George Mason University College of Education and Human Development Mathematics Education Leadership

EDCI 702 M2 – Internship in Mathematics Education 3 Credits, Spring 2024 Wednesdays 7:20-10:00 p.m. Online Synchronous

Faculty	
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Prerequisites/Corequisites

This course should be taken within the last two semesters of the MEL program or with special permissions from the instructor.

University Catalog Course Description

Offers practical experiences and professional challenges for mathematics leaders in authentic educational settings. Activities emphasize school-based and classroom-based research and leadership. Develops the skills and abilities of the mathematics leaders to analyze classroom practice, investigate teaching and disseminate information about mathematics education in professional development settings for teachers.

Course Overview

Not Applicable.

Course Delivery Method

This course will be delivered online (76% or more) using a synchronous 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 @masonlive.gmu.edu) and email password. The course site will be available on January 16.

Under no circumstances, may candidates/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:

https://help.blackboard.com/Learn/Student/Ultra/Getting_Started/Browser_Support

- 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 will need a headset microphone for use with the Blackboard Collaborate web 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, respectively, are available for free download:
 - Adobe Acrobat Reader: <u>https://get.adobe.com/reader/</u>
 - Windows Media Player: <u>https://support.microsoft.com/en-us/help/14209/get-windows-media-player</u>
 - Apple Quick Time Player: <u>www.apple.com/quicktime/download/</u>

Expectations

• <u>Course Week:</u>

Our course week will begin on the day that our synchronous meetings take place as indicated on the Schedule of Classes.

• Log-in Frequency:

Students must actively check the course Blackboard site and their GMU email for communications from the instructor, class discussions, and/or access to course materials at least 3 times per week. In addition, students must log-in for all scheduled online synchronous meetings.

• <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.

• Workload:

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** section of this syllabus. It is the student's responsibility to keep track of the weekly course schedule of topics, readings, activities and assignments due.

• Instructor Support:

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 insure accessibility must be registered with George Mason University Disability Services.

Learner Outcomes or Objectives

This course is designed to enable students to do the following:

[Items should be a numbered list, observable, and written in third person. All objectives MUST remain constant from semester to semester.]

Learner Outcomes or Objectives

This course is designed to enable students to do the following:

Develop the skills and abilities of the mathematics specialist to analyze classroom practice, investigate teaching and disseminate information about mathematics education in professional development settings for teachers.

Professional Standards (National Council of Teachers of Mathematics (NCTM))

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

A. Standard 6: Professional Knowledge and Skills

- **a.** Take an active role in their professional growth by participating in professional development experiences that directly relate to the learning and teaching of mathematics and to their development as a mathematics instructional leader.
- c. Plan, develop, implement, and evaluate mathematics-focused professional development programs at the school and/or district level; use and assist teachers in using resources from professional mathematics education organizations such as teacher/leader discussion groups, teacher networks, and print, digital, and virtual resources/collections; and support teachers in systematically reflecting on and learning from their mathematical practice.
- **d.** Demonstrate mathematics-focused instructional leadership through actions such as coaching/mentoring; building and navigating relationships with teachers, administrators, and the community; establishing and maintaining learning communities; analyzing and evaluating educational structures and policies that affect students' equitable access to high quality mathematics instruction; leading efforts to assure that all students have opportunities to learn important mathematics; evaluating the alignment of mathematics curriculum standards, textbooks, and required assessments and making recommendations for addressing learning and achievement gaps; developing appropriate classroom or school level learning environments; and collaborating with school-based professionals to develop evidence-based interventions for high and low-achieving students.

