MODULE SUMMARY

PARTICIPANT OBJECTIVES:

As a result of participating in this module, participants will:

1. Be able to assess the neurodevelopmental demands of the content of a lesson
2. Be able to assess the neurodevelopmental demands of the instructional strategies used in the lesson
3. Be able to modify instructional strategies of a specific lesson to accommodate neurodevelopmental diversity
4. Be able to consider how the demands of instructional strategies may impact individual students
5. Be able to develop management strategies to support individual students during a lesson
6. Network with other educators around the topic of lesson analysis

MODULE OVERVIEW:

In this module, participants will apply the neurodevelopmental framework and management strategies to their curriculum and their instructional decisions; they’ll use one of their own lesson plans as the basis for the module activities.

The module begins with an overview of how the lesson analysis process fits into the All Kinds of Minds Conceptual Model (“classroom” level). Participants will then engage in the lesson analysis process, identifying the demands of both what they teach and how they teach it, using a worksheet that will help them structure their analysis.

Next, participants will identify alternate instructional strategies for teaching their lesson and examine how different approaches may alter the overall neurodevelopmental demands of the lesson.

Finally, participants will brainstorm management strategies to support individual students who may be particularly challenged by this lesson.

PRE-REQUISITE: Completion of the Schools Attuned Program, Schools Attuned to All Kinds of Minds, or Teaching All Kinds of Minds
## MODULE AT-A-GLANCE

### LESSON ANALYSIS

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>FACILITATOR MATERIALS</th>
<th>PARTICIPANT MATERIALS</th>
<th>GROUPING</th>
<th>SUGGESTED TIME*</th>
</tr>
</thead>
</table>
| 1. Welcome/Introduction | • Facilitator pages 4-7  
• PPT-1-5  
• Flip chart and markers | • Participant page 1 | Core group | 15 min. |
| 2. Neurodevelopmental Demands of a Lesson | • Facilitator pages 8-13  
• PPT-6  
• Flip chart and markers | • Participant pages 2-5  
• Table of Neurodevelopmental Constructs  
• Glossary of Neurodevelopmental Terms  
• Construct Elaboration pages  
• Lesson plan | Core group and Individuals at grade level (GP) or subject/discipline (SSP) tables | 50 min. |
| BREAK | | | | 10 min. |
| 3. Alternate Instructional Strategies for the Whole Class | • Facilitator pages 14-16 | • Participant page 6  
• Management Resources/Strategies binder/book or Classroom Reference Guide  
• Table of Neurodevelopmental Constructs  
• Glossary of Neurodevelopmental Terms  
• Construct Elaboration pages | Individuals at grade level (GP) or subject/discipline (SSP) tables | 20 min. |
| 4. Management Strategies for Struggling Students | • Facilitator pages 17-19 | • Participant page 7  
• Management Resources/Strategies binder/book or Classroom Reference Guide | Individuals at grade level (GP) or subject/discipline (SSP) tables | 20 min. |
| 5. Closing | • Facilitator page 20 | • None | Core group | 5 min. |

**TOTAL TIME:** 2 hrs.

*Please note that times for activities may vary based on facilitation style and group dynamic.*
MODULE PREPARATION

WHAT TO BRING (PARTICIPANTS):

> Lesson plan that they are currently using in their classroom
> Materials from the Schools Attuned Program, Schools Attuned to All Kinds of Minds, or Teaching All Kinds of Minds, including Glossary and Table of Neurodevelopmental Constructs (Placemat)
> Schools Attuned participants: Management Resources/Strategies binder/book
> Teaching All Kinds of Minds participants: Classroom Reference Guide

SET-UP INFORMATION:

