George Mason University College of Education and Human Development Teaching Culturally & Linguistically Diverse and Exceptional Learners



EDCI 777 DL1– Research to Practice 3 Credits, Spring 2024 Asynchronous Online 1/16/2024 – 5/8/2024

Synchronous Meeting dates 1/25/2024; 2/22/2024; 4/11/2024

Faculty Name: Jennifer K. Santiago, Ph. D.

Office Hours: by appointment

Office Location: Zoom

Email Address: jsantia5@gmu.edu

Prerequisites/Corequisites:

Required Prerequisite: Completion of all other program requirements, including internship courses

EDCI 792, 793 or 794 for licensure candidates

Recommended Corequisite: EDCI 776
University Catalog Course Description

Provides culminating experience that synthesizes and applies essential elements of teaching culturally and linguistically diverse and exceptional learners in international contexts. Emphasizes teacher as change agent through critical inquiry into practice. Promotes collaboration among teachers and school professionals to advance achievement of diverse learners.

Course Overview

Teachers are often encouraged to implement research-based practices, required to attend workshops where research findings are presented, provided with lists of books that synthesize research, and asked to suggest changes in practice based on the implications of research.

Although these practices have their usefulness, the assumption in much of the discourse surrounding educational research is that teachers are consumers and/or objects of research, rather than producers of research. The past decade has seen a growing movement to upend these assumptions through an emphasis on the importance of teacher research. Thus, the research and theory we will read about and the methodologies with which we will engage are those associated with teacher research, also known as action research (i.e., research conducted by teachers for professional purposes). Teacher research positions teachers as producers of knowledge—professionals who can learn about and improve their practice by studying important questions that emerge from their own experiences and observations.

This course is designed to provide teachers with support for conducting self-assessments and observations of their own teaching, trying out instructional innovations and tools, and helping them reflect on what works in their teaching. Teachers will conceptualize, design, and implement an original action research project based on their teaching. Each teacher will need to begin the action research project promptly and continue to work on it each week. Course readings, online discussions and resources, and instructor feedback are all designed to support each individual in their professional development as a teacher researcher.

Course Delivery Method (Online Course)

This course will be delivered online (76% or more) using an asynchronous format via Blackboard Learning Management system (LMS) housed in the MyMason portal. You will log in to the Blackboard (Bb) course site using your Mason email name (everything before @gmu.edu) and email password. The course site will be available on Blackboard by **8:30 a.m. on January 15th**.

Under no circumstances may students participate in online class sessions (either by phone or Internet) while operating motor vehicles. Further, as expected in a face-to-face class meeting, such online participation requires undivided attention to course content and communication.

Technical Requirements

To participate in this course, students will need to satisfy the following technical requirements:

- High-speed Internet access with standard up-to-date browsers. To get a list of Blackboard's supported browsers see:
 - $\underline{https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support\#supported-browsers}$
 - To get a list of supported operation systems on different devices see: https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support#tested-devices-and-operating-systems
- Students must maintain consistent and reliable access to their GMU email and Blackboard, as these are the official methods of communication for this course.
- Students might need a headset microphone for use with the Blackboard Collaborate or Zoom conferencing tool.
- Students may be asked to create logins and passwords on supplemental websites and/or to download trial software to their computer or tablet as part of course requirements.
- The following software plug-ins for PCs and Macs are available for free download:
 - Adobe Acrobat Reader: https://get.adobe.com/reader/
 - o Windows Media Player: https://support.microsoft.com/en-us/help/14209/get-windows-media-player
 - o Apple Quick Time Player: www.apple.com/quicktime/download/

Expectations

- <u>Course Week:</u> Because asynchronous courses do not have a "fixed" meeting day, our week will start on **Monday and end on Sunday at midnight**.
- <u>Log-in Frequency:</u> Students must actively check the course Blackboard site and their GMU email for communications from the instructor, class discussions, and/or access course materials at least 3 times per week.
- <u>Participation:</u> Students are expected to actively engage in all course activities throughout the semester, which includes viewing all course materials, completing course activities and assignments, and participating in course discussions and group interactions.