B. Standard 6: Professional Knowledge and Skills

- **a.** Take an active role in their professional growth by participating in professional development experiences that directly relate to the learning and teaching of mathematics and to their development as a mathematics instructional leader.
- c. Plan, develop, implement, and evaluate mathematics-focused professional development programs at the school and/or district level; use and assist teachers in using resources from professional mathematics education organizations such as teacher/leader discussion groups, teacher networks, and print, digital, and virtual resources/collections; and support teachers in systematically reflecting on and learning from their mathematical practice.
- **d.** Demonstrate mathematics-focused instructional leadership through actions such as coaching/mentoring; building and navigating relationships with teachers, administrators, and the community; establishing and maintaining learning communities; analyzing and evaluating educational structures and policies that affect students' equitable access to high quality mathematics instruction; leading efforts to assure that all students have opportunities to learn important mathematics; evaluating the alignment of mathematics curriculum standards, textbooks, and required assessments and making recommendations for addressing learning and achievement gaps; developing

appropriate classroom or school level learning environments; and collaborating with school-based professionals to develop evidence-based interventions for high and low-achieving students.

C. Standard 7: Elementary Mathematics Specialist Field Experiences and Clinical Practice

- **a.** Engage in a sequence of planned field experiences and clinical practice under the supervision of an experienced and highly qualified mathematics educator that involves the development of a broad experiential base of knowledge and skills working with a range of student and adult learners in a variety of school and professional development settings and the development of interpersonal skills critical for mentoring other teachers and working with school-based personnel, district administrators, and others.
- b. Develop and use leadership skills to improve mathematics programs at the school and/or district level, e.g., coaching/mentoring new and experienced teachers to better serve students; sharing critical issues, policy initiatives, and curriculum trends related to mathematics teaching; keeping abreast of local, state, or national policy decisions related to mathematics education; communicating to educational constituents about students, curriculum, instruction, and assessment; collaborating to create a shared vision and to develop an action plan for school improvement; and partnering with schoolbased professionals to improve each student's achievement.

Required Texts

Samaras, A. P. (2011). Self-study teacher research: Improving your practice through collaborative inquiry. Sage.

***A free online version of the textbook above is available via the course Blackboard site

Recommended Texts

- National Council of Teachers of Mathematics. (2014). *Principles to actions: Ensuring mathematical success for all*. NCTM.
- National Council of Teachers of Mathematics. (2020). *Catalyzing Change in Early Childhood and Elementary Mathematics*. NCTM.
- National Council of Teachers of Mathematics. (2020). *Catalyzing Change in Middle School Mathematics*. NCTM.

Course Performance Evaluation

Students are expected to submit all assignments on time in the manner outlined by the instructor (e.g., Blackboard, VIA, hard copy).

• Assignments and/or Examinations

• Participation (20%)

Attendance

- Attend all scheduled online meetings for the entire class period is a course expectation and absence will impact your grade
- Arrive to all scheduled meetings on time
- Notify your instructor in advance if you will miss class and work with peers for missed material

Assignments

- Complete all assignments on time.
- All assignments will be assessed using posted criteria known to the student.
- For full consideration, all assignments are due to professor *electronically* in the digital drop box prior to the beginning of class on the day they are due, unless otherwise announced.

Readings, Class Activities, and Online Participation

- Complete all readings prior to class
- Participate in class and all online discussions with openness, consideration, and effort to "hear for" and "listen to" others as you also seek to be understood.
- Come to class prepared to contribute your critical reflections on both your own experiences and ideas presented by your critical friends.
- Demonstrate positive and collaborative professional dispositions towards colleagues during peer review along with a willingness to accept constructive criticism.

Critical Friend Work

- Work with a critical friend(s) to catalogue your research.
- Share weekly updates in class, send and respond to critical friend research memos. These memos are designed to co-support each other's research and to provide alternative perspectives on interpretation to increase the validity of your research. Critical friends provide support as well as a feedback loop to improve our practice. It is *critical* to have friends in research but critical friends are *not critical* in their approach with each other.
- Brainstorm ideas as a teacher about the classroom dilemma you are researching and ideas for strategies and lessons
- Share how you are integrating standards in meaningful ways
- Share peer review of your research report.
- Establish ground rules with "critical friends" and visit them often.
- Use your blackboard space to post and respond to each other's memos in the "Critical Friend." Critical friend inquiry (CFI) assignments are listed in the course schedule.