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<thead>
<tr>
<th>ACTIVITY</th>
<th>SET-UP REQUIREMENTS</th>
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<tbody>
<tr>
<td>1. Welcome/Introduction</td>
<td>&gt; Arrange for a laptop and LCD projector.</td>
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<td>&gt; Set up Power Point presentation to first slide.</td>
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<tr>
<td>2. Neurodevelopmental Demands of a Lesson</td>
<td>&gt; If the module will include GP participants, determine grade level groups of 3-4 participants each ahead of time if possible.</td>
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<td></td>
<td>&gt; If the module will include SSP participants, determine subject/discipline groups of 3-4 participants each ahead of time if possible.</td>
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<td></td>
<td>&gt; Familiarize yourself with the sample lesson and the Constructs, Functions, and Components tapped in this lesson</td>
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<tr>
<td>3. Alternate Instructional Strategies for the Whole Class</td>
<td>&gt; None</td>
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<tr>
<td>4. Management Strategies for Struggling Students</td>
<td>&gt; None</td>
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<tr>
<td>5. Closing</td>
<td>&gt; None</td>
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</tbody>
</table>
Welcome/Introduction

**GROUPING:** Core group

ucceed SUGGESTED TIME: 15 minutes
- 5 minutes – Welcome/review of objectives and agenda
- 5 minutes – What is Lesson Analysis?
- 5 minutes – Contextualization/Conceptual Model

**DIRECTIONS FOR ACTIVITY:**

**WELCOME/REVIEW OF OBJECTIVES AND AGENDA**

- **5 minutes**

1. Welcome participants and go over:
   - Any logistical matters as necessary
   - Materials needed for the session

2. Display PP-1 (Module Objectives) and **briefly** review the objectives.

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**Module Objectives**

As a result of participating in this module, participants will:

- Be able to assess the neurodevelopmental demands of the content of a lesson
- Be able to assess the neurodevelopmental demands of the instructional strategies used in the lesson
- Be able to modify instructional strategies of a specific lesson to accommodate neurodevelopmental diversity
- Be able to consider how the demands of instructional strategies may impact individual students
- Be able to develop management strategies to support individual students during a lesson
- Network with other educators around the topic of lesson analysis
3. Display PP-2 (Module Agenda) and briefly review the agenda.

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<thead>
<tr>
<th>Module Agenda</th>
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<tr>
<td>Welcome/Introduction</td>
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<tr>
<td>Demands of a Lesson (Lesson Analysis Process)</td>
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<tr>
<td>Break</td>
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<tr>
<td>Alternate Instructional Strategies for the Whole Class</td>
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<tr>
<td>Management Strategies for Individual Students</td>
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<tr>
<td>Closing/Evaluations</td>
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</table>

WHAT IS LESSON ANALYSIS?

光电5 minutes

1. Ask participants what the term “lesson analysis” means to them.

> Record responses on a flip chart.

**FACILITATION POINT:** In the context of All Kinds of Minds, lesson analysis is the process of identifying the neurodevelopmental demands one’s curriculum and one’s instructional strategies place on students, and analyzing how these demands can change based on one’s instructional decisions.

2. Once a broad understanding of lesson analysis has been reached by the group, transition to the discussion of the AKOM Conceptual Model – e.g., note that the group will now explore how this process fits into the big picture of the AKOM approach.

*(continued)*
CONTEXTUALIZATION/CONCEPTUAL MODEL

5 minutes

1. Display PPT-3 (AKOM Conceptual Model).

> Illustrates the foundation of AKOM approach – the core elements of the program and the continuum across which the program can be applied.

> Briefly discuss the core elements:

- **ND Framework** (8 constructs)
- **Processes and Tools** (e.g., Management by Profile, Lesson/Subject Analysis, Student Learning Partnership, and Attuning a Student)
- **AKOM Philosophy** (Nine Principles)*

*NOTE: Participants who attended the Teaching All Kinds of Minds course may not be familiar with the Nine Principles; however, the 5 Beliefs about Teaching All Kinds of Minds encompass many of the same concepts. If you have TAKOM participants in the session, make this connection for them.

FACILITATION POINT: The Conceptual Model concept/image will be new to most, if not all, module participants, but the components of the model will be familiar.


> Lesson Analysis is one of the processes for operationalizing the ND framework and the AKOM philosophy.
3. Briefly discuss the 3 levels of application: school, classroom, and student. Examples:

   - **School** – Faculty book studies, student support teams, Understanding All Kinds of Minds (a.k.a. Parent Program)

   - **Classroom** – Lesson analysis, subject analysis, instructional decisions, learning about learning

   - **Students** – Focused use of strategies, Student Learning Partnership, Attuning a Student


   - Lesson analysis primarily falls under the **classroom level** of application.
   - However, at times the lesson analysis process may prompt a teacher to develop strategies targeted toward an individual student or targeted groups of students.

