C&I 600: Graduate Seminar
ACTION RESEARCH PROJECT

Candidates in the graduate Elementary Education Program complete field work in their classrooms. During the final semester of the program, they conduct an action research project with their students.

The action research project includes a discussion of contextual factors, journal entries, a review of literature, a unit of instruction, an analysis of student learning, reflections on teaching, and a discussion of the action research findings.

Task 1: CONTEXTUAL FACTORS

**Due Mon., Jan. 24 (8:00 a.m.)**

Discuss (in paragraph form) contextual information that includes the following:

A. the name of the school district and building where you are teaching
B. the nature and size of the school district (rural, urban, suburban; small, large, typical)
C. the grade level you are teaching (If you are teaching in a departmentalized setting, include all of the classes and grade levels you are teaching.)
D. the number of sections in the grade level you are teaching
E. the number and role of aides, assistants and/or special education teachers/reading coaches who work with you
F. initiatives or curriculum changes that are impacting your classroom and perhaps your teaching
G. the number of students in your class (If you are teaching in a departmentalized setting, indicate the total number of students you are teaching.)
H. the number of male and female students
I. the cultural diversity in your classroom
J. the number of second language learners
K. the number of students with IEPs and the % of instruction that takes place in your classroom
L. the number of other students who also need accommodations (struggling students, students with behavioral challenges, advanced students who need challenged, students with other disabilities, etc.) and how the needs of those students are served
M. differences in the developmental levels of students in your classroom
N. socioeconomic factors that influence the school and community
O. the nature of the families of the students in your classroom
P. the number of years you have taught (including this year) at this grade level and the number of years you have taught at other grade levels
Q. any other information that could assist the reader in understanding the unique nature and needs of your classroom, including your role in and/or the district’s approach to RtI

Task 2: JOURNALS (Four consecutive daily entries and summary entry)

**First Journal Entry Due Mon., Jan. 24 (8:00 a.m.)**

**Procedures:**
1. Audiotape or videotape a lesson in the content/subject area that you have selected for the focus of your action research project. Listen/view the recording.
2. Collect and analyze formal/informal assessment data from the lesson.
3. Reflect on the lesson, your teaching, and student learning.

**Content of the Journal Entry:**
1. Describe the lesson you taught, including the objectives, procedures/activities used, and the type of assessment used to determine students’ attainment of the lesson objectives.
2. What changes did you make in your plan for the lesson, if any, as you taught the lesson? What evidence indicated those changes were needed?
3. Discuss what you learned about students’ characteristics and developmental levels, student learning, and your teaching skills from the audiotape or videotape.
4. Discuss what you learned about student achievement from the analysis of the assessment data. Be specific. Charts with assessment results can be used to support the explanation. (Examples of charts can be found on page 11.)
5. Which students struggled to attain the objectives? (Don’t use students’ names.) Why did those students struggle?
6. Which students achieved the lesson objectives easily? (Don’t use students’ names.) What might you have done to make the lesson more challenging for them?
7. Discuss the impact of your teaching skills (content knowledge, strategies used, classroom management approach, etc.) on student learning during this lesson. Provide specific examples.
Second Journal Entry

Procedures:
1. Audiotape or videotape a lesson in the content/subject area that you have selected for the focus of your action research project. Listen/view the recording.
2. Collect and analyze formal/informal assessment data from the lesson.
3. Reflect on the lesson, your teaching, and student learning.

Content of the Journal Entry:
1. Describe the lesson you taught, including the objectives, procedures/activities used, and the type of assessment used to determine students’ attainment of the lesson objectives.
2. What changes did you make in your plan for the lesson, if any, as you taught the lesson? What evidence indicated those changes were needed?
3. Discuss what you learned about students’ characteristics and developmental levels, student learning, and your teaching skills from the audiotape or videotape.
4. Discuss what you learned about student achievement from the analysis of the assessment data. Be specific. Charts with assessment results can be used to support the explanation. (Examples of charts can be found on page 11.)
5. Which students struggled to attain the objectives? (Don’t use students’ names.) Why did those students struggle?
6. Which students achieved the lesson objectives easily? (Don’t use students’ names.) What might you have done to make the lesson more challenging for them?
7. Discuss the impact of your teaching skills (content knowledge, strategies used, classroom management approach, etc.) on student learning during this lesson. Provide specific examples.

Third Journal Entry

Procedures:
1. Audiotape or videotape a lesson in the content/subject area that you have selected for the focus of your action research project. Listen/view the recording.
2. Collect and analyze formal/informal assessment data from the lesson.
3. Reflect on the lesson, your teaching, and student learning.

Content of the Journal Entry:
1. Describe the lesson you taught, including the objectives, procedures/activities used, and the type of assessment used to determine students’ attainment of the lesson objectives.
2. Discuss what you learned about student achievement from the analysis of the assessment data. Be specific. Charts with assessment results can be used to support the explanation.
3. Discuss what you learned about students’ characteristics and developmental levels, student learning, and your teaching skills from the audiotape or videotape.
4. Discuss what you learned about students’ characteristics and developmental levels, student learning, and your teaching skills from the audiotape or videotape.
5. Which students struggled to attain the objectives? (Don’t use students’ names.) Why did those students struggle?
6. Which students achieved the lesson objectives easily? (Don’t use students’ names.) What might you have done to make the lesson more challenging for them?
7. Using the data from the first, second and third journal entries, identify three atypical students, each with different characteristics/needs. One should be a student who struggles to learn, one should be a student who learns quickly and needs to be challenged, and the third should be a student for whom English is not the first language. If you do not have an ELL student, select another student who has difficulty learning or faces challenges in the classroom. You will provide specific information about each of these three students during the project. Discuss why you selected each student as an “atypical” student. (Don’t use students’ names. Use “Atypical Student 1, Atypical Student 2, and Atypical Student 3.” If you are teaching in a homogeneous setting, select three students with different characteristics/needs.
8. Discuss the impact of your teaching skills (content knowledge, strategies used, classroom management approach, etc.) on student learning during this lesson. Provide specific examples.

Fourth Journal Entry

Procedures:
1. Audiotape or videotape a lesson in the content/subject area that you have selected for the focus of your action research project. Listen/view the recording.
2. Collect and analyze formal/informal assessment data from the lesson.
3. Reflect on the lesson, your teaching, and student learning.

Content of the Journal Entry:
1. Describe the lesson you taught, including the objectives, procedures/activities used, and the type of assessment used to determine students’ attainment of the lesson objectives.
2. Discuss what you learned about the first atypical student during the lesson from your observations, the audio/videotape, and the assessment data.
3. Discuss what you learned about the second atypical student during the lesson from your observations, the audio/videotape and the assessment data.

4. Discuss what you learned about the third atypical student during the lesson from your observations, the audio/videotape, and the assessment data.

5. Discuss what you learned overall about students’ characteristics and developmental levels, student learning, and your teaching skills from the audiotape or videotape.

6. Discuss what you learned overall about student achievement from the analysis of the assessment data. Be specific. Charts with assessment results can be used to support the explanation.