Participation Rubric					
Category	Exemplary	Accomplished	Developing	Undeveloped	
	30 Points	27-29 Points	25-26 Points	Below 25 Points	
Attendance/	Participates regularly	Participates	Participates	Does not participate	
Participation	and substantively in	regularly in	occasionally in	in discussions and	
	discussions and	discussions and	discussions and	activities	
Attendance and	activities	activities	activities		
participation are				Offers little or no	
critical components	Promotes	Demonstrates	Reveals some	evidence of	
of this course.	conversation focused	purposeful reflection	thoughts on assigned	reflection on	
Participation	on the topic	on assigned readings	readings through	assigned readings	
creates	D	through verbal	verbal contributions	a 1 1	
opportunities to	Demonstrates a high	contributions		Shows little concern	
learn from one	level of understanding		Follows rather than	for peers' learning or	
another and to	of assigned readings	Frequently involves	leads group	input.	
build a positive classroom	through verbal contributions	peers in discussion	activities.	Misses classes and is	
experience and	contributions		Solicits some peer	late for class	
community.	Prompts peer		discussion	Tate for class	
Participants	feedback and input		uiscussion	Does not make up	
contribute to	recuback and input		Misses classes or is	work	
others' learning in	Listens actively to		late for class	WOIK	
critical friend work	peers		fate for class		
by actively	peers				
listening,					
exchanging ideas,					
sharing learning					
from reading and					
websites, and					
supporting each					
other's efforts.					

• Professional Development Design (30%) (NCTM NCATE 6a, 6c, 6d)

This is a Performance Based Assessment. The student will design, develop, implement and refine a professional development experience (1-2 hours) for teachers. This should include a plan for the session and a written reflection paper about the professional development experience (3-5 pages) For a complete rubric and grading criteria please see the rubric at the end of the syllabus. The final report will be submitted on Blackboard in VIA. No Google links will be accepted.

• Self-Study Teacher Research Project (50%) (NCTM NCATE 7a, 7b)

This is a Performance Based Assessment. You are required to write a final report that includes the following sections: Rationale/Introduction, Research Question, Review of Related Literature, Method, Context, Participants, Data Collection, Analysis, Findings, Limitations, and Discussion including your reflections of self-study and implications for practice/further research. Your project should be useful to you and your students. A written report that includes the specific headings and subheading are listed in Chapter 12 of the textbook. For a complete rubric and grading criteria please see the rubric at the end of the

syllabus. The final report will be submitted on Blackboard in VIA. No Google links will be accepted.

In addition to the final report, students will submit assignments throughout the semester that will support the development and implementation of their project. Finally, students will present their findings in the last class session of the semester. Information on presentations will be provided in class and on Blackboard.

• Other Requirements

All assignments require APA formatting: American Psychological Association (2020). *Publication manual of the American psychological association*. APA.

Specifically, the following aspects of APA formatting should be addressed in any submission:

- o 12 point, Times New Roman font
- o Double spaced
- Page headers/Running head
- Cover page with title, author's name and professional affiliation
- References
- Headings
- Citations
- o Clearly organized, grammatically correct, coherent and complete
- Professional language (i.e., no jargon)

• Attendance

It is your responsibility to attend all class sessions. You are held accountable for all information from each class session whether you are present or not. Reasons for any absence must be reported to the instructor in writing.

• Tardiness

It is your responsibility to be on time for each class session. Reasons for any absence must be reported to the instructor in writing.

• Course Performance Evaluation Weighting

20% Participation

- Attendance
- Readings, Class Activities and Online Participation
- Critical Friend Work
- Weekly Researcher Log
- 30% Professional Development Design
- 50% Self-Study Teacher Researcher Project

• Grading

All assignments are to be turned in to your instructor on time. Late work will not be accepted for full credit. Assignments turned in late will receive a 10% deduction from the grade per late day or any fraction thereof (including weekends and holidays).

The final evaluation criteria utilizes the graduate grading scale and is as follows:

А	93%-100%	B+	87%-89%	С	70%-79%
A-	90%-92%	В	80%-86%	F	Below 70%

• For Master's Degrees:

Candidates must have a minimum GPA of 3.00 in coursework presented on the degree application, which may include no more than 6 credits of C. (Grades of C+, C-, or D do not apply to graduate courses. The GPA calculation excludes all transfer courses and Mason non-degree studies credits not formally approved for the degree).

• For Endorsement Requirements

Candidates must have a grade of B or higher for all licensure coursework (endorsement coursework).

Professional Dispositions

Students are expected to exhibit professional behaviors and dispositions at all times. Education professionals are held to high standards, both inside and outside of the classroom. Educators are evaluated on their behaviors and interactions with students, parents, other professionals, and the community at large. At the College of Education and Human Development, dispositions may play a part in the discussions and assignments of any/all courses in a student's program (and thus, as part or all of the grade for those assignments). For additional information visit: https://cehd.gmu.edu/students/policies-procedures/

This course will require students to audiotape, videotape, or use the audio/video conferencing feature. Students should dress professionally, speak professionally, and aware of their recording surroundings and backgrounds. Background noise (such as television, music, conversations, etc.) and inappropriate background video are distracting, unprofessional, and not allowed in this course.

Class Schedule

Note: Faculty reserves	the right to alter the schedule	e as necessary, with notification to students.
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	Topic (In Class)	Assignments Due
Week 1 1/17 Format Synchronous	Introduction to Course Overview of Self-Study Teacher Research Process and Project Critical Friend Inquiries: Access & Expectations	
Week 2 1/24 Format Asynchronous	Research Design Critical Friend Blogs: Norms of Responding Respond to your Critical Friend's CFI 1.1 Connecting Our Wonderings to Research Find research articles	Self-Study Project Read Chapters 1 & 2 CFI 1.1 Professional Development Project Ongoing
Week 3 1/31 Format Synchronous	Research Design Sharing Relevant Research Developing Research Questions Gathering Relevant Research CFI 4.1 (done collaboratively in class)	Self-Study Project Read Chapter 4 Summarize 1 research article related in dINB Professional Development Project Determine When to Implement
Week 4 2/7 Format Asynchronous	Research Design Gathering Relevant Research Summarize 4 Research Articles	Self-Study Project Write CFI 5.1 Summarize 1 Research Article Professional Development Project Ongoing
Week 5 2/14 Format Synchronous	Research DesignGathering Relevant ResearchInstructor ConsultationsPD Project Topics & GoalsWrite CFI 5.3	Self-Study Project Respond to CFI 5.1 Professional Development Project Be ready to share your Professional Development Session Plan DRAFT in class.

Week 6 2/21 Format Asynchronous	Research Design Gathering Relevant Research <i>Summarize 4 Research Articles</i> Respond to CFI 5.3	Self-Study Project Summarize 1 Research Article Professional Development Project Ongoing
Week 7 2/28 Format Synchronous	Research Design Developing Conceptual Frameworks PD Project Updates Respond to CFI 6.1	Self-Study Project Write CFI 6.1 Professional Development Project Ongoing
Week 8 3/6 Format Asynchronous	Research Implementation Research Proposals Write & Respond CFI 6.3 Launch Data Collection	Self-Study Project Read & Brainstorm CFI 6.3 All Literature Due Conceptual Framing Due Professional Development Project Ongoing
Week 9 3/13 Format Synchronous	Research ImplementationWrite CFI 8.1Create Your dINB Templates for Data CollectionData CollectionData Collection & Analysis Workshop: Problems of PracticeCollaborate Consults: Self-study Literature Review	Self-Study Project Continue Data Collection Professional Development Project Ongoing
Week 10 3/20 Format Synchronous	Research Implementation Launch Data Analysis Launch Problems of Practice Data Collection & Analysis Workshop: Problems of Practice PD Project Feedback	Self-Study Project Continue Data Collection Begin Data Analysis Respond to CFI 8.1 Professional Development Project Ongoing