**TRANSITION**

Next, participants will learn about the lesson analysis process, applying it first to a sample lesson and then to a lesson of their own.
Neurodevelopmental Demands of a Lesson

PARTICIPANT OBJECTIVES:

As a result of participating in this activity, participants will:

1. Be able to assess the neurodevelopmental demands of the content of a lesson
2. Be able to assess the neurodevelopmental demands of the instructional strategies used in the lesson

<table>
<thead>
<tr>
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<tr>
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<td>• Construct Elaboration pages</td>
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<td>• Lesson plan</td>
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</table>

GROUPING:

• Core group (for demonstration)
• Individuals at grade level (GP) or subject/discipline (SSP) tables (for lesson analysis by participants)

✴ SUGGESTED TIME: 50 minutes
• 20 minutes – Demonstration of lesson analysis process
• 25 minutes – Lesson analysis by participants
• 5 minutes – Debrief

DIRECTIONS FOR ACTIVITY:

DEMONSTRATION OF LESSON ANALYSIS PROCESS
✴ 20 minutes

1. Arrange participants in grade level and/or subject/discipline groups if you have not already done so.

2. Review activity objectives.
3. Display PPT-6 (Sample Lesson Analysis Worksheet) and direct participants to page 2 in their booklets.

INTRODUCTION: *WHAT* I TEACH VS. *HOW* I TEACH (5 min.)

1. Give participants a moment to look at the sample worksheet.

2. Ask participants to identify the difference between the left and right columns.

   > **Boxes 1-3 = Lesson content (what you teach) and its ND demands**
     - **Box 1** = the standard the lesson was designed to teach
       
       **NOTE:** When working with their own lesson plan, participants could also choose the *objective(s)* of the lesson or the *main concept of the lesson* depending on what their lesson plan design emphasizes.
       
       - Certain curricula is generally required (i.e., double digit addition to second graders); teachers rarely have flexibility to change the curriculum.
       
       - Each standard/objective or concept has inherent ND demands.

   > **Boxes 4-6 = Instructional strategies (how you teach) and their ND demands**
     - **Box 4** = the instructional strategies the teacher used in the delivery of his lesson (in this example, modeling and individual practice)
       
       - While teachers may not have the flexibility to change the curriculum, *they are able to change/adapt their instructional practices* to address the learning needs of a broad range of students.

   > **What you teach + how you teach it = the demands of a lesson**
ND DEMANDS OF THE LESSON CONTENT (5 min.)

1. Ask participants to identify the ND demands (Construct, Function, and/or Component level) of the **content** of the sample lesson described in Box 1 and **briefly** explain their reasoning behind their choice. Record their responses on a flip chart.

   **FACILITATION POINT:** Depending on how long ago participants attended the course and/or which course they attended, they may have varying depths of knowledge of and comfort with the ND framework. Encourage participants to take their analysis to the level at which they feel comfortable.

2. After a list of 5-8 ND demands has been compiled, ask participants to narrow it down to the top 3-4 demands of the lesson content. Circle these demands on the chart and ask participants to record them on the worksheet on page 2.

   **FACILITATION POINT:** The following determinations could be made, but it is important to note that there is room for disagreement and that any answer that has sound evidence behind it should be considered.

   - **Higher Order Cognition** – Students tap into their **problem solving** skills and use a stepwise approach to solve complex word problems.
   - **Memory:**
     - **Short-term Memory** for **saliency determination** to quickly figure out which information is relevant and which is not in the word problem.
     - **Active Working Memory** – **task component maintenance** to use a multi-step process without getting lost in the middle of solving a problem and **short-term to long-term linkage** to hold current information in memory while they activate prior knowledge or skills stored about word problems.
     - **Long Term Memory** – **pattern storage** to recognize and use the common patterns in elapsed time word problems.
   - **Temporal-Sequential Ordering:**
     - **Sequential perception** to understand the sequential order in word problems.
     - **Time management** to understand time laden vocabulary used in elapsed time word problems.
     - **Higher sequential thinking** as they understand the process of solving word problems and show strong problem solving abilities.
   - **Language** – **Receptive/written** comes to read and understand the word problems in order to solve them.