7. Discuss the role your teaching skills (content knowledge, strategies used, classroom management approach, etc.) played in student learning during this lesson. Provide specific examples.

Summary Journal Entry

Procedures:
1. Review the four journal entries you have created.
2. Access any additional information about each of the three atypical students that might be helpful.
3. Continue to reflect on your teaching.

Content of the Journal Entry

1. Discuss Atypical Student #1
   (a) Discuss the social, emotional, cognitive, linguistic, and developmental characteristics of this student.
   (b) Discuss the strengths of the student in the content area you have selected for this project.
   (c) Discuss the weaknesses of the student in the content area you have selected for this project. (challenges he/she encounters during instruction in this content area)
   (d) Describe the instructional modifications the student needs in this content area.

2. Discuss Atypical Student #2
   (a) Discuss the social, emotional, cognitive, linguistic, and developmental characteristics of this student.
   (b) Discuss the strengths of the student in the content area you have selected for this project.
   (c) Discuss the weaknesses of the student in the content area you have selected for this project. (challenges he/she encounters during instruction in this content area)
   (d) Describe the instructional modifications the student needs in this content area.

3. Discuss Atypical Student #3
   (a) Discuss the social, emotional, cognitive, linguistic, and developmental characteristics of this student.
   (b) Discuss the strengths of the student in the content area you have selected for this project.
   (c) Discuss the weaknesses of the student in the content area you have selected for this project. (challenges he/she encounters during instruction in this content area)
   (d) Describe the instructional modifications the student needs in this content area.

4. Impact of Teaching Skills on Student Learning: Discuss the impact of your teaching skills (content knowledge, use of instructional strategies, ability to use assessment information, etc.) on student learning in this content area. Include a discussion of your strengths and weaknesses as a teacher in the selected content area.

5. Statement of the Problem: Identify and then describe the specific aspect of your practice in this content area that you would like to change to enhance your effectiveness and increase student learning. Discuss the specific data that led you to select this as the problem you will address in the Action Research Project. Describe how/why enhancing this aspect of your practice will increase student learning.

Tasks 3, 4, 5, 6, and 7 are due Monday, February 28 at 8:00 a.m.

Task 3: OUTLINE OF THE REVIEW OF LITERATURE

The “Review of Literature” will discuss scientifically-based research studies of practices, techniques, and strategies related to the Statement of the Problem (the area of practice you plan to improve to enhance student learning). These scientifically-based (evidence-based) research studies should describe the extent to which the practice, technique, or strategy investigated did or did not positively impact student learning. These are not articles that describe how to implement an activity or strategy. These are articles that describe the results of actual research studies that have been conducted. The studies should be applicable to the grade level you are teaching. For example, if you are investigating strategies that can be used to help fourth grade students comprehend expository text, research studies conducted in high school classrooms would not be applicable.

The “Review of Literature” (not the outline of the Review of Literature) is an eight to ten page paper synthesizing the research studies
you have read. It should not appear to be a summary of individual sources.

Major topics (at least four), which will become headings, will be used to organize the paper. Subtopics will be used to organize the discussion of each major topic. Each subtopic will be discussed in one or more separate paragraphs. At least two sources should be cited in most paragraphs of the literature review.

Create the Outline of the Review of Literature:

1. Read at least eight to ten professional research articles, books, and/or book chapters written since 2005 that discuss research studies related to the Statement of the Problem (identified in the Summary Journal Entry). Read professional literature that describes research-based “best practices” in the specific aspect of instruction you are investigating. Do not use articles and books that simply describe the implementation of an instructional practice, strategy, or technique, although these may be useful initially to help you identify techniques/strategies that you will then investigate in the research literature. References must specifically discuss the nature of the research conducted and the findings that emerged from the investigation.

2. Take notes as you read each article/book. (Use note cards or type your notes.) Your notes should include specific information about each of the research studies, as well as the findings. It is important to record the source of each note. It may be helpful to number your sources and put the number of the source on each note.

3. Review your notes and identify major topics, which will be used to organize the paper. At least four major topics should be included.

4. Organize the major topics.

5. Group all of the relevant notes for each major topic. (If you typed your notes, cut them apart or use the cut/paste tools.)

6. As you review the notes for each major topic, identify the subtopics for each major topic.

7. Group all of the relevant notes for each subtopic.

8. Organize the subtopics under each major topic and the notes under each subtopic.

9. After all notes have been organized, create an outline using brief phrases. The outline will include the major topics (designated with Roman numerals) and subtopics for each major topic (designated with capital letters). Notes for subtopics will be indicated with numbers in your outline. Nearly all of your notes (written as brief phrases) should be included in your outline. Continually review your notes to identify the most effective organization of the content as you develop the outline.

Task 4: CONCLUSIONS DUE MON., FEB. 28 (8:00 a.m.)

1. Review all of the information in your outline. Draw conclusions about the most effective instructional practices, strategies, and techniques (based on research evidence) in the area you have investigated. (Which instructional practices, strategies, and techniques are most likely to positively impact student learning?)

2. Write one or more paragraphs in which you describe your conclusions about the best practices, strategies, and techniques that are clearly supported by the research (scientifically-based or evidence-based practices).

Task 5: IDENTIFICATION OF THE TECHNIQUE, STRATEGY, or APPROACH DUE MON., FEB. 28 (8:00 a.m.)

1. From the conclusions that you have drawn, select ONE new technique, strategy, or approach that you will implement in a unit of instruction to address the problem you identified in the Summary Journal Entry. Specifically describe the new technique, strategy, or approach.

2. Develop a rationale (one or more paragraphs) supporting your selection of this technique strategy, or approach. (Explain why/how the implementation of this strategy, practice, or technique will address the problem and positively impact student learning.)

Task 6: ACTION RESEARCH HYPOTHESIS DUE MON., FEB. 28 (8:00 a.m.)

1. Consider how the implementation of this strategy, practice, or technique will impact student learning.
2. Develop an “Action Research Hypothesis” that specifically describes how you think the use of the new technique, strategy, or practice will impact student learning.

Task 7: REFERENCES   DUE MON., FEB. 28 (8:00 a.m.)

1. Develop the “References” page(s) using the APA style/format (5th edition). Only include sources that will be cited in the paper. A minimum of eight sources must be cited.

TASKS 8, 9, 10, AND 11 ARE DUE MONDAY, MARCH 7 AT 8:00 A.M.

Task 8: OVERVIEW OF THE UNIT OF INSTRUCTION   DUE MON., MARCH 7 (8:00 a.m.)

While you are waiting for feedback from the instructor for the product submitted February 28, begin planning a two-week unit of instruction (minimum) using the technique, approach, or strategy you selected. In this unit, your students should acquire new knowledge/understandings and skills. The unit/lessons must focus on a theme, topic, or one or more chapters in a textbook. Objectives, instruction and assessments should be clearly aligned. The unit should utilize instructional technology and connect with students’ experiences.

1. Description of the Instructional Unit
   A. Describe the content and skills that will be taught in the unit. (The unit must focus on a common theme, topic, novel, or one or more chapters in a text.)
   
   B. Explain how the new technique, strategy, or approach will be used during the unit. This strategy/technique should be used in most, if not all, of the lessons in the unit. INDICATE THE LESSONS IN WHICH IT WILL BE USED.

   C. Discuss how instructional technology will be used in the unit.

2. Objectives
   A. List specific objectives for each lesson of the unit. Objectives describe the knowledge and skills students are expected to acquire during the unit.

   Note: The objectives must focus on student learning and be measurable in ways that show student learning/growth. The instructional technique, practice, or strategy selected for the action research project will be used to help students achieve the unit objectives; however, the objectives must focus on knowledge and skills should acquire during the unit. The objectives should not focus on participating in or completing activities.

3. Accommodations for Atypical Students
   Identify the accommodations each atypical student will need related to the new technique, strategy, or practice that you will implement during the unit, as well as the content of the unit. For the student who learns quickly and easily, describe how you will make the technique, strategy, or practice and the content of the unit more challenging.

   A. Discuss the accommodations you will make for the first atypical student related to the implementation of the new strategy, technique, or practice, as well as the content of the unit.

   B. Discuss the accommodations you will make for the second atypical student related to the implementation of the new strategy, technique, or practice, as well as the content of the unit.

   C. Discuss the accommodations you will make for the third atypical student related to the implementation of the new strategy, technique, or practice, as well as the content of the unit.

Task 9: IMPACT OF NEW TECHNIQUE   DUE MON., MARCH 7 (8:00 a.m.)

1. Discuss how you will determine the extent to which the implementation of the new technique, strategy, or practice has impacted student learning.

Task 10: PRE-ASSESSMENT   DUE MON., MARCH 7 (8:00 a.m.)

1. Create the pre-assessment for the unit.

Guidelines for creating appropriate pre-assessments, post-assessments, and formative assessments:
A. Items/questions/tasks included in the assessment should clearly address the objectives of the unit and the content/skills that you will teach. Objectives, assessment, and instruction must align.

B. The number of items/tasks for each objective should be roughly equal and/or proportional. However, there may be a few instances in which you may only have one task or question for each objective.

C. An item analysis should be conducted (both difficulty and discrimination indexes for each item). Does the item, question, or task clearly and specifically address the objective? Is the item of an appropriate level of difficulty? It shouldn’t be so easy that it doesn’t indicate what the child knows or doesn’t know related to the content and skill included in the objective. It should not be so difficult that it requires more knowledge/skill than you will teach in the unit. When several items/questions/tasks are used to assess one objective, those items/questions/tasks should collectively address all aspects of the objective.

2. Complete Table 1 to show how the pre-assessment aligns with your instructional objectives.

<table>
<thead>
<tr>
<th>Pre-Assessment Analysis Instrument</th>
<th>Objective 1 (P=20%)</th>
<th>Objective 2 (P=20%)</th>
<th>Objective 3 (P=10%)</th>
<th>Objective 4 (P=10%)</th>
<th>Objective 5 (P=20%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific items</td>
<td>3, 7, 11, 12, 18</td>
<td>1, 4, 9, 14, 15, 17</td>
<td>2, 5, 13, 16, 20</td>
<td>6, 10</td>
<td>8, 19</td>
</tr>
<tr>
<td># of items</td>
<td>5</td>
<td>6</td>
<td>5</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Total items = 20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Explain the qualities/characteristics of your pre-assessment that indicate it is an accurate, consistent, and fair evaluation of student learning. Information from Table 1 and the “guidelines for creating appropriate pre-assessments, post-assessments, and formative assessments” listed above can be used to develop this explanation.

4. Discuss adaptations you will make to the pre-assessment to accommodate the needs of the atypical students. What modifications or accommodations will you utilize to ensure that each student will be able to represent his/her understanding of the unit concepts and skills? Modifications of the pre-assessment are not needed for the advanced student.

5. Include the answer key if a test or worksheet is used for the pre-assessment. If an activity/task is used for the pre-assessment, include it and the rubric that will be used to evaluate it.

Include the criteria you will use to determine if the students’ performance for each objective (1) exceeds expectations, (2) meets expectations – adequate mastery of the objective, (3) does not meet expectations – did not achieve the objective, or (4) indicates significant weakness related to the objective. THE SAME CRITERIA MUST BE USED FOR THE ATYPICAL STUDENTS AND THE WHOLE CLASS.

The following criteria could be used, but adapt as needed.
- **90% or above:** student exceeded expectations for the objective.
- **80% to 89%:** student met the objective.
- **79% to 62%:** student did not meet the objective.
- **61% and below:** student has a significant weakness in this content/skill.

Task 11: TIMELINE FOR IMPLEMENTATION OF THE UNIT DUE MON., MARCH 7 (8:00 a.m.)

The instructor will need at least one week to examine the unit overview and the pre-assessment. With this in mind, please indicate (a) the date you plan to conduct the pre-assessment and (b) the time period during which the unit will be implemented.

Task 12: ANALYSIS OF THE PRE-ASSESSMENT DATA (Due TWO DAYS following the administration of the Pre-Assessment)

1. After you have received feedback from your instructor on the unit and pre-assessment and at least one day prior to implementing the unit, conduct the pre-assessment. IT IS ESSENTIAL THAT YOU ANALYZE THE PRE-ASSESSMENT DATA IMMEDIATELY AND THEN USE THAT DATA TO PLAN THE LESSONS FOR THE
UNIT. The results of the pre-assessment should not be recorded as a grade. Do not ask students to correct/revise the pre-assessment.

2. Provide copies of the pre-assessment(s) completed by each of the three atypical students. Delete the students’ names from these copies.

3. Create a data chart (see Tables 2-4) that shows the individual results of the pre-assessment for each of the three atypical students. (Adapt the chart to accommodate the number of objectives you have identified for the unit.) Indicate the number of correct items/total number of items or the number of points awarded/total number of points available for the assessment of each objective. Complete this for each objective for each atypical student. Do not include the students’ names in the charts.

Table 2: Pre-Assessment Data (Example)
Atypical Student #1 (Learns quickly)

<table>
<thead>
<tr>
<th>Phase of Assessment</th>
<th>Objective 1</th>
<th>Objective 2</th>
<th>Objective 3</th>
<th>Objective 4</th>
<th>Objective 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Assessment</td>
<td>5/5 (exceeded expectations)</td>
<td>6/6 (exceeded expectations)</td>
<td>5/5 (exceeded expectations)</td>
<td>2/2 (exceeded expectations)</td>
<td>2/2 (exceeded expectations)</td>
</tr>
</tbody>
</table>

The following criteria could be used, but adapt as needed.

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>90% or above</td>
<td>student exceeded expectations for the objective.</td>
</tr>
<tr>
<td>80% to 89%</td>
<td>student met the objective.</td>
</tr>
<tr>
<td>79% to 62%</td>
<td>student did not meet the objective.</td>
</tr>
<tr>
<td>61% and below</td>
<td>student has a significant weakness in this content/skill.</td>
</tr>
</tbody>
</table>

Table 3: Pre-Assessment Data (Example)
Atypical Student #2 (ELL Student)

<table>
<thead>
<tr>
<th>Phase of Assessment</th>
<th>Objective 1</th>
<th>Objective 2</th>
<th>Objective 3</th>
<th>Objective 4</th>
<th>Objective 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Assessment</td>
<td>3/5 (significant weakness)</td>
<td>5/6 (met expectations)</td>
<td>4/5 (met expectations)</td>
<td>0/2 (significant weakness)</td>
<td>1/2 (significant weakness)</td>
</tr>
</tbody>
</table>

Table 4: Pre-Assessment Data (Example)
Atypical Student #3 (Struggling Student)

<table>
<thead>
<tr>
<th>Phase of Assessment</th>
<th>Objective 1</th>
<th>Objective 2</th>
<th>Objective 3</th>
<th>Objective 4</th>
<th>Objective 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Assessment</td>
<td>1/5 (significant weakness)</td>
<td>0/6 (significant weakness)</td>
<td>1/5 (significant weakness)</td>
<td>0/2 (significant weakness)</td>
<td>0/2 (significant weakness)</td>
</tr>
</tbody>
</table>

4. Discuss the specific findings and the implications of the analysis of the pre-assessment data.
   A. 1st atypical student
      (1) Discuss the findings, focusing on strengths and weaknesses as appropriate.
      (2) Discuss how you will modify the unit for this student based on the pre-assessment information.
   B. 2nd atypical student
      (1) Discuss the findings, focusing on strengths and weaknesses as appropriate.
      (2) Discuss how you will modify the unit for this student based on the pre-assessment information.
   C. 3rd atypical student
      (1) Discuss the findings, focusing on strengths and weaknesses as appropriate.
      (2) Discuss how you will modify the unit for this student based on the pre-assessment information.

5. Tally the pre-assessment scores for the whole class (including the three atypical students). Create a data chart (see Table 5 below) that shows the results of the pre-assessment for the entire class (including the three atypical students).
Indicate the number of correct items/total number of items or the number of points awarded/total number of points available for the assessment of each objective. Complete this step for each unit objective.

### Table 5: Pre-Assessment Data (example)

<table>
<thead>
<tr>
<th>Phase of Assessment</th>
<th>Objective 1</th>
<th>Objective 2</th>
<th>Objective 3</th>
<th>Objective 4</th>
<th>Objective 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Include the objective.</td>
<td>Include the objective.</td>
<td>Include the objective.</td>
<td>Include the objective.</td>
<td>Include the objective.</td>
</tr>
<tr>
<td>Pre-Assessment</td>
<td>4/15 or 27% exceeded</td>
<td>6/15 or 40% exceeded</td>
<td>4/15 or 27% exceeded</td>
<td>10/15 or 67% exceeded</td>
<td>7/15 or 47% exceeded</td>
</tr>
<tr>
<td></td>
<td>5/15 or 33% met</td>
<td>3/15 or 20% met</td>
<td>6/15 or 40% met</td>
<td>5/15 or 33% met</td>
<td>8/15 or 53% met</td>
</tr>
<tr>
<td></td>
<td>6/15 or 40% showed significant weakness</td>
<td>6/15 or 40% showed significant weakness</td>
<td>5/15 or 33% showed significant weakness</td>
<td>10/15 or 67% showed significant weakness</td>
<td>8/15 or 53% showed significant weakness</td>
</tr>
</tbody>
</table>

6. Discuss the specific findings and the implications of the analysis of the pre-assessment data for the whole class.

   A. Discuss the findings, focusing on strengths and weaknesses as appropriate.

   B. Discuss how you will modify the unit for all students based on the pre-assessment information. For example, if all or nearly all students earned 100% on an objective, you will either omit this aspect of the unit or make it more challenging.

**Task 13: IMPLEMENTATION OF THE UNIT AND ANALYSIS OF FORMATIVE DATA** (Due two weeks after the unit has been taught; April 15 at the latest.)

**Procedures**

Once you have administered the pre-assessment, analyzed the data, and identified specific modifications of the unit for the three atypical students and rest of the class (if needed), begin teaching the unit. Include the following information for each lesson (labeled Day One, Day Two, etc.):

1. Provide an overview of each lesson of the unit. Please include the following information:
   - Date the lesson is taught
   - Lesson objective(s)
   - Instructional procedures used in the lesson.
   - Technology used in the lesson.
   - Specific modifications for each of the three atypical students.

2. Provide a copy of the formative assessment completed by each of the three atypical students during each lesson.

3. After each lesson, add the daily formative assessment data to the data analysis chart for each atypical student. (Tables 6-8). The Formative Data Charts for the atypical students will only appear once at the end of all of the lessons.

4. What does the formative assessment data from this lesson indicate about the achievement of the lesson objectives for each of the three atypical students? Draw conclusions about why you think each of the atypical students was successful or may have struggled with specific objective(s). Respond to this question after each lesson.

5. Were the planned modifications for each of the atypical students effective? Why or why not? Respond to this question after each lesson.

6. After each lesson, add the daily formative assessment data to the “whole class” data analysis chart (Table 9). The Formative Data charts for the whole class will only appear once at the end of all of the lessons.

7. What does the formative assessment data from this lesson indicate about the achievement of the lesson objectives for the class as a whole? Draw conclusions about why you think the class as a whole was successful or may have struggled with specific objective(s). Respond to this question after each lesson.
8. Reflect on the effectiveness of the instructional technique, practice, or strategy you are investigating. Respond to this question after each lesson.

9. Describe changes you will make in the next lesson based on your analysis of this lesson. Respond to this question after each lesson.

Table 6: Formative Data (example)
Atypical Student #1

<table>
<thead>
<tr>
<th>Phase of Assessment</th>
<th>Objective 1 Include the objective.</th>
<th>Objective 2 Include the objective.</th>
<th>Objective 3 Include the objective.</th>
<th>Objective 4 Include the objective.</th>
<th>Objective 5 Include the objective.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formative Assessment</td>
<td>15/15</td>
<td>20/21</td>
<td>18/18</td>
<td>10/10</td>
<td>20/20</td>
</tr>
</tbody>
</table>

Table 7: Formative Data (example)
Atypical Student #2

<table>
<thead>
<tr>
<th>Phase of Assessment</th>
<th>Objective 1 Include the objective.</th>
<th>Objective 2 Include the objective.</th>
<th>Objective 3 Include the objective.</th>
<th>Objective 4 Include the objective.</th>
<th>Objective 5 Include the objective.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formative Assessment</td>
<td>14/15</td>
<td>19/21</td>
<td>14/18</td>
<td>8/10</td>
<td>12/20</td>
</tr>
</tbody>
</table>

Table 8: Formative Data (example)
Atypical Student #3

<table>
<thead>
<tr>
<th>Phase of Assessment</th>
<th>Objective 1 Include the objective.</th>
<th>Objective 2 Include the objective.</th>
<th>Objective 3 Include the objective.</th>
<th>Objective 4 Include the objective.</th>
<th>Objective 5 Include the objective.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formative Assessment</td>
<td>12/15</td>
<td>15/21</td>
<td>10/18</td>
<td>9/10</td>
<td>17/20</td>
</tr>
</tbody>
</table>

Table 9: Whole Class Formative Data Analysis

<table>
<thead>
<tr>
<th>Phase of Assessment</th>
<th>Objective 1 Include the objective.</th>
<th>Objective 2 Include the objective.</th>
<th>Objective 3 Include the objective.</th>
<th>Objective 4 Include the objective.</th>
<th>Objective 5 Include the objective.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formative Assessment</td>
<td>8/15 or 53% exceeded 6/15 or 40% met 1/15 or 7% did not meet</td>
<td>14/15 or 93% exceeded 1/15 or 7% met</td>
<td>10/15 or 67% exceeded 1/15 or 7% met 2/15 or 13% did not meet 2/15 or 13% showed significant weakness</td>
<td>12/15 or 80% exceeded 3/15 or 20% met</td>
<td>12/15 or 80% exceeded 2/15 or 13% met 1/15 or 7% did not meet</td>
</tr>
</tbody>
</table>

Task 14: POST-ASSESSMENT (Due two weeks after the unit has been taught; April 15 at the latest.)

1. Create the post-assessment for the unit. In some cases, the pre- and the post-assessment may be similar. However, if the pre-assessment indicates that most students have already mastered one or more of the unit objectives, you will need to revise your objectives and revise your post-assessment.

2. Complete Table 10 to show how the post-assessment aligns with your instructional objectives.
3. Explain the qualities/characteristics of your post-assessment that indicate it is an accurate, consistent, and fair evaluation of student learning. Information from Table 10 and the “guidelines for creating appropriate pre-assessments, post-assessments, and formative assessments” (page 8) can be used to develop this explanation.

4. Discuss adaptations you will make to the post-assessment to accommodate the needs of the atypical students. What modifications or accommodations will you utilize to ensure that each student will be able to represent his/her understanding of the unit concepts/skills? Modifications of the post-assessment are not needed for the advanced student.

5. Include the answer key if a test or worksheet is used for the post-assessment. If an activity/task is used as the post-assessment, include it and the rubric that will be used to evaluate it.

Include the criteria you will use to determine if the students’ performance for each objective (1) exceeds expectations, (2) meets expectations – adequate mastery of the objective, (3) does not meet expectations – did not achieve the objective, or (4) indicates significant weakness related to the objective. This criteria should be the same as the criteria established for the analysis of the pre-assessment data.

Task 15: ANALYSIS OF THE POST-ASSESSMENT AND GROWTH DATA (Due two weeks after the unit has been taught; April 15 at the latest.)

1. Provide copies of each post-assessment completed by each atypical student.

2. Add the post-assessment data to the data analysis charts for each of the three atypical students (Tables 2-4). (Simply add rows to the charts that already include the pre-assessment data.)

3. Calculate the growth of each atypical student by comparing the pre-assessment and post-assessment data. Record this information in the charts (Tables 2-4). Please note: The pre-assessment section of each chart below was completed in Task 12, #3. You can simply copy those charts and then add rows for post-assessment and growth data.

Table 11: Post-Assessment and Growth Data (Example)

<table>
<thead>
<tr>
<th>Atypical Student #1</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase of Assessment</td>
<td>Objective 1</td>
<td>Objective 2</td>
<td>Objective 3</td>
<td>Objective 4</td>
<td>Objective 5</td>
</tr>
<tr>
<td></td>
<td>Include the objective.</td>
<td>Include the objective.</td>
<td>Include the objective.</td>
<td>Include the objective.</td>
<td>Include the objective.</td>
</tr>
<tr>
<td>Pre-Assessment</td>
<td>5/5 (exceeded expectations)</td>
<td>6/6 (exceeded expectations)</td>
<td>5/5 (exceeded expectations)</td>
<td>2/2 (exceeded expectations)</td>
<td>2/2 (exceeded expectations)</td>
</tr>
<tr>
<td>Post-Assessment</td>
<td>5/5 (exceeded expectations)</td>
<td>6/6 (exceeded expectations)</td>
<td>5/5 (exceeded expectations)</td>
<td>2/2 (exceeded expectations)</td>
<td>2/2 (exceeded expectations)</td>
</tr>
<tr>
<td>Growth</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Total Test</td>
<td>20/20</td>
<td>20/20</td>
<td>20/20</td>
<td>20/20</td>
<td>20/20</td>
</tr>
</tbody>
</table>

Table 12: Post-Assessment and Growth Data (Example)

<table>
<thead>
<tr>
<th>Atypical Student #2</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase of Assessment</td>
<td>Objective 1</td>
<td>Objective 2</td>
<td>Objective 3</td>
<td>Objective 4</td>
<td>Objective 5</td>
</tr>
<tr>
<td></td>
<td>Include the objective.</td>
<td>Include the objective.</td>
<td>Include the objective.</td>
<td>Include the objective.</td>
<td>Include the objective.</td>
</tr>
</tbody>
</table>
### Table 13: Post-Assessment and Growth Data (Example)

#### Atypical Student #3

<table>
<thead>
<tr>
<th>Phase of Assessment</th>
<th>Objective 1</th>
<th>Objective 2</th>
<th>Objective 3</th>
<th>Objective 4</th>
<th>Objective 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Assessment</td>
<td>1/5 (significant weakness)</td>
<td>0/6 (significant weakness)</td>
<td>1/5 (significant weakness)</td>
<td>0/2 (significant weakness)</td>
<td>0/2 (significant weakness)</td>
</tr>
<tr>
<td>Post-Assessment</td>
<td>3/5 (significant weakness)</td>
<td>2/6 (significant weakness)</td>
<td>2/5 (significant weakness)</td>
<td>0/2 (significant weakness)</td>
<td>2/2 (exceeded expectations)</td>
</tr>
<tr>
<td>Growth</td>
<td>40%</td>
<td>34%</td>
<td>20%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-Assessment</td>
<td>13/20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-Assessment</td>
<td>17/20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Growth</td>
<td>20% increase</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Based on the post-assessment data, for which objective(s) was each of the atypical students most successful?

5. Based on the post-assessment data, for which objective(s) was each of the atypical students least successful?

6. Summarize and analyze the growth data for each of the three atypical students. Draw conclusions about the extent to which each of the atypical students did or did not achieve each objective? Why do you think growth was shown or not shown for each objective?

7. What modifications/adaptations were most helpful for each of the atypical students? Which modifications were least helpful for each of the atypical students?

8. Tally the post-assessment scores for the whole class (including the three atypical students) and add the data to the data analysis chart for the whole class (Table 5). (Simply add rows to the charts that already include the pre-assessment data.)

### Table 14: Post-Assessment and Growth Data (Example)

#### Whole Class Data

<table>
<thead>
<tr>
<th>Phase of Assessment</th>
<th>Objective 1</th>
<th>Objective 2</th>
<th>Objective 3</th>
<th>Objective 4</th>
<th>Objective 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Assessment</td>
<td>4/15 or 27% exceeded 5/15 or 33% met 6/15 or 40% showed significant weakness</td>
<td>6/15 or 40% exceeded 3/15 or 20% met 6/15 or 40% showed significant weakness</td>
<td>4/15 or 27% exceeded 6/15 or 40% met 5/15 or 33% showed significant weakness</td>
<td>10/15 or 67% exceeded 5/15 or 33% showed significant weakness</td>
<td>7/15 or 47% exceeded 8/15 or 53% showed significant weakness</td>
</tr>
<tr>
<td>Post-Assessment</td>
<td>8/15 or 53% exceeded 3/15 or 20% met 10/15 or 67% exceeded 2/15 or 13% met</td>
<td>10/15 or 67% exceeded 3/15 or 20% met 2/15 or 13% still</td>
<td>10/15 or 67% exceeded 3/15 or 20% met 2/15 or 13% still</td>
<td>12/15 or 80% exceeded 5/15 or 33% still showed</td>
<td>10/15 or 67% exceeded 5/15 or 33% still showed significant weakness</td>
</tr>
</tbody>
</table>
Growth (find the difference in the number of students in each category using the pre-assessment and post-assessment data; calculate the percentage of change, and identify the change as an increase or decrease)

<table>
<thead>
<tr>
<th>Category</th>
<th>Pre-assessment</th>
<th>Post-assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exceeded</td>
<td>4/15 or 27%</td>
<td>4/15 or 27% increase in the number who exceeded; 2/15 or 13% decrease in the number who showed significant weakness</td>
</tr>
<tr>
<td>Met</td>
<td>1/15 or 7%</td>
<td>1/15 or 7% decrease in the number who met; 4/15 or 27% decrease in the number who showed significant weakness</td>
</tr>
<tr>
<td>Significant weakness</td>
<td>2/15 or 13%</td>
<td>6/15 or 40% increase in the number who exceeded; 3/15 or 20% decrease in the number who showed significant weakness</td>
</tr>
<tr>
<td>Decreased</td>
<td>2/15 or 13%</td>
<td>2/15 or 13% decrease in the number who showed significant weakness; 3/15 or 20% decrease in the number who exceeded; 3/15 or 20% decrease in the number who met; 3/15 or 20% decrease in the number who showed significant weakness</td>
</tr>
</tbody>
</table>

9. Based on the post-assessment data, for which objective(s) was the class as a whole most successful?
10. Based on the post-assessment data, for which objective(s) was the class as a whole least successful?
11. Summarize and analyze the growth data for the whole class. Draw conclusions about the extent to which the whole class did or did not achieve each objective? Why do you think growth was shown or not shown for each objective?

**Task 16: REFLECT ON UNIT AND TEACHING**  (Due two weeks after the unit has been taught; April 15 at the latest.)

1. Discuss examples of “research-based practices” (in addition to the new technique) used in the unit.
2. Discuss how the unit connected instruction with students’ experiences.
3. Discuss how the use of technology enhanced student learning.
4. How effectively did you utilize your pre-assessment and formative assessment data to provide appropriate instruction and activities?
5. Discuss your strengths and weaknesses in teaching this unit.
6. Discuss what you learned about promoting student learning.

**Task 17: EXAMINATION OF THE RESEARCH HYPOTHESIS**  (Due two weeks after the unit has been taught; April 15 at the latest.)

1. Review (and restate) your Action Research Hypothesis.
2. How did the new technique, practice, or strategy affect your instruction and student learning? Provide specific examples to support your claim.
3. To what extent was the Action Research Hypothesis confirmed? Provide data to support your conclusions.
4. Describe how you might improve or further develop your use of this technique in future lessons.
Task 18: COMPLETE THE DRAFT OF THE “REVIEW OF LITERATURE” DUE OR BEFORE WED., APRIL 20

The “Review of Literature” must be a well-written paper that includes a strong topic sentence for each paragraph; has no errors in sentence construction; has very few grammatical, mechanical, punctuation or spelling errors; and reflects the correct use of APA (5th edition) in the citation of sources, format of headings, etc.

While your instructor will provide feedback on a draft of the “Review of Literature,” it is expected that this draft will be a well-written paper. Reading the paper aloud is often useful as you revise and edit your paper!

Procedures

1. Once you have received feedback on the “Review of Literature” outline, begin writing the paper.

2. Create an Introduction to the Review of Literature (This is Chapter 2.)

3. Follow your outline closely as you develop the sections of the chapter.

4. Develop the Conclusions section (Tasks 4, 5, and 5).

5. Carefully revise and edit the paper. (Develop several drafts before submitting the paper to the instructor.)

Additional Guidelines for Writing the Review of Literature (Chapter 2)

A. A minimum of four (4) major headings must be included that directly relate to the stated problem. These sections represent important categories of information about the problem or issue.

B. Begin Chapter 2 with a one or two paragraph introduction that provides a “preview” of the major sections of the chapter.

C. The review of literature should be a minimum of 6-8 pages in length (excluding the “Conclusions” section) and demonstrate an extensive review of the literature related to your issue/problem.

D. Primary (original) sources should be used. Very few, if any, secondary sources should be included. Frequent use of secondary sources is often an indication of insufficient research in a specific area or topic. If you find a relevant and timely secondary source, try to retrieve and read the original document.

E. Very few, if any, sources published before 2005 should be used. Only truly seminal studies published prior to 2004 should be included. At least eight different sources must be cited in the chapter.

F. Citations will be used frequently. Every paragraph, except the introductory paragraph and the “conclusions” section, must include citations.

G. The chapter must reflect an analysis and synthesis of the research. The text of the chapter cannot be written as a series of summaries of articles. This is apparent when the same author/authors are cited consecutively. Most paragraphs should include citations from at least two different sources. As you write this chapter, it is appropriate for you to feel that all you are doing is citing sources.

H. Chapter 2 involves extensive paraphrasing. See the University of Madison website for examples of appropriate and inappropriate paraphrasing. Paraphrasing is the act of restating an author's research in your own words. You must cite (acknowledge) the source of the information. You must provide a reference for any material that is written in this way - when in doubt, document the source.

I. Direct quotes should be used sparingly and mainly for emphasis.

J. Each paragraph should discuss one main idea that is introduced in the topic (first) sentence of the paragraph. A paragraph must include at least four sentences. A paragraph should not be longer than one-half page.

K. Lists cannot be used in this chapter.

L. References and In-text Citations

Please read the following information carefully as this is a challenging aspect of writing a literature review.

The following information is excerpted from Ridley, 2008, pp. 96-116.
In academic writing, it is important to include references to the work of others in two places in your document: First, within the main body of the text and, second, in a bibliography or list of references at the end of the document. References within the main body of the text are known as ‘in-text citations.’

