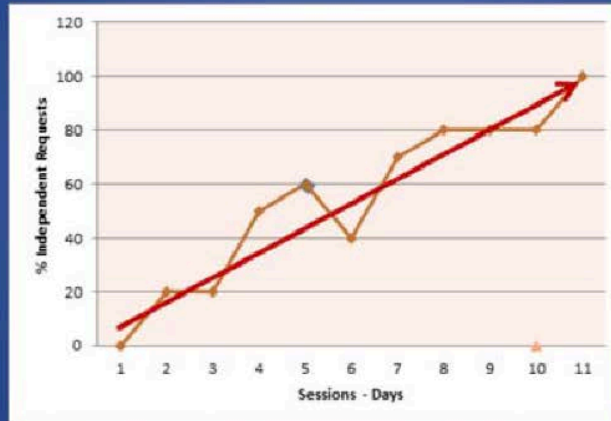
Data Analysis Considerations



We are going to start by defining a data point, data line, and a data trend. A data point is simply the number of correct responses or % of correct responses – correct responses divided by the number of opportunities available to the student in a single session. A session could be the number of opportunities in a 20 minute direct instruction session or the number of opportunities – or the opportunities are distributed across a day. A data line represents the number of sessions or days indicated by multiple data points. A data trend is a line that bisects the data points and indicates whether the data are increasing or decreasing.

Because we are teaching new communication skills, we will look for data lines and data trends that are increasing or going up. If we were counting a behavior that we wanted to decrease, obviously, we would look for a decreasing trend. However, for this presentation, we will focus on teaching new communication skills so we will be looking for upward trends.

Visual Analysis of Data



In this example, the student is learning to initiate a request using an AAC Device. The dots (or data points) indicate the % of independent responses the student made out of five opportunities in a day. The data line is a little variable but performance jumps on the 4th and 7th days. The overall trend (indicated by the red line) is upward as we would like to see. If we add a trend line we see a definite incline toward correct responses. The data decision suggested by these data is that the student has mastered the skill as indicated at the 80% criterion, the teacher should implement a maintenance schedule where the number of opportunities are reduced or thinned to “normal” opportunities.

Quiz Question

True or False

The data line represents the student's performance across a number of days or sessions.

- A) True
- B) False



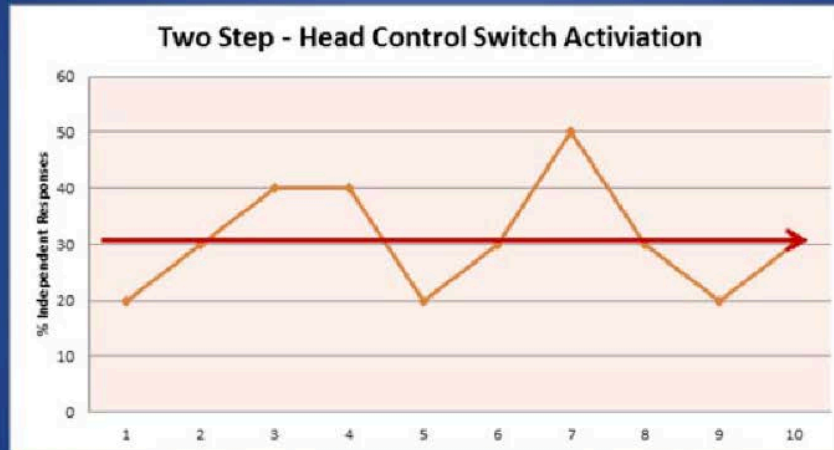
National Center and State Collaborative

Submit

Clear

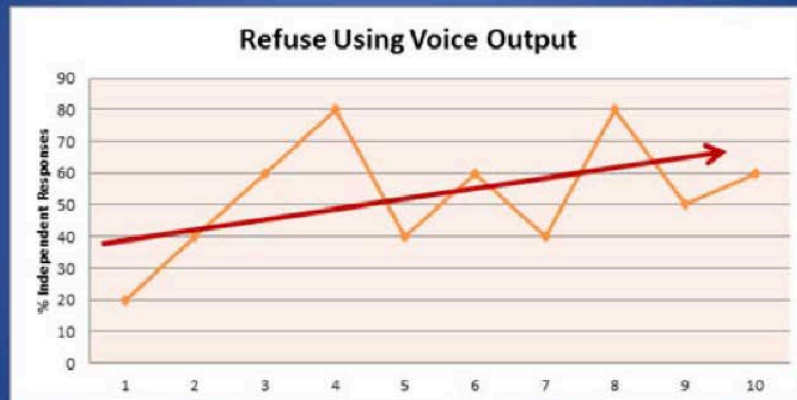
7

Flat Trend Line



Let's take a look at a flat trend line. In this example, the student is using a head control switch. The data points in this data line start at 20%, go to 40% then drop back to 20%, spike again to 30% and then drop again. It is also important to note that the data points never exceed 50%. The data line is variable with up and down, but if we add a trend line, we see that the data are flat. The student knows what to do, it may be that the two step activation may well be a little hard for the student right now. A data decision, the team may want to consider is to make the task easier with one step instead of two. Flat data generally indicates the task too hard and we need to make it easier for the student. How could we make it easier are things that we want to consider.

Upward Trend Line with Variable Data



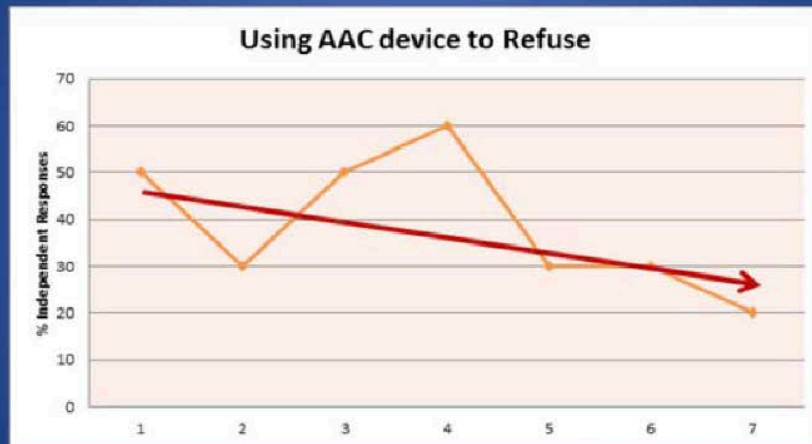
National Center and State Collaborative

Data decision: increase motivation and opportunities to practice

9

In these data, we are pleased to see plenty of opportunities across multiple days. Our data line indicates some variability with a few spikes. These data indicate that the student knows what to do, can use the device, but for some reason doesn't use it. The trend line indicated by the red arrow also suggests that the student is moving toward criteria but maybe not as quickly as we would like. The variability indicates that additional student motivation and perhaps environmental manipulation, creating opportunities, might be important strategies to consider to improve the rate of progress.

Decreasing Trend Lines with Variable Data



In this case, the student started off doing really well with using the device and used it independently 50% of the time. However, the data line is variable going up and then down below the original high level. In this case, the student may need some additional motivation to turn this decreasing data trend around. It also may be that the teaching procedure needs some tweaking. More detail in the reinforcing event, careful modeling, it could also be that the skill is too difficult to maintain. Careful consideration of teaching procedure will help the team determine how to turn these data around. This concludes our brief look at data trend lines and the inferences that might be made from them.

Ultimately, we want to improve instruction so choosing an instructional variable to manipulate or control can help improve the student's rate of performance.

Quiz Question

True or False

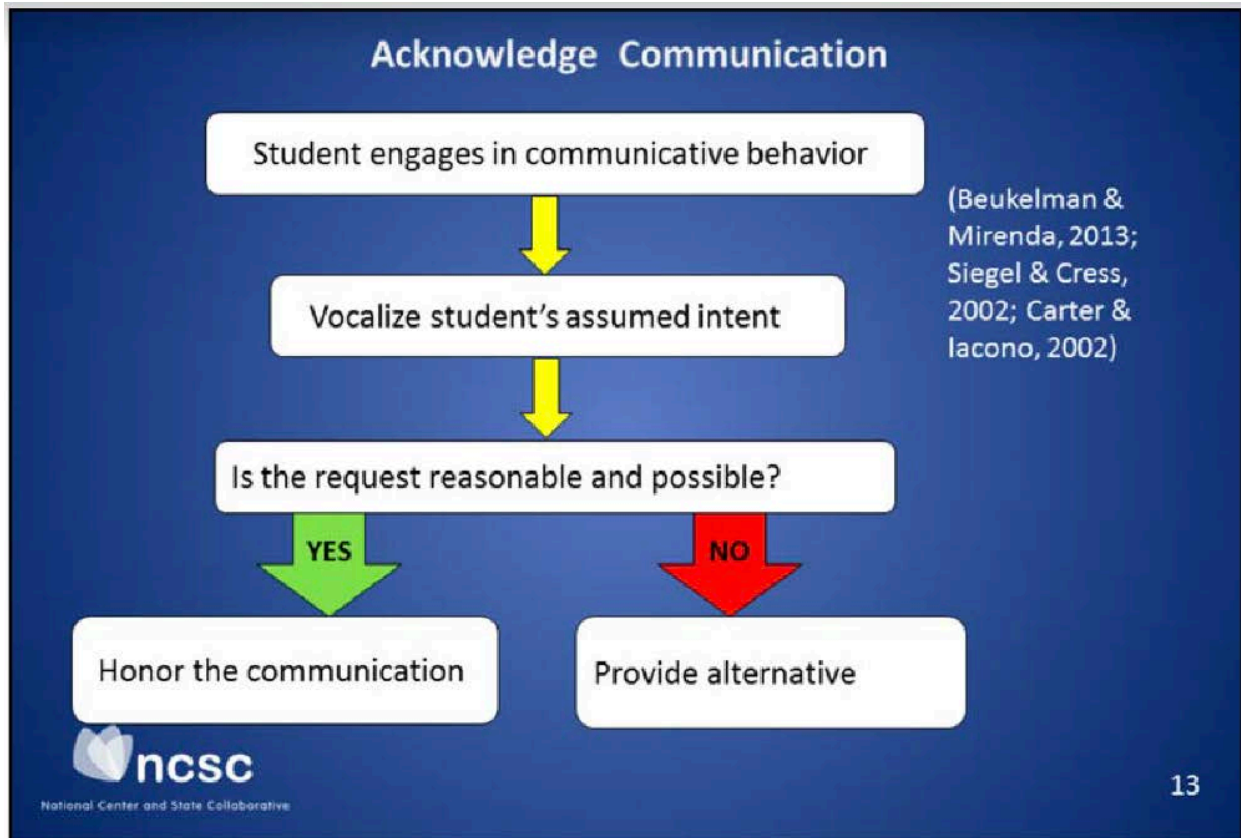
Student performance improves when data analysis occurs regularly.

- A) True
- B) False

Implement the data decision



In the next section we're going to discuss implementing the data decisions and go back to our systematic presentation. After we conducted our analysis of data we have to figure out what to do next, so implementing data decisions will be our next topic.

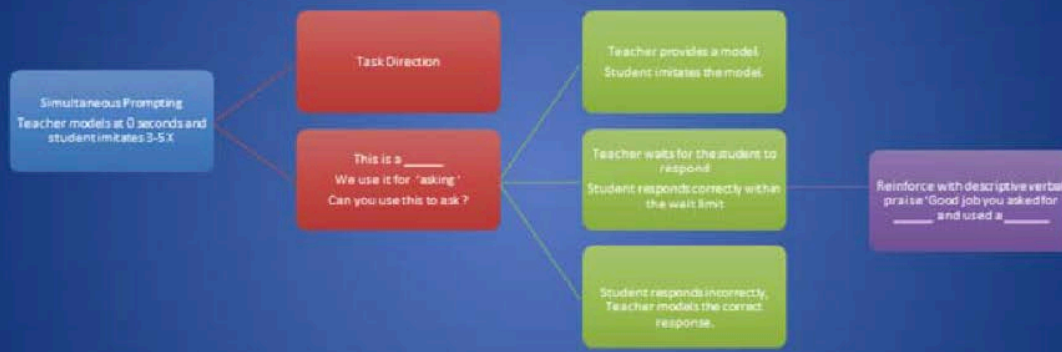


The easiest way to systematically build communication is to simply acknowledge communicative intents. It might go something like this, student engages in communicative behavior. Acknowledge the communication by vocalizing the assumed intent – “Oh, you are telling me you want to walk. If the request to walk is reasonable - honor the request if at all possible “OK, Let’s go for a walk”. The student learns that they are indeed communicating because the communication is acknowledged. If it isn’t possible to honor the intent or if you are unsure of the intent, acknowledge and provide an alternative. “I think you told me you want to walk, is that right? You told me you want to, but we have to wait because it is raining. Would you like to instead?”

If you respond to a communicative intent even if it doesn’t yet have the form you are wanting the student to use, communicative attempts will increase. If you can’t honor the student’s request, acknowledge and provide another option. Then you can shape the communication into a more recognizable form “Tell me with the button”.

You monitor the student’s progress by simply tallying the number of communicative attempts and the number of honored vs the number of alternatives provided. This process will give the teacher some good feedback about communicative forms and opportunities.

Systematic Presentation



In this systematic presentation we focus on using a new communicative form. We are highlighting simultaneous prompting procedure. This means that the student receives the task direction and demonstration of the correct response immediately or simultaneously. There is no opportunity for the student to make an error as long as the student can imitate the teacher's model of the correct response. The correct response could be a verbal response as in imitating a word, or a motor response as in activating an AAC device.

In this procedure, there are three parts – the task direction – where the teacher says “this is a switch, we use it for asking. Can you use it for asking?” The teacher demonstrates or models the correct response and the student demonstrates the response.

The possible student responses – imitate the teacher's model, waiting for the teacher to model again, or if the student responds incorrectly, the teacher models again and has the student practice. Each of these receives some form of descriptive reinforcement; Good job, you used a button to say it or Good try you worked really hard, let's see if we can make it easier! Each of these steps in the systematic presentation can be manipulated to improve student responding – refining the task direction, simplifying the response, determining the best type of prompt – verbal, model etc., increasing or decreasing wait time. This helps by systematically managing the supports so that the student demonstrates the target independently.

Systematic Presentation



Date	16-Apr	17-Apr	18-Apr
Setting	PE	Science	PE
Initiations	4	5	5
% of 5	80%	100%	100%



National Center and State Collaborative

15

You will recall this video clip from Module 1. This is Shelly and she is learning to use a voice output switch to ask for more/ more walk. This time we want to watch the clip to see the systematic presentation from the teacher. We will see and hear the teacher provide a task direction, model the task – using a switch that says more, provides the consequences – wheel chair moving. When the wheel chair stops moving, the teacher waits and says “what happened?” Shelley uses the switch to request “more” wheel chair movement. The teacher reinforces naturally by telling Shelley – good job you told us “more”.. “more” “more” and the movement starts immediately.

Let’s Watch.



Teacher 1: Oh no, we stopped! What do you want to do?

Teacher 1: You want more?

Teacher 1: You want more?

Shelly's AAC device: More

Teacher 1: Good job!

Teacher 1: Good good good



This systematic presentation allows the teacher to determine which part of the instruction needs to change so that the student can complete the task with as few errors as possible. In this case the student accomplishes the use of the switch for more in as few as seven trials.

Use a Script



Using a script really helps the teacher be consistent with the task direction, modeling the target behavior, and cues the teacher to provide praise when the target behavior is demonstrated. The script may go something like this.....

“Today I want you to use your switch/button to comment – you can say “eww Yuck” or “Awesome”. The teacher models - and then provides a task direction: Can you use a button to talk? Let’s see if you can! The teacher watches to make sure that the student can use the switch/button easily. They practice a few times asking questions.

The teacher reinforces the practice effort – “Great job, you can use the button to comment. I’m going to see if you can use that button to comment without my help the rest of the day”.

The script helps the teacher and student by using consistent language until it becomes a part of the class routine.

Quiz Question – Multiple Choice

Using systematic teaching procedures helps the teacher by

- A) controlling the parts of instruction
- B) charting the data
- C) identifying targets
- D) none of the above

Collect and Chart the Data



Back to our monitoring progress cycle. In this section we are going to discuss collecting & charting the data. We will discuss planning when teaching and data collection will occur throughout the week, we will discuss the important elements necessary in a data collection tool whether sheet or electronic format; and finally charting the data whether by hand, or technology application.

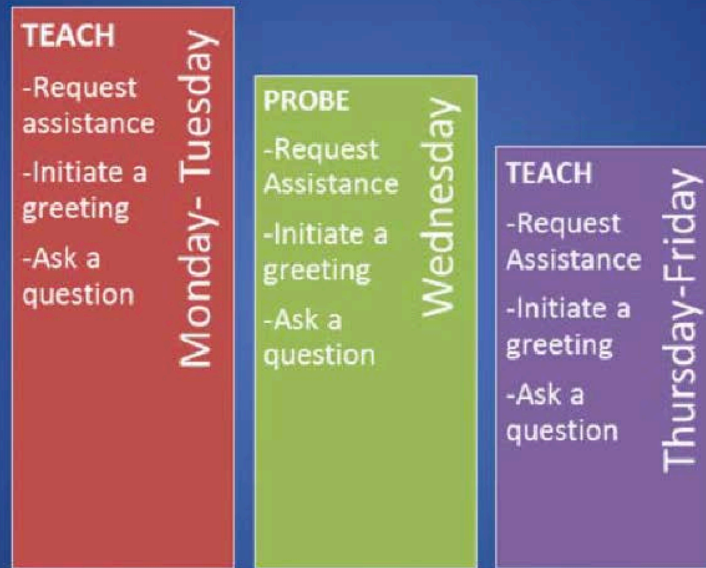
Determine opportunities to practice

Communication Matrix - Determining Opportunities to Practice									
Targets	Opportunities								Total
	Meeting	Language Arts	Snack	Math	Lunch	Music	Science	Social studies	
Aska question	X	X	X	X	X	X	X	X	8
Request	X	X	X	X	X	X	X	X	8
Initiate	X	X	X	X	X	X	X	X	8
Refuse	X	X	X	X	X	X	X	X	8
Comment	X	X	X	X	X	X	X	X	8
Select a choice	X	X	X	X	X	X	X	X	8

Determining opportunities to practice is a really important part of managing data opportunities. As discussed in Module 3 using a communication target activity matrix can assist the team in determining which targets can be taught and which mode will be selected based on the type of target (i.e. Wanting the student to use an AAC device, picture cards, or single switch). The matrix tells us how many opportunities to practice might occur during that time period. For example, at lunch time – the student may use pictures to request more of something or indicate that the next bite should be; asking a question during math class might require a different communicative form... pictures but a more complex array. The idea here is to determine if indeed there are enough opportunities to practice the target. It also cues the teacher/SLP to think about how the student will communicate best during which activities – collect data... or how to phase in new messages.

In this matrix we find that we can find at least eight opportunities for each of the communication targets that we have identified.

Data- Managing the Task



Once you have determined the number of opportunities to practice communication target across the day the next thing you may want to consider is managing the task of collecting the data, what days are we going to teach and what days are we going to assess or probe. In the example above, direct instruction teaching will occur on Monday and Tuesday – students will practice requesting, initiating a greeting, and asking a question. The teacher will model these three targets and look for the students to imitate her model. She may do requesting for one portion of the day, greeting at another time of the day, and asking a question at another time of day. She'll manage the classroom environment to make sure there are opportunities and she may give the students a script.. "Today, we are going to use our devices to request. I'm using this device to request, Jamie is using picture card to request, etc. Let's practice asking for help using our devices..." On Wednesday, they continue to provide situations that require these communication targets, the teacher reminds them of their job but then as each opportunity comes up, the teacher waits to see if the student will perform independently. Finally on Friday, they return to teaching and modeling the communication targets.

Data- Managing the Task

Data Sheet



Date	13-Apr	14-Apr	15-Apr	16-Apr	17-Apr	18-Apr
Setting	Science PE	Science PE	Science PE	Science PE	Science PE	Science PE
Initiations	1	2	3	4	4	3
% of 5	20%	40%	60%	80%	80%	60%



National Center and State Collaborative

23

A third step in managing and collecting data, we talk about how to design a data collection tool. This tool is a data sheet, it has the:

Date

Setting (where the student performed the skill..) The setting will be important for managing generalization to other settings or situations.

Target behavior

Number of correct responses

Key (An explanation of the codes for example a + is a correct response; a – is an incorrect response. If a prompt was provided a key to the type of prompt that was provided.)

This data sheet is simply a spreadsheet printed. This is the easiest possible way to collect student performance data.

Try an App for that!



National Center and State Collaborative

Of course if you're more tech savvy you might try an app for that, or simply a pencil and paper tally. While endorsing specific products is outside of our scope, there are several smart phone apps that are useful for managing student data, many at a very low cost.

Finally of course if nothing else works, simple tally counters will count with a click. The important thing is to collect the data and use it, whatever system is simplest will work the best.

Quiz Question: True or False

Managing the task for collecting communication data involves planning and the use of tools.

- A) True
- B) False



National Center and State Collaborative

Submit

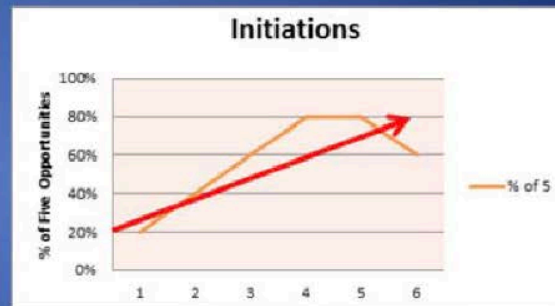
Clear

25

Putting the Task Together

Date	13-Apr	14-Apr	15-Apr	16-Apr	17-Apr	18-Apr
Setting	Science PE	Science PE	Science PE	Science PE	Science PE	Science PE
Initiations	1	2	3	4	4	3
% of 5	20%	40%	60%	80%	80%	60%

Cherry will initiate a greeting, a question, or a request using a voice output device 80% of opportunities at least 3 days.



Data decision: criterion reached, plan for maintenance, generalization, select new target.



National Center and State Collaborative

Now let's put the task together. First we have our target. Cherry's target is to initiate a greeting, a question, or a request using a voice output device with 80% opportunities with at least 3 days. We have a target, we have a criterion. Next we collect the data. We collect data for these targets in science and PE. The data line in the chart tells us that Cherry is initiating at an 80% criterion, and may need a more complex target. Our data decision is to move these targets to a maintenance schedule, plan for generalization to other settings after we achieve the next 80% criterion.

Putting the Task Together

Date	13-Apr	14-Apr	15-Apr	16-Apr	17-Apr	18-Apr	19-Apr	20-Apr	21-Apr
Setting	S Studies	Reading	S studies	Reading	S Studies	Reading	S studies	Reading	sStudies
Target	2	3	4	4	2	3	5	3	3
% Correct	20%	30%	40%	40%	20%	30%	50%	30%	30%

Joey will use a two step head control switch to initiate a request.



National Center and State Collaborative

Data Decision: Simplify the task.

27

Our next step in putting the task together involves three steps. Joey will use a two-step head control switch to initiate a request. The data collection sheet indicates that he is initiating during reading and social studies. The data chart indicates a variable but flat performance that is below 50%. Our data decision is to consider whether the task is too hard for Joey to perform at a high criterion level and see if we can make the task easier. If we don't monitor progress we continue to practice targets that either aren't working or have been reached so we end up not making as much communication progress over time as we would like.

Quiz Question: Multiple Choice

Implementing Data Decisions requires which of the following

- A) a plan for collecting the data
- B) tools for collecting the data
- C) charting and analysis of the data
- D) All of the above