- <u>Technical Competence</u>: Students are expected to demonstrate competence in the use of all course technology. Students who are struggling with technical components of the course are expected to seek assistance from the instructor and/or College or University technical services.
- <u>Technical Issues:</u> Students should anticipate some technical difficulties during the semester
 and should, therefore, budget their time accordingly. Late work will not be accepted based
 on individual technical issues.
- <u>Workload</u>: Please be aware that this course is **not** self-paced. Students are expected to meet *specific deadlines* and *due dates* listed in the **Class Schedule** provided on Blackboard. It is the student's responsibility to keep track of the weekly course schedule of topics, readings, activities, and assignments due.
 - <u>Instructor Support:</u> Students may schedule a one-on-one meeting to discuss course requirements, content or other course-related issues. Those unable to come to a Mason campus can meet with the instructor via telephone or web conference. Students should email the instructor to schedule a one-on-one session, including their preferred meeting method and suggested dates/times.
- <u>Netiquette:</u> The course environment is a collaborative space. Experience shows that even an innocent remark typed in the online environment can be misconstrued. Students must always re-read their responses carefully before posting them, so as others do not consider them as personal offenses. *Be positive in your approach with others and diplomatic in selecting your words*. Remember that you are not competing with classmates but sharing information and learning from others. All faculty are similarly expected to be respectful in all communications.
- <u>Accommodations:</u> Online learners who require effective accommodations to ensure accessibility must be registered with George Mason University Disability Services.

Learner Outcomes

This course is designed to enable candidates to:

- 1. Formulate an action research question that is relevant to their work setting;
- 2. Review research and prepare a literature review in support of the research question;
- 3. Design and conduct an action research project;
- 4. Use action research as a foundation for professional development, improvement of instruction, and advocacy for students; and
- 5. Identify approaches for sharing the results of action research.

Professional Standards

Upon completion of this course, students will have met the following professional standards:

Mason Dispositions for a Career Educator I, II, and III

- Commitment to the Profession
- Commitment to Honoring Professional Ethical Standards
- Commitment to Key Elements of Professional Knowledge

NBPTS Propositions 2, 3, and 4

- Teachers Know the Subjects They Teach and How to Teach Those Subjects to Students
- Teachers are Responsible for Managing and Monitoring Student Learning
- Teachers Think Systematically about Their Practice and Learn from Experience

Required Text

Putman, S. M. & Rock, T. (2018). Action research: Using strategic inquiry to improve teaching and learning. Los Angeles, CA: SAGE.

Recommended Texts

Brookhart, S. M. (2013). How to create and use rubrics for formative assessment and grading. Alexandria, VA: Association for Supervision & Curriculum Development (ASCD).

Grahn, L. and D. McAlpine. (2017). The keys to strategies for language instruction. Alexandria, VA: American Council on the Teaching of Foreign Languages (ACTFL).

McTighe, J., Doubet, K. J., & Carbaugh, E.M. (2020). Designing authentic performance tasks and projects. Alexandria, VA: Association for Supervision & Curriculum Development (ASCD).

Short, D., H. Becker, N. Cloud, A.B. Hellman, L. N. Levine. (2018). The 6 principles for exemplary teaching of English learners, grades K – 12. Alexandria, VA: TESOL International Assn.

Teacher Research Websites

http://www.practicalteacherresearch.com/current-issue.html (Journal of Teacher Action Research) https://newprairiepress.org/networks/ (online journal for teacher research)

https://www.drawntoscience.org/educators/action-research/ (examples in science, ESL)

http://teachersnetwork.org/tnli/research/ (teacher research)

http://carn.org.uk/?from=carnnew/ (international teacher research)

More Action Research Resources

Each starred (*) textbook below contains at least 2 sample Action Research reports.