The use of in-text citations enables the writer to:
- Acknowledge and show respect for other researchers’ contributions to the field
- Provide justification and support for assertions and arguments
- Compare, contrast, and evaluate the work others have done in the field
- Illustrate an understanding of the subject matter by demonstrating that he/she has read widely and is able to select relevant information to contextualize the writer’s research
- Enables readers to find source texts easily if they wish to find out more information
- Allows the accuracy of work to be validated
- Avoids plagiarism

There are two types of references: integral and non-integral references.

**Integral references**
An integral reference is a citation where the cited author’s name has a grammatical function in the sentence.

1. **Cited author as subject**
   Berninger et al. (2008) reasoned that students with dyslexia might not have completed the phonological stage because of persistent problems with phonological processing that are associated with reading disabilities.

2. **Cited author in initial adjunct phrase**
   In Lyster (2002) and Casalis and Colé (2009), kindergartners who were taught morphological awareness outperformed their peers (whether in the phonological awareness or control condition) on posttest measures of morphological awareness.

3. **Cited author as agent in passive sentence**
   A recently published literature review by Reed (2008) examined the effects of instruction in morphology on word identification, spelling, vocabulary, and reading comprehension.

**Non-integral references**
The use of a non-integral reference is a way of emphasizing the idea, theory or finding rather than the person who is being attributed with saying it. The three examples of non-integral references provided below illustrate the way the source information is brought into the foreground rather than the cited author. In Example 3 below, the writer carefully attributes each idea to a specific author or authors, thus avoiding any confusion.

1. **A single non-integral reference**
   Researchers have argued that explicit instruction in principles governing such spellings would help students understand why *musician* is not spelled musition (Nunes & Bryant, 2006).

2. **A generalization (authors came to the same conclusions)**
   In two of those studies, researchers focused on kindergartners, exploring the possibility that morphological awareness instruction – delivered largely orally – might provide a stronger foundation for first-grade word-reading instruction than phonological awareness instruction or their standard literacy instruction (Casalis & Colé, 2009; Lyster, 2002).

3. **Attribution to different authors (a sequence of non-integral references with a range of findings or viewpoints being attributed to different authors.)**
   Recent studies have examined the specific relationship between prosody and skilled reading by using spectrographic measures of reading prosody at the word and phrase level (Whalley & Hansen, 2006), and sentence or passage level (Cowie et al., 2002; Miller & Schwanenflugel, 2006, 2008; Schwanenflugel et al., 2004).

**Avoiding Plagiarism**
The following information is excerpted from Ridley, 2008, pp. 49-50.

Plagiarism is the use of a cited author’s exact words with no or little attempt at rephrasing.

Unless an author’s words are part of a direct quotation, this is plagiarism even if the source author is acknowledged in the correct way.
Although it may be suitable, on occasion, to use direct quotations when the exact words of a source text are used, their excessive use suggests that the writer is hiding behind the ideas of the quoted authors and that he/she does not fully understand the authors’ work.

It is essential that the writer is able to rephrase and summarize the points taken from source material.

Plagiarism is a practice which must be avoided because, in whatever way it occurs, it is considered to be ‘literary theft’ and suggests a lack of respect for the work of others.

When plagiarism occurs, it can result in work being failed or even expulsion from a course of study.

References for In-text Citation Guidelines


PUTTING IT TOGETHER: FINAL COPY OF THE ACTION RESEARCH PROJECT DUE WEDNESDAY, MAY 4

1. After completing all revisions of previous submissions suggested by the instructor, submit **two copies** of the project. One copy must be **spiral bound**, which will be retained by the department.

2. The final project will include the following components (**headings that must be included are italicized**):
   
   A. **Cover page**
   
   B. **Table of Contents**
   
   C. **Overview or abstract of the project**
   
   D. **Chapter 1: Introduction**
      
      Introduction to the chapter (this hasn’t been written previously)
      
      *Contextual Factors* (Task 1)
      
      Transition Paragraph (new)
      
      *Atypical Student One* (completed in Task 2 – Summary Journal Entry)
      
      *Atypical Student Two* (completed in Task 2 – Summary Journal Entry)
      
      *Atypical Student Three* (completed in Task 2 – Summary Journal Entry)
      
      *Impact of Teaching Skills on Student Learning* (completed in Task 2 – Summary Journal Entry)
      
      *Statement of the Problem* (completed in Task 2 – Summary Journal Entry)
   
   E. **Chapter 2: Review of Literature** (Task 18)
   
   F. **Chapter 3: Implementation of the Unit and Analysis of Data**
      
      Introduction to the chapter (this hasn’t been written previously)
      
      *Description of the Unit* (completed in Task 8, #1 A, B, C)
      
      *Accommodations for Atypical Students* (completed in Task 8, #3A, B, C)
      
      *Measuring the Impact of New Technique* (completed in Task 9)
      
      *Analysis of Pre-Assessment Data* (completed in Task 10, #1; the actual assessment tool will be included in the appendices)
      
      Explain the qualities that indicate the pre-assessment is accurate, consistent, and fair (completed in Task 10, #3)
      
      Insert Table 1 (completed in Task 10, #2)
      
      Discuss adaptations of the pre-assessment (completed in Task 10, #4)
      
      Discuss the pre-assessment findings and implications for **each** atypical student (completed in Task 12, #4 A, B, C; refer readers to your data tables)
Insert the data table for each atypical student following the discussion of the pre-assessment findings for the student (completed in Task 12, #3)
Discuss the pre-assessment findings and implications for the whole class (completed in Task 12, #6 A, B; refer readers to your data tables)
Insert the data tables for the whole class (completed in Task 12, #5)

Analysis of Formative Data (data from each lesson should be discussed)

Day One
Describe the lesson (completed in Task 13, #1)
Describe the formative assessment (created in Task 13, #2; the actual assessment tools will be included in the appendices)
Discuss the formative assessment data and modifications for each atypical student (completed in Task 13, #4 & #5; refer readers to your data tables)
Discuss the formative assessment data for the whole class (completed in Task 13, #7; refer readers to your data tables)
Reflect on effectiveness of new technique (completed in Task 13 #8)
Describe changes made in the next lesson based on data analysis (Completed in Task 13, #9)

Day Two, Day Three (etc.) – include the information outlined for Day One (above)
Insert the Formative Data Table for each atypical student (completed in Task 13, #3)
Insert the Formative Data Tables for the whole class (completed in Task 13, #6)

Analysis of Post-Assessment Data
Describe the post-assessment (completed in Task 14, #1; the actual assessment tool will be included in the appendices)
Explain the qualities that indicate the post-assessment is accurate, consistent, and fair (completed in Task 14, #3)
Insert Table 10 (completed in Task 14, #2)
Discuss adaptations of the post-assessment (completed in Task 14, #4)
Discuss the post-assessment findings for each atypical student (completed in Task 15, #4 & 5; refer readers to your data tables)
Discuss the growth data for each atypical student (completed in Task 15 #6; refer readers to your data tables)
Discuss the effectiveness of the modifications for each atypical student (completed in Task 15, #7)
Insert the post-assessment/growth data table for each atypical student following the discussion of the post-assessment data and the growth data (completed in Task 15, #2 & 3)
Discuss the post-assessment findings for the whole class (completed in Task 15, #9 & 10; refer readers to your data tables)
Discuss the growth data for the whole class (completed in Task 15 #11; refer readers to your data tables)
Insert the post-assessment/growth data table for the whole class (completed in Task 15, #8)

G. Chapter 4: Summary of Results
Introduction to the chapter (this hasn’t been written previously)
Reflection on Unit and Teaching (Task 16, #1-6)
Examination of Research Hypothesis (Task 17, #1-4)

H. References (Task 7)

I. Appendices:
Appendix A: Four journal entries
Appendix B: Copy of the pre-assessment
Appendix C: Answer key/rubric for pre-assessment
Appendix D: Copies of the three atypical students’ pre-assessments
Appendix E: Copies of the three atypical students’ formative assessments (from each lesson)
Appendix F: Copy of the post-assessment
Appendix G: Answer key/rubric for post-assessment
Appendix H: Copies of the three atypical students’ post-assessments
<table>
<thead>
<tr>
<th><strong>Action Research Project Evaluation</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name of Student:</strong> ____________________________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Unacceptable</strong></th>
<th><strong>Acceptable</strong></th>
<th><strong>Target</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Introduction</strong></td>
<td>Content does not indicate an adequate understanding of the nature of the families of students in the classroom.</td>
<td>Content indicates an adequate understanding of the nature of the families of students in the classroom.</td>
</tr>
<tr>
<td><strong>Review of Literature</strong></td>
<td>Inappropriate and/or insufficient research studies are cited; research discussed is only somewhat relevant to the action research hypothesis; some of the content is not supported by appropriate research studies</td>
<td>Appropriate and sufficient research is discussed; all research discussed is relevant to the action research hypothesis; all content is supported by appropriate research studies</td>
</tr>
<tr>
<td><strong>Accommodations for atypical students</strong> (from journals, unit – accommodations; pre-assessment data; daily journal during the unit, analysis of student learning)</td>
<td>Strengths and weaknesses of atypical students were not clearly or sufficiently discussed; inappropriate or insufficient accommodations were used for each of the focus students</td>
<td>Strengths and weaknesses of atypical students were clearly and sufficiently discussed; appropriate and sufficient accommodations were used for each of the focus students.</td>
</tr>
<tr>
<td><strong>Pre-Assessment Instrument</strong></td>
<td>Inappropriate pre-assessment instrument; some objectives of the unit were not assessed or assessed inappropriately in the pre-assessment.</td>
<td>Appropriate pre-assessment instrument; all objectives of the unit were appropriately assessed in the pre-assessment.</td>
</tr>
<tr>
<td><strong>Formative Assessments</strong></td>
<td>Inappropriate or insufficient formative assessments were used.</td>
<td>Appropriate and sufficient formative assessments were used that provided information about students’ attainment of the lesson and overall unit objectives.</td>
</tr>
<tr>
<td><strong>Post-Assessment Instrument</strong></td>
<td>Inappropriate post-assessment instrument; some objectives of the unit were not assessed or assessed inappropriately in the post-assessment.</td>
<td>Appropriate post-assessment instrument; all objectives of the unit were appropriately assessed in the post-assessment.</td>
</tr>
<tr>
<td><strong>Pre-assessment data analysis</strong></td>
<td>Pre-assessment data was not adequately or accurately analyzed and/or the pre-assessment data was not used to inform instruction.</td>
<td>Pre-assessment data was adequately and accurately analyzed; the pre-assessment data was used to inform instruction.</td>
</tr>
<tr>
<td><strong>During the unit/formative assessments (daily reflections)</strong></td>
<td>Formative assessment data was not used to inform instruction</td>
<td>Formative assessment data was used to inform instruction</td>
</tr>
<tr>
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</tr>
<tr>
<td><strong>Factors affecting student learning</strong></td>
<td>Limited discussion of factors that influenced student learning in journals and description of student population;</td>
<td>Adequate discussion of factors that influenced student learning in journals and description of student population;</td>
</tr>
<tr>
<td>(from Beginning of semester journals; Description of student population;)</td>
<td>Limited analysis of student learning as evidenced in the discussion of the pre-post assessment data (growth); factors contributing to student learning were not discussed or clearly connected to the assessment data and observations.</td>
<td>Appropriate analysis of student learning as evidenced in the discussion of the pre-post assessment data (growth) for each of the atypical students and the class; student learning for all unit objectives was discussed; factors contributing to student learning were discussed and supported by the assessment data and observations.</td>
</tr>
<tr>
<td><strong>Analysis of student learning</strong></td>
<td>Instructional methods used in the unit somewhat reflect best practices in this content area.</td>
<td>Instructional methods used in the unit reflect best practices in this content area.</td>
</tr>
<tr>
<td>(Analysis of assessment data, during the unit journals,)</td>
<td>Connections between students' experiences and the unit were limited</td>
<td>Some connections between students' experiences and the unit were discussed</td>
</tr>
<tr>
<td><strong>Reflection on Unit and Teaching - Best Practices</strong></td>
<td>Technology was not used in the unit</td>
<td>Technology was used in the unit</td>
</tr>
<tr>
<td><strong>Reflection on Unit and Teaching - Connections with students' experiences</strong></td>
<td>Did not adequately discuss strengths and weaknesses in the beginning of the semester journals; strengths and weaknesses were not supported by data (as evident in the assessment data and daily journals)</td>
<td>Adequately discussed strengths and areas of improvement in the beginning of the semester journals; strengths and weaknesses were supported by data (as evident in the assessment data and daily journals)</td>
</tr>
<tr>
<td><strong>Reflection on Unit and Teaching - Use of technology</strong></td>
<td>Strengths and weaknesses of atypical students were not clearly or sufficiently discussed; inappropriate or insufficient accommodations were used for each of the focus students</td>
<td>Strengths and weaknesses of atypical students were clearly and sufficiently discussed; appropriate and sufficient accommodations were used for each of the focus students.</td>
</tr>
<tr>
<td><strong>Strengths and weaknesses</strong></td>
<td>Did not adequately discuss strengths and weaknesses in the beginning of the semester journals; strengths and weaknesses were not supported by data (as evident in the assessment data and daily journals)</td>
<td>Adequately discussed strengths and areas of improvement in the beginning of the semester journals; strengths and weaknesses were supported by data (as evident in the assessment data and daily journals)</td>
</tr>
<tr>
<td><strong>Accommodations for atypical students</strong></td>
<td>Strengths and weaknesses of atypical students were not clearly or sufficiently discussed; inappropriate or insufficient accommodations were used for each of the focus students</td>
<td>Strengths and weaknesses of atypical students were clearly and sufficiently discussed; appropriate and sufficient accommodations were used for each of the focus students.</td>
</tr>
<tr>
<td>(from journals, unit – accommodations; pre-assessment data; daily journal during the unit, analysis of student learning)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>