**PROPORTION OF DEMANDS OF THE LESSON CONTENT (5 min.)

1. The 3-4 greatest ND demands of the lesson content may or may not be tapped equally. The next step is to identify the proportion of each of the demands in relation to this objective/standard/concept.
2. These proportions can be represented in a pie graph – how much of the pie does each Construct/Function comprise?

3. Direct participants to Box 3.

   > As a group, come to a consensus on the proportion of demand for the Constructs/Functions identified in Box 2.

   > Participants can call out percentages.

   > Illustrate these percentages on a pie chart on a flip chart.

**FACILITATION POINTS:** The following determinations could be made, but it is important to note that there is room for disagreement and that any answer that has sound evidence behind it should be considered.

- **Higher Order Cognition** is paramount since the standard the lesson is designed to teach is about problem solving.
- **Memory** is a very significant demand since the problem solving process taps into all three Functions.
- **Temporal-Sequential Ordering** plays a significant role in understanding and solving word problems.
- **Receptive Language** demand of reading the word problems is important, but the text length is short enough to make this a smaller demand of the lesson.

**ND DEMANDS OF INSTRUCTIONAL STRATEGIES (5 min.)**

1. Direct participants to Box 4. Remind participants that the focus is now shifting from **what** is taught to **how** it is taught.

2. Explain that the thought process they used to analyze **what** was taught – the demands of the content – can be used to analyze **how** it was taught – or the demands of the instructional strategies.

3. Ask participants to read over Boxes 5 and 6. Ask:

   > What, if anything, would you add or change on the example?

   > What questions do you have about the example?

4. Answer any clarifying questions and proceed to the next part of the activity.
LESSON ANALYSIS BY PARTICIPANTS
⊕ 25 minutes

1. Direct participants to pages 3-4 for detailed instructions for engaging in the lesson analysis process with their own lesson.

2. The following resources might be helpful:
   - Table of ND Constructs
   - Glossary of ND Terms
   - (for Schools Attuned participants) Construct Elaboration pages

3. Answer any clarifying questions participants may have about the activity and then ask them to begin analyzing the lesson they brought with them, using the Lesson Analysis worksheet on page 5.

4. Participants will have 25 minutes to complete the worksheet. At the halfway point in their individual work time, cue participants to move toward Part 2, working on Boxes 4-6.

5. Circulate and provide small group facilitation as needed.

DEBRIEF
⊕ 5 minutes

Suggested questions:

1. What differences surfaced between the demands of the lesson content and the demands of the instructional strategies?

2. What value do you see in the lesson analysis process – that is, what are the benefits of knowing the ND demands of a lesson in relation to both the content and the instructional strategies used to deliver the content?

3. Based on the understanding that the content demands of the lesson don’t change, what actions might a teacher take to make the lesson/concept being taught more accessible for students?
TRANSITION

In the next activity (after the break), participants will explore ways in which they might adapt their instructional strategies to make the lesson they are analyzing more accessible to the entire class.
Alternate Instructional Strategies for the Whole Class

PARTICIPANT OBJECTIVE:

1. As a result of participating in this activity, participants will be able to modify instructional strategies of a specific lesson to accommodate neurodevelopmental diversity

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GROUPING:

• Individuals at grade level (GP) or subject/discipline (SSP) tables

♫ SUGGESTED TIME: 20 minutes

• 15 minutes – Brainstorming alternate instructional strategies

• 5 minutes – Debrief

DIRECTIONS FOR ACTIVITY:

CONTEXTUALIZATION

1. Participants will now consider how changing the instructional strategies used in a lesson may change the neurodevelopmental demands placed on students.

2. Review activity objective.
BRAINSTORMING ALTERNATE INSTRUCTIONAL STRATEGIES

1. Direct participants to page 6 in their booklet – “Alternate Instructional Strategies for the Whole Class”.

2. Explain the activity:
   > Transfer the brief description of their original instructional strategy (from Box 4 on their Lesson Analysis worksheet) and the proportions of ND demands of their instructional strategy (from Box 5).
   > Brainstorm an alternative strategy for presenting the same content and record it in the row labeled “Alternative Strategy #1”. Confer with colleagues and/or use the Management Resources/Strategies book or Classroom Reference Guide as a reference.
   > Identify the primary 3-4 ND demands associated with that alternative strategy. Use the Glossary, Placemat, and/or the Construct Elaboration pages for reference.
   > Represent the proportions of each of these demands in the corresponding blank pie chart.
   > Repeat this process one more time, using the row on their worksheet labeled “Alternative Strategy #2”.