Alber, S.M. (2011). A toolkit for action research. Lanham, MD: Rowan & Littlefield. (contains lots of sample data collection tools & data analysis display formats)

*Bradbury-Huang, H. (2015). The SAGE handbook of action research: Participative inquiry & practice. London: Sage Ltd.

Dana, N. F. & D. Yendol-Hoppey. (2014). The reflective educator's guide to classroom research, 3rd ed. Thousand Oaks, CA: Corwin Press.

*Hendricks, C. (2016). 4 th ed. Improving schools through action research. Columbus, OH: Pearson. McNiff, J. (2017). Action research. London: Sage Ltd.

*Mertler, C. A. (2019). Action research: Improving schools and empowering educators. 6 th Ed. Los Angeles: Sage.

*Mills, G. E. (2017). 6 th ed. Action research: A guide for the teacher researcher. Upper Saddle River, NJ: Pearson.

Course Performance Evaluation

Students are expected to submit all assignments on time in the manner outlined by the instructor on Blackboard.

Assignments

Assignment	Due	Percentage of
		Grade
Discussion Board	Weekly/Biweekly	10%
Action Research Plan	Week 3: February 4	15%
Literature Review	Week 8: March 19	20%
Data Collection Plan	Week 10	20%
Action Research Presentation	Week 14	15%
Data Analysis & Action Plan	Week 15	20%

Grading

At George Mason University coursework is measured in terms of quantity and quality. A credit normally represents one hour per week of lecture or recitation or not fewer than two hours per week of laboratory work throughout a semester. The number of credits is a measure of quantity. The grade is a measure of quality. The university-wide system for grading graduate courses is as follows:

Grade	Range	Grade	Interpretation	
		Points		
A+	=100	4.00	Domingonts magtains of the subject through offert	
A	94-99	4.00	Represents mastery of the subject through effort	
A-	90-93	3.67	beyond basic requirements	
B+	85-89	3.33	Reflects an understanding of and the ability to	
В	80-84	3.00	apply theories and principles at a basic level	
C*	70-79	2.00	Denotes an unacceptable level of understanding and	
F*	< 70	0.00	application of the basic elements of the course	

Note: "C" is not satisfactory for a licensure course; "F" does not meet requirements of the School of Education.

See the University Catalog for details: http://catalog.gmu.edu/policies/academic/grading/ Professional Dispositions: https://cehd.gmu.edu/students/polices-procedures/

Honor Code & Integrity of Work

Integrity of Work: TCLDEL students must adhere to the guidelines of the George Mason University Honor Code (https://catalog.gmu.edu/policies/honor-code-system/). The principle of academic integrity is taken very seriously, and violations are treated as such.

Violations of the Honor Code include:

- 1. Copying a paper or part of a paper from another student (current or past)
- 2. Reusing work that you have already submitted for another class (unless express permission has been granted by your current professor **before** you submit the work)
- 3. Copying the words of an author from a textbook or any printed source (including the Internet) or closely paraphrasing without providing a citation to credit the author. For examples of what should be cited, please refer to: https://owl.purdue.edu/owl/avoiding_plagiarism/index.html

Late Work Policy

At the graduate level all work is expected to be of high quality and submitted on the dates due. Work submitted late will be reduced one letter grade for every day of delay. Because we live in uncertain times, if you have any extraordinary circumstances (e.g., medical emergency, natural disaster) that prevent you from submitting your work in a timely manner, it is your responsibility to contact the instructor as soon as possible after the circumstances occur and make arrangements to complete your work. It is up to the discretion of the instructor to approve the late/makeup work.

Course Withdrawal with Dean Approval

For graduate and non-degree students, withdrawal after the last day for dropping a course requires approval by the student's academic dean and is permitted only for nonacademic reasons that prevent course completion (Mason catalog). **Students must contact an academic advisor in APTDIE to withdraw after the deadline**. There is no guarantee that such withdraws will be permitted.

Online Participation/Attendance Policy

Students are expected to participate in <u>all</u> online discussions. Not participating in an online discussion module will be reflected with a zero for the week and as an absence. <u>Students with two or more absences will not receive credit for the course.</u>

Incomplete (IN)

This grade may be given to students who are in good standing, but who may be unable to complete scheduled course work for a cause beyond reasonable control. The student must then complete all the requirements by the end of the ninth week of the next semester, not including summer term, and the instructor must turn in the final grade by the end of the 9th week. Unless an explicit written extension is filed with the Registrar's Office by the faculty deadline, the grade of IN is changed by the registrar to an F (Mason catalog). Faculty may grant an incomplete with a contract developed by the student with a reasonable time to complete the course at the discretion of the faculty member. The faculty member does not need to allow up to the following semester for the student to complete the course. A copy of the contract will be kept on file in the APTDIE office.

Core Values Commitment

The College of Education and Human Development is committed to collaboration, ethical leadership, innovation, research-based practice, and social justice. Students are expected to adhere to these principles: http://cehd.gmu.edu/values/.

GMU Policies and Resources for Students

Policies

- Students must adhere to the guidelines of the Mason Honor Code (see https://catalog.gmu.edu/policies/honor-code-system/).
- Students must follow the university policy for Responsible Use of Computing (see https://universitypolicy.gmu.edu/policies/responsible-use-of-computing/).
- Students are responsible for the content of university communications sent to their Mason email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students **solely** through their Mason email account.
- Students with disabilities who seek accommodations in a course must be registered with George Mason University Disability Services. Approved accommodations will begin at the time the written letter from Disability Services is received by the instructor (see https://ds.gmu.edu/).
- Students must silence all sound emitting devices during class unless otherwise authorized by the instructor.
- NOTE: Any text generated by an artificial intelligence (AI) text-generation tool (such as ChatGPT) is not accepted in this class as "the student's own work," and so will be considered similarly to text published on paper or online or text composed or significantly edited/altered by another person. The use of such text without proper attribution is a violation of academic integrity.

Campus Resources

- Support for submission of assignments to VIA should be directed to VIAhelp@gmu.edu or https://cehd.gmu.edu/aero/assessments.
- Questions or concerns regarding use of Blackboard should be directed to: https://its.gmu.edu/knowledge-base/blackboard-instructional-technology-support-for-students/.
- For information on student support resources on campus, see: https://ctfe.gmu.edu/teaching/student-support-resources-on-campus

Notice of mandatory reporting of sexual assault, interpersonal violence, and stalking:

As a faculty member, I am designated as a "Responsible Employee," and must report all disclosures of sexual assault, interpersonal violence, and stalking to Mason's Title IX Coordinator per University Policy 1202. If you wish to speak with someone confidentially, please contact one of Mason's confidential resources, such as Student Support and Advocacy Center (SSAC) at 703-380-1434 or Counseling and Psychological Services (CAPS) at 703-993-2380. You may also seek assistance from Mason's Title IX Coordinator by calling 703-993-8730 or emailing titleix@gmu.edu.

For additional information on the College of Education and Human Development, please visit our website https://cehd.gmu.edu/students/

Class Schedule

**NOTE: Class will discuss common Spring Break amongst school calendars and then finalize dates for post week 8

Module & Week #	Topics/Due Dates	Readings/Assignments		
Each week you'll be responsible for the assigned readings and Discussion Board assignments, as well as viewing materials and completing assignments in weekly modules on Blackboard. You'll also need to meet weekly deadlines for participation as described in this syllabus.				
Week 1 Tuesday Jan 16 – Sunday Jan 21	What is action research? Steps in the action research process. Professional improvement goals. Role of the research log. Course requirements. Self-Introductions.	Putman & Rock, Ch. 1 - Qs Bbd - Directions AR Plan, Syllabus, Zoom tips, Starter Qs, Video tutorials, Peer feedback Discussion Board (DB) - Intros & Act. Research Qs		
Week 2 Monday Jan 22 – Sunday Jan 28	We will meet Synchronously on Thursday Jan 25 th from 7:20pm-10:00pm Identifying and narrowing down a research topic. Describing the learning challenge (problem statement). Developing a research question. Work on Action Research Plan.	P & R, Chs. 2 & 3 (pp. 49 - 57) Qs Bbd -Sample AR Projects, Effective searches, Choosing topic, Setting targets, Identifying research sources, RQ format, APA format, video tutorials		
Week 3 Monday Jan 30 – Sunday Feb 4	Creating an annotated bibliography - the role of abstracts. Research-based vs. practitioner-focused articles. Identifying and synthesizing sources into a literature review - from broad to narrow (primary sources only). Due Sunday Feb 4: Action Research Plan.	DB - AR Plan Outline P & R, Ch. 3 (pp. 46 - 60, 66 - 68) Bbd - AR Plan, Annotated bibliography., Sample Annotated bibliography, Narrowing down searches, APA format, Video tutorials		
Week 4 Monday Feb 5 – Sunday Feb 11	Do's & Don'ts for writing a literature review. Work on annotated bibliography & Literature Review.	P & R, Ch. 3 (pp. 60 - 65) Qs Bbd - Directions Lit. Review, APA format, Video tutorials		

Week 5 Monday Feb 12 – Sunday Feb 18 Week 6 Monday Feb 19 – Sunday Feb 25	Quantitative, qualitative, and mixed methods research. Types of data sources. Triangulation matrix. Ethical considerations. Work on Literature Review. Individual conferences as needed. We will meet Synchronously on Thursday Feb 22nd from 7:20pm-10:00pm Determining data collection sources - qualitative and quantitative. Data sources - validity & reliability of results. Intra - vs. inter-rater reliability. Work on Data Collection Plan.	P & R, Ch. 4 Qs Bbd - Relevant sources, Triangulation matrix, Video tutorials, DB - Lit Rev. draft P & R, Ch. 5 Qs Bbd - Directions Data Collect. Plan, Types of Validity, Triangulation matrix, Sample AR papers, Video tutorials
Week 7 Monday Feb 26 – Sunday March 3	Draft your Data Collection Plan. Describing teaching intervention. Triangulation matrix. Creating a timeline. Possible data sources. Developing rubrics. Sample speaking assmt: Fresh Start Interview. Individual conferences as needed.	P & R, Ch. 5 Qs Bbd - Teaching intervention details, timeline, Data sources, Triangulation matrix, Dev. rubrics, Sample rubrics, Video tutorial, FS Interview DB- Triangulation matrix & Data Collection tools
Week 8	Work on Data Collection Plan.	Bbd - Directions Data
Monday	Des Condon Month 10, L'Annaton Design	Analysis Paper, Types of data,
March 4 – Sunday	Due Sunday March 10: Literature Review. (begin implementing teaching intervention and	checklists, anecdotal notes, Vocab. assessment, Analyzing
March 10	collecting data after your plan is approved).	results, Video tutorials
Week 9	Analyzing the data. Looking for patterns in the	P & R, Ch. 6 Qs Bbd -
	data - codes or themes in qualitative data.	Analyzing data, Sample data
	Descriptive statistics in quantitative analysis.	analysis papers, Video
	If not yet started, begin your teaching intervention	tutorials
	and data collection this week. Make sure to collect	
	samples of student work for pre- and post-testing	
Week 10	Reporting and sharing action research. Individual	P & R, Chs. 6, 10 Qs Bbd -
	conferences as needed. Conduct your teaching intervention this week. Work on data analysis.	Directions AR Presentation, Analyzing qualitative data, Reporting research, Video tutorials
	Due Sunday: Data Collection Plan	
Week 11	Reflecting on results and creating an action plan. Generating new questions. Organizing your data -	P & R, Ch. 7 Qs Bbd - Creating action plan, Sample Data Analysis tables/graphs

	data tables, charts, graphs. Interpreting the results. Using your triangulation matrix.	
	Conduct your teaching intervention this week	
Week 12	Writing an Action Research report/making a	P & R, Ch. 8 Qs Directions for
	presentation. Writing an abstract. Conduct your	abstracts.
	teaching intervention this week.	
	Begin drafting Data Analysis paper.	
Week 13	Conduct your teaching intervention this week.	Bbd - Preview data analysis
	Work on Data Analysis paper.	resources,
	, , ,	
		DB - Feedback Data Analysis
		& Action Plan
Week 14	Conduct your teaching intervention this week.	Bbd - Student Evaluation
	Finalize Data Analysis & Action Plan paper and	Form, Materials Release Form
	abstract (collect student samples from post-testing)	
		DB - Post abstract
	Due Sunday: Action Research Presentations	
Week 15	Due Sunday: Data Analysis & Action Plan Paper.	

Note: Faculty reserve the right to alter the schedule as necessary, with notification to students. Discussion Board & Assignments may be added or removed as the semester progresses – see Blackboard for updates.

Assignment Descriptions

Action Research Project - Overview

Teachers will design an *action research project* that is relevant to your current or future teaching position. You will identify an area of professional growth and a teaching intervention (an evidence-based teaching approach) that has a high likelihood of improving your students' learning. You will write a literature review on research on your selected teaching intervention, draft an implementation plan for this project, identify data sources to determine how the teaching intervention is working, then collect and analyze the data to determine the relationship between your teaching intervention and student learning. You will also make a brief presentation on your research and describe how you plan to share the results of your study with other teachers.

Both pre- and in-service teachers can complete this project. Teachers not currently teaching students need to make arrangements to do so as soon as possible. It is possible to <u>partner with another candidate for the purpose of accessing students</u>, sharing data and getting feedback on a <u>common topic</u>. However, <u>each candidate must write and/or present his/her own assignments</u>.* The data you collect will depend on your research question, the teaching intervention, and the students. Data sources for this project may include combinations of the following:

- quantitative analyses rubric scores, assessment scores, survey results
- qualitative analysis non-numeric data such as interviews and teacher observation notes
- student work samples writing samples, audio or video samples
- visual representations PowerPoints, images or photos of the classroom

To make this project manageable, each stage of the research process will be submitted for a separate score. This type of scaffolding supports formative assessment and allows the instructor to provide you with actionable feedback to improve your understanding of each stage. However, you need to submit each part of the project by the deadline; otherwise, you'll fall behind and may not be able to complete your project. Samples of student work that you provide will be used as evidence that you have actually conducted this research project. Data analyses submitted without samples of student work will not be graded; instead, they will need to be resubmitted with the student samples attached.

*Papers or presentations submitted for credit in another course cannot also be resubmitted for a grade in this course.

Discussion Board & Assignments – due Weekly or Biweekly

Discussion Board (DB) will be an essential part of your learning in this online course. Through regular Discussion Board postings, you will join your online class community in establishing connections through individual feedback and collaboration. You'll be responsible for providing critical and constructive peer feedback, including follow up questions, to others, possibly in an assigned small group. In order for you to interact with all students in this course and with teachers having similar research interests, small groups may change as your action research questions become finalized. Since each of you will be sharing various stages of your action research project and waiting for feedback from others, it will be extremely important for each of you to respond to others by the deadlines stated on DB. Your interactions with others should be honest and helpful, supportive without being unkind or personally offensive.

2) Action Research Plan

You need to begin with a plan. Describe how you found your focus. Describe the problem or priority achievement targets and your professional learning goal, the level of language proficiency of the language learners involved in your research and their priority learning needs, and the data to be collected. Indicate your role as current or future teacher and total contact hours per week with students. List preliminary sources for your literature review. Draft a research question. Identify at least one teaching skill that you would like to improve in order to become a more effective teacher and promote student learning.

3) Literature Review

Write a review of research that informs and supports the selection of your teaching intervention or research topic. Once you identify your research question, use search engines such as Mason Library and Google Scholar to do a focused search for at least 10 sources on your topic, a combination of peer reviewed journal articles, book chapters, books, and online blogs and articles on professional educator web sites (e.g., Reading Rockets). You'll submit about a 10-page review (double-spaced in 12-point font) synthesizing the main points of each source that support your research topic. You'll write an integrated review based on common themes across all sources rather than writing a paragraph describing each source separately (see Bb for how to write an integrated literature review).

4) Data Collection Plan

Describe how you plan to implement your research plan. Identify at least three data sources and formulate a data collection plan, including assessments of student learning. Provide a timeline for implementation of your research, with actions to be conducted week by week.

5) Data Analysis & Action Plan

After collecting your pre- and post-test data, you will analyze the results of your three data sources and determine how well your teaching intervention worked. Do you plan to use your teaching approach again in the future? Do you need to adjust its implementation? What is your action plan for moving forward with this teaching intervention? Describe how you plan to share your research with teachers in your school or program.

6) Action Research Presentation

You will make a short presentation using a multi-media approach (slides, videos, documents, photos) to share your research design, data sources, and results with classmates. As part of this presentation, you'll have the option of simulating your teaching intervention using us as your students.

Data Analysis & Action Plan – Spring 2024

	1	2	3	4
Data Analysis	Includes major inaccuracies in reporting results and/or patterns of change or does not report changes and does not provide a description of revisions made to post testing tools based on pretesting results; provides few or no data tables or graphs.	Includes major inaccuracies in reporting results and/or patterns of change and/or does not report changes or does not provide a description of revisions made to post-testing tools based on pretesting results; data tables and/or graphs show results for only some data sources and may contain inaccuracies.	Includes some or minor inaccuracies in reporting results and/or patterns of change, may not report changes for each data source, or may not provide a complete description of revisions made to post-testing tools based on pretesting results; data tables and graphs show results of each data source but may contain inaccuracies.	Accurately reports results and patterns of change for each data source and includes a complete description of revisions made to post-testing tools based on pretesting results. Provides data tables and graphs that clearly and accurately show results of each data source or scoring tool.
Data Interpretation	Does not interpret the data.	Makes few or inaccurate interpretations and unsupported inferences from the data and/or does not compare results to the literature review.	May not interpret results for each data source, makes inaccurate or unsupported inferences from the data, or does not consistently and effectively compare results to those found in the literature review. May include description rather than interpretation.	Thoroughly and accurately interprets results of each data source, making valid and complete inferences from the data, consistently and effectively comparing results to those found in the literature review.
Validity & Reliability	Includes serious threats to validity and reliability and does not address validity and reliability for each data source.	Includes serious threats to validity and reliability or contains major and/or numerous inaccuracies or omissions in defense of validity and reliability of inferences for each data source.	Contains minor inaccuracies or provides incomplete defense of validity and/or reliability of inferences for each data source.	Accurately defends various types of validity and reliability of inferences for each data source.
Action Plan	Does not make connections between data results and proposed action plan and does not reflect on effectiveness of methodology used in action research study.	Makes incomplete and/or inaccurate connections between data results and proposed action plan and does not reflect on effectiveness of methodology used in action research study.	Makes incomplete on inaccurate connections between data results and proposed action plan and/or may not reflect accurately on effectiveness of methodology used in action research study.	Makes thorough and accurate connections between data results and proposed action plan and reflects accurately on effectiveness of methodology used in action research study.