National Center and State Collaborative

Submit

Clear

28

Communication Documentation

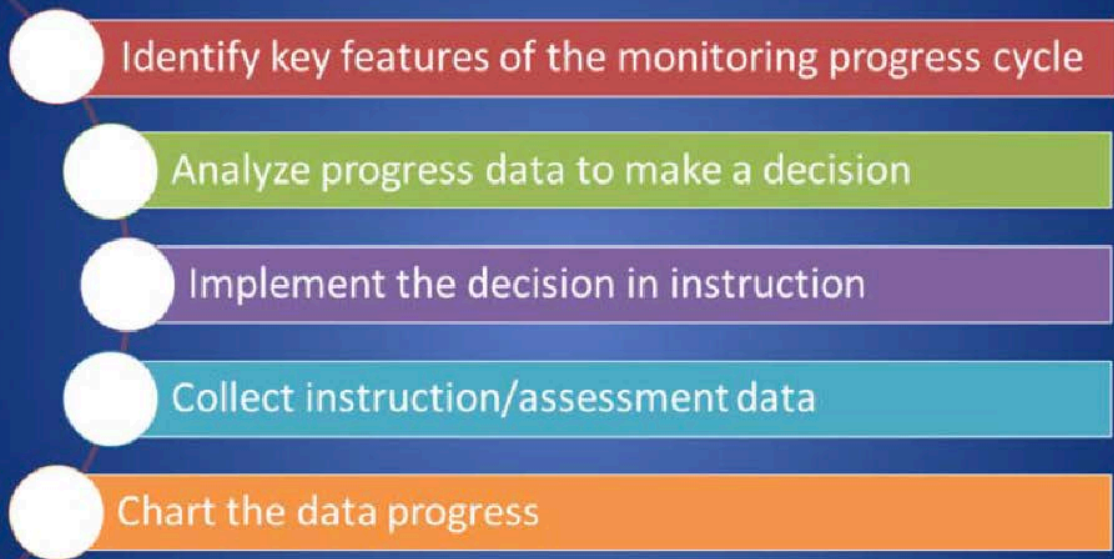
Date	13-Apr	14-Apr	15-Apr	16-Apr	17-Apr	18-Apr
Setting	Science PE	Science PE	Science PE	Science PE	Science PE	Science PE
Initiations	1	2	3	4	4	3
% of 5	20%	40%	60%	80%	80%	60%



National Center and State Collaborative

Finally, it is important to document a student's communication so that others – teachers, family members, friends, peers know and understand how the student communicates. It is important to document what devices and strategies worked and didn't work, or maybe haven't worked yet. This is also important so that when a student transitions to a new classroom or situation – instructional time is used as efficiently as possible and time is not spent on things that don't work. Electronic documentation through pictures, video clips, electronic progress notes and documents can follow the student to their next learning destination. Review of these materials ensures that student progress continues. Be sure to review you school and district policy and the use of electronic data, video file, and photographs to be sure that you are consistent with these policies before implementing, but certainly consider that these tools will be helpful as we help students along the communication progress.

Module 7 – Outcomes



Let's review the outcomes in Module 7 Monitoring Progress in Communication.

Identified key features of the monitoring progress cycle Analyzed progress data to make a decision about instruction Implemented the data decision

Collected the instruction/assessment data Charted the data progress

These are the essential outcomes of Module 7.

These are the references used in this module, we hope you find them useful.

Beukelman, D.R., & Mirenda, P. (2013). *Augmentative and alternative communication: Supporting children & adults with complex communication needs* (4th ed.). Baltimore, MD: Paul H. Brookes Publishing Co.

Carter, M., & Iacono, T. (2002). Professional judgments of the intentionality of communicative acts. *Augmentative and Alternative Communication, 18*(3), 177-191.

Gibson, A. N., & Schuster, J. W. (1992). The use of simultaneous prompting for teaching expressive word recognition to preschool children. *Topics in Early Childhood Special Education, 12*(2), 247-267.

Griffen, A.K., & Worley, M. (1992). Comparison of simultaneous prompting and constant time delay procedures in teaching sight words to elementary students with moderate mental retardation. *Journal of Behavioral Education, 2*, 305-325.

McDonnell, J. (1998). Instruction for students with severe disabilities in general education settings. *Education and Training in Mental Retardation and Developmental Disabilities, 199-215*.

Siegel, E.B., & Cress, C.J. (2002). Overview of the emergence of early AAC behaviors: Progression from communicative to symbolic skills. In J. Reichle, D.R. Beukelman, & J.C. Light (Eds.), *Exemplary practices for beginning communicators: Implications for AAC* (pp 25-57). Baltimore, MD: Brookes Publishing Company.

Wolery, M., Bailey, D., & Sugai, G. (1988). *Teaching students with moderate to severe disabilities*. Boston, MA: Allyn & Bacon.



Thank You. This concludes our series of modules in the communication tool kit. We started with Identifying communication, considered sensory and motor factors, selected targets, selected AAC, identified strategies for teaching and embedding communication into academic content and then consider steps for monitoring student progress so that they continue to make progress in communication. We hope this series has helped jump start your thinking about the importance of communication for students with significant cognitive disabilities. Communication is THE MOST essential life outcome – without communication, friendships, self-care, social skills, and academics are limited. Give a student the gift of communication to share a secret with a friend, a hurt with the doctor, an “I love you” to a parent. Always assume that the student is communicating, our job is to make it easier.