3. If participants are using the Management Resources/Strategies book, consider briefly reviewing the organization of the book, reminding participants that strategies are organized by Construct, as well as by academic sections (Reading, Writing, and Math).

4. The strategies in these resources can be used as is or adapted to meet the specific needs of the lesson and/or class.

5. Answer any clarifying questions before participants begin the activity.

6. Circulate and provide small group facilitation as needed.
Suggested questions:

1. How do the alternate strategies you identified relate to the strategies you already use in your classroom?

2. If you were teaching this lesson next week, which instructional strategy would you select? Why?

3. What factors might you consider when determining whether and how to differentiate your instructional strategies for a given lesson?

4. How might the lesson analysis process be complemented by teaching your students about learning based on the ND framework?

TRANSITION

In the next activity, participants will explore strategies to support individual students in successfully meeting the demands of a lesson.
Management Strategies for Struggling Students

PARTICIPANT OBJECTIVES:

As a result of participating in this activity, participants will:

1. Be able to consider how the demands of instructional strategies may impact individual students
2. Be able to develop management strategies to support student learning during a lesson

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GROUPING:

• Individuals at grade level (GP) or subject/discipline (SSP) tables

☀️ SUGGESTED TIME: 20 minutes
• 15 minutes – Brainstorming management strategies to support struggling students
• 5 minutes – Debrief

DIRECTIONS FOR ACTIVITY:

CONTEXTUALIZE

1. In this activity, participants will shift their focus from instructional strategies geared toward the entire class to management strategies directed toward specific students who are likely to struggle with the demands of a given lesson.

2. Review activity objectives.
BRAINSTORMING ALTERNATE INSTRUCTIONAL STRATEGIES

1. Direct participants to page 7 in their booklet – “Management Strategies for Struggling Students”.

2. Explain the activity:
   > Transfer the brief descriptions of their original instructional strategy and alternative instructional strategies (from the previous activity) to the appropriate boxes on the worksheet.
   > Think of a current or former student who would likely struggle with the original instructional strategy.
   > Record the characteristics of this student that might cause him/her to struggle with this strategy (e.g., ND weaknesses).
   > Identify/develop a management strategy that could help this student experience success with this lesson. Confer with colleagues and/or use AKOM strategy resources as a reference.
   > Repeat this process with the first and second alternative instructional strategy from the previous activity.

3. Answer any clarifying questions before participants begin the activity.

4. Circulate and provide small group facilitation as needed.

DEBRIEF

1. Provide an opportunity for 1-2 participants to share with the core group:
   > one of their instructional strategies
   > characteristics of a student who would struggle with this lesson, and
> the management strategy they identified to support the student

**TRANSITION**

Move directly into the closing.
Closing

PARTICIPANT OBJECTIVES:

1. As a result of participating in this activity, participants will network with other educators around the topic of lesson analysis.

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<tr>
<td>• Facilitator page 20</td>
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GROUPING: Core group

بالغ SUGGESTED TIME: 5 minutes

DIRECTIONS FOR ACTIVITY:

1. Encourage participants to engage in the Lesson Analysis process with other lessons, continuing to think about how the ND demands of their lessons – both what they teach and how they teach it – impact student learning.

2. Reassure participants that they do not need to be an expert in the neurodevelopmental framework to accurately analyze their lessons.
   - Their comfort level with the ND framework and the lesson analysis process will deepen over time.

3. Encourage participants to continue analyzing their lessons when they return to their classrooms and schools.
   - Partner with their colleagues to collaboratively analyze lessons and create alternative lesson plans when deemed necessary.
   - Remind participants about the blank worksheets in the Appendix of their booklet, intended for future use.

4. Bring the module to closure, including making any necessary announcements regarding upcoming extended learning sessions, etc.
Facilitator’s Journal

What went well in this module:

What I would change for next time: