



## Guiding Document

### Evaluation of Effectiveness

Student performance as monitored through data collection and analysis is used to evaluate student success and drive decision making. Evaluation of effectiveness does not occur in isolation and is dependent upon the execution of consideration, assessment, inclusion in the individual education program (IEP), and implementation planning. It addresses where, when, and if adaptations, accommodations, modifications and/or services are needed.

**1. Team members share clearly defined responsibilities to ensure that data are collected, evaluated, and interpreted by capable and credible team members.**

Intent: Each team member is accountable for ensuring that the data collection process determined by the team is implemented. Individual roles in the collection and review of the data are assigned by the team. Data collection, evaluation, and interpretation are led by persons with relevant training and knowledge. It can be appropriate for different individual team members to conduct these tasks.

Evaluating the effectiveness of assistive technology (AT) use is a process shared by all team members rather than the responsibility of any one individual serving a student. It requires clearly defining the goal(s); determining how progress toward the goal(s) can be measured; when and where it can be measured; and by whom. Evaluating the effectiveness of AT use also requires that the data are analyzed, shared with the team, and discussed as to implications for adaptations, modifications or continuance of the current plan. Responsibilities generally are not determined by job title nor is it expected that any one team member assume responsibility for all tasks related to evaluation of effectiveness. Responsibilities for evaluation of effectiveness are clarified by the team or a team leader in order to move forward effectively and collaboratively.

When planning evaluation of effectiveness team members may not have prior knowledge related to all aspects of the process. When assigning the roles and planning the steps for evaluation, team members reflect on their knowledge of the tasks included in the evaluation and, if it is not sufficient, seek additional information or assistance.

Example:

*Chafic's team decided that he was a good candidate for speech recognition software. The plan stated that training with the software would begin with a few sessions at school. After the initial training, Chafic would use voice recognition software in the resource room for assignments longer than two paragraphs. Chafic would also continue to dictate to a designated staff person in selected classes. The school team shared a data collection tool with the parents so they could also collect data at home. During the six week training period, his special education teacher and the parents agreed to collect data on accuracy, time on task, and number of words dictated. The parents and teacher planned to communicate via email on progress and data collected. At the end of the trial period, the team planned a face-to-face meeting to discuss Chafic's progress and next steps.*

#### Key Questions for IEP Teams

- How will team members determine who is responsible for each aspect of evaluation?
- Who will collect data?
- Who will analyze data?
- Who will share the information about student performance with team members?
- Is training or technical assistance needed to develop an evaluation of effectiveness plan or carry it out?

## **2. Data are collected on specific student achievement that has been identified by the team and is related to one or more goals.**

Intent: In order to evaluate the success of assistive technology use, data are collected on various aspects of student performance and achievement. Targets for data collection include the student's use of assistive technology to progress toward mastery of relevant IEP and curricular goals and to enhance participation in extracurricular activities at school and in other environments.

Student IEP goals determine the use of the AT tools and services. Everyone on a student's team understands the reasons that AT has been chosen and the change in student performance that is expected. Evaluation of effectiveness is aligned with the goals and the implementation plan.

Example:

*Derek is an orally fluent third-grader who struggles with written productivity. His most recent writing assessment indicates that he meets expectations in ideas, organization, voice and word choice but struggles with sentence fluency, conventions, and presentation. His teacher reports that Derek's handwriting is very difficult to read and that he frequently shows frustration and fatigue when writing. His team determined that he may benefit from the use of a portable word processor. Team members agreed that the*

*tool could be used in many settings where Derek needs to write, but had differing criteria related to how Derek's writing would change when using the device and how change should be measured. The teacher expected Derek to increase the number of sentences in a paragraph, the occupational therapist (OT) expected Derek to increased legibility and speed, and his parents expected Derek to complete written tasks more independently. After reviewing Derek's IEP goals, the team agreed that change would be measured on the goal that read, "Derek will write a 3-5 sentence paragraph that meets expectations on the Six-Traits rubric on 4 of 5 assignments." They were particularly interested in noting changes in fluency, conventions and presentation.*

#### Key Questions for IEP Teams

- How is student achievement expected to change as a result of the use of AT?
- Does the data on use of the AT tools and services provide enough information about student performance on the related goals?
- What additional data is needed about student performance to clarify the effectiveness of the use of AT?

### **3. Evaluation of effectiveness includes the quantitative and qualitative measurement of changes in the student's performance and achievement.**

Intent: Changes targeted for data collection are observable and measurable, so that data are as objective as possible. Changes identified by the IEP team for evaluation may include accomplishment of relevant tasks, how assistive technology is used, student preferences, productivity, participation, independence, quality of work, speed, accuracy of performance, and student satisfaction, among others.

Specific student behaviors are identified so that the data collected about them matches the intent of the goal. It is only when the correct data is collected that this information can be used to make instructional decisions. It is important that both quantitative and qualitative data are gathered and taken into account when making educational decisions.

Quantitative data refers to actions, behaviors, student responses, etc., that can be measured and counted. In the case of AT use, it might include factors like speed, accuracy, latency, task completion or duration. It is gathered by observing and counting specific actions, products or movements.

Qualitative data, on the other hand, can be observed but not counted. It might include, descriptions of what took place or the student's stated opinion of a preference or feeling. It is gathered through interviews, anecdotal notes, and measurement through rubrics or observations.

Example:

*Shane uses a speech generating device (SGD). The team identified skills related to his use of the device. They collected data on the frequency of his spontaneous device use to see if there were quantitative improvements as reflected by the number of spontaneous communications. In addition, they collected data on the elements (words) he strung together to communicate his message. They identified that Shane used many single words to identify objects, but these words were rarely combined with verbs. Shane received specialized instruction in expressive language intended to help him talk about topics of interest to him (qualitative) and increase the number of times he initiated communication (quantitative). The team then collected data on the same areas.*

#### Key Questions for IEP Teams

- What behaviors can be observed and measured that will demonstrate progress toward goals?
- What kind of change in student performance is expected?
- How will that change be captured in the data?
- How will progress be monitored over time?
- What other information do we need?

#### **4. Effectiveness is evaluated across environments during naturally occurring and structured activities.**

Intent: Relevant tasks within each environment where the assistive technology is to be used are identified. Data needed and procedures for collecting those data in each environment are determined.

It is critical that success is demonstrated on more than one occasion and in more than one environment. In developing the implementation plan and the method for evaluating the effectiveness of the AT plan, the team identifies the environments in which the student participates at naturally occurring times. Developing shared expectation among team members facilitates collection of data in multiple environments and with multiple personnel. When data is collected that shows the student is having trouble with a certain part of a task, it may be necessary develop strategies to address the specific difficulty and then return to the task as a whole.

In some cases, lack of student progress may be related to inconsistent opportunities to use the technology. This may be due to absences, schedule changes or failure of team members to provide opportunities to use AT. It may be necessary to collect data on

opportunities provided by team members and consistency of implementation as well as on student performance.

Example:

*The IEP team has identified that Kathryn needs to use a switch for basic communication tasks such as asking for help and calling for attention. However, the specific motor movement with which Kathryn would use a switch has not been determined. The OT met with Kathryn two times per week for five weeks and collected data on motor movement and switch activations. The team then met to review the implementation plan and prepare for the next step. The OT shared the data and the need for increased opportunities for switch use. After discussion, the team created a chart listing natural and scripted ways that Kathryn could use a switch in multiple environments, so that they could determine preferred switch site and type, and intentionality of switch activations. Each team member identified a time and activity for which they would be responsible to support Kathryn's switch use and collect the necessary data. They met two weeks later and decided they had enough data to determine the switch site, switch type and intentionality of switch use in multiple settings.*

#### Key Questions for IEP Teams

- What are the environments in which the data will be collected?
- What are the relevant tasks in each environment?
- Will there be sufficient opportunities for the child to complete tasks using AT in each environment?
- Will there be sufficient opportunities for the team to collect performance data in the identified environments?

**5. Data are collected to provide teams with a means for analyzing student achievement and identifying supports and barriers that influence assistive technology use to determine what changes, if any, are needed.**

Intent: Teams regularly analyze data on multiple factors that may influence success or lead to errors in order to guide decision-making. Such factors include not only the student's understanding of expected tasks and ability to use assistive technology but also student preferences, intervention strategies, training, and opportunities to gain proficiency.

Teams use predetermined criteria for analyzing data to see if appropriate progress is occurring. The criteria for success are determined during device selection and goal setting. Student and staff expectations, barriers the student encounters, opportunities to practice skills as well as skills of same age peers may be analyzed. Data provide more than information about the student's level of performance. When adequate progress is

occurring, data will help identify essential supports for continued student achievement. In the absence of adequate progress, data can identify causative factors to suggest program adjustments.

Example:

*Jill was expected to participate in history class by answering a minimum of three questions posed to her by her teacher. The team analyzed her performance data and found that Jill had only answered one question in five days. They realized that the vocabulary words specific to the history chapter were not programmed into her communication device for that week. Jill was supported by a paraprofessional who was new to the school and did not have experience with speech generating devices. Due to busy schedules, the teacher and paraprofessional were unable to collaborate to enter the vocabulary. The team arranged professional development and scheduled additional time for team members to collaborate and program the device. The school administration provided classroom coverage during training.*

#### Key Questions for IEP Teams

- Have performance criteria been identified and agreed upon?
- Will the data identify barriers that should be removed?
- Will the data identify supports that need to be included?

#### **6. Changes are made in the student's assistive technology services and educational program when evaluation data indicate that such changes are needed to improve student achievement.**

Intent: During the process of reviewing evaluation data, the team decides whether changes or modifications need to be made in the assistive technology, expected tasks, or factors within the environment. The team acts on those decisions and supports their implementation.

Flexibility in the provision of AT services is needed in order to support student progress. To be responsive to changes in student performance such as a change in student need, achievement, environment and/or tasks, evaluation of effectiveness data are collected in an ongoing manner and reviewed periodically. A consistent process of data collection, review, and sharing facilitates the team in determining the effectiveness of AT tools and services/strategies.

In the absence of sufficient progress, the team analyzes the data to decide what changes in the student's program need to be made. These changes may include adjustments to AT services, AT tools, or both. Analyzing data helps to pinpoint specific training or supports the student needs in order to support adequate progress in

relationship to the predetermined criteria. When the team analyzes the student performance, team members can make necessary adjustments and avoid making errors such as assuming the student has skills that are not present, assuming the student does not have skills that are actually mastered, or prematurely abandoning the AT tool. Some changes in student performance may result in a need for the IEP team to be reconvened to adjust the IEP goals.

Example:

*Mary Ellen showed minimal, but not satisfactory, gains in use of supported reading software. In reviewing the data, the team realized that her performance could be related to insufficient opportunities to use the program across settings. The team identified additional environments and natural opportunities in which the AT could be used. The trial period was extended. The team agreed to meet again in one month to determine if there had been enough opportunities to gather data and to review the data gathered during the extended time frame.*

#### Key Questions for IEP Teams

- Is the information gathered through the data shared with all team members?
- Does the data plan include frequent review and discussion by the team regarding progress?
- When do periodic progress reviews take place?
- What changes in the student's program may be indicated in response to the data?
- Are the changes indicated by the data made in a timely manner rather than waiting for the next annual IEP team meeting?

### **7. Evaluation of effectiveness is a dynamic, responsive, ongoing process that is reviewed periodically.**

Intent: Scheduled data collection occurs over time and changes are made in response to both expected and unexpected results. Data collection reflects measurement strategies appropriate to the individual student's needs. Team members evaluate and interpret data during periodic progress reviews.

In some instances the original data collection strategies planned by the team may not provide needed information. When creating and/or modifying the plan for evaluation of effectiveness, the team addresses the desired student outcomes as well as current skills in observation and data review of the staff. In developing the original evaluation plan, the team also determines the circumstances that will trigger the need to reexamine or initiate new data collection activities.

Example:

*During the IEP meeting, Stuart's team agreed to meet monthly to review data and make necessary changes in his AT use in response to the data. Stuart's goal was to complete math assignments with 90% accuracy using a talking calculator. At the first meeting, the data revealed that Stuart's accuracy on assignments had gone from 45% to 75%, but that his test performance had not changed. A plan was developed to observe Stewart during testing to provide additional data about his use of the calculator. The team planned to meet again in one month to identify changes to the plan that might be needed to help Stuart increase his test scores.*

#### Key Questions for IEP Teams

- How will team analyze and respond to data?
- What circumstances will generate a need to reevaluate the effectiveness of current tools and strategies?