Week 11 3/27 Format N/A	No Class Meeting				
Week 12 4/3 Format Asynchronous	Optional Collaborate Instructor Consults Research Implementation	Self-Study Project Continue Data Collection Continue Data Analysis Professional Development Project Ongoing			
Week 13 4/10 Format Synchronous	Research ImplementationData Collection & Analysis Workshop: Problems of PracticeCritical Friend Work: CFI 11.1Optional Collaborate Instructor Consults	Self-Study Project Continue Data Collection Continue Data Analysis Ongoing CF Feedback Professional Development Project BLACKBOARD VIA POST Final PD Plan, Materials & Reflection Uploaded			
Week 14 4/17 Format Asynchronous	Reflection on Research Writing Workshop	Self-Study Project Ongoing CF Feedback Research Presentation Preparation			
Week 15 4/24 Format Synchronous	Research Presentations				
Week 16 5/1 Format No Class Meeting		Self-Study Project BLACKBOARD VIA POST All Elements of Self-Study Research Project (dINB)			

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: <u>http://cehd.gmu.edu/values/</u>.

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.

Campus Resources

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

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

As a faculty member, I am designated as a "Non-Confidential Employee," and must report all disclosures of sexual assault, sexual harassment, interpersonal violence, and stalking to Mason's Title IX Coordinator per <u>University Policy 1202</u>. If you wish to speak with someone confidentially, please contact one of Mason's confidential resources, such as <u>Student Support and Advocacy</u> <u>Center</u> (SSAC) at 703-380-1434 or <u>Counseling and Psychological Services</u> (CAPS) at 703-993-

2380. You may also seek assistance or support measures from Mason's Title IX Coordinator by calling 703-993-8730, or emailing <u>titleix@gmu.edu</u>.

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

Professional Development Project Description Course Performance Based Assessment

This is a Performance Based Assessment. The student will design, develop, refine, implement and reflect on a professional development experience (approximately 60 minutes) for teachers, administrators or other educational professionals. The final product should include the following: 1) topic identification and rationale; 2) an implementation plan; 3) all materials used or accessed; and 4) a written reflection paper about the professional development experience. The final report will be submitted on Blackboard in Tk20. For a complete rubric and grading criteria please see the rubric at the end of the syllabus.

TOPIC IDENTIFICATION & RATIONALE

Professional development should be centered on relevant and specific mathematics topics. In this project, a rationale is provided that specifically explains the connection of the professional development to the following: the school or district's needs, the promotion of mathematics instruction within the targeted audience, local, state and/or national goals for mathematics instruction. Things to consider are:

- A Clearly Defined Focus and Purpose: What is the topic you will base your professional development on?
- A Rationale for Why This Topic Matters: What is going on in your classroom which brings your attention to this topic? Why are you interested in this topic and why does it matter to you, other teachers/administrators, your district, and the field?

IMPLEMENTATION PLAN

The implementation plan should be clearly and comprehensively written so that another individual could pick up the plan with all materials and implement the professional development. This includes:

- Timing
- Materials
- Electronic downloads of materials (not weblinks)
- Anticipated responses of participants
- A focus on mathematics
- Objectives
- Detailed activities and actions
- Planned opportunities for discussion
- Questions to ask the audience
- Anticipated teacher questions
- Anticipated responses to teacher questions,

The professional development implementation plan should emphasize collaboration and take into consideration the needs of both adult and student learners. An assessment should be included to determine the impact of the professional development and future needs of the stakeholders.

Additionally, the plan should focus on making a mathematics-focused shift through one of several actions: coaching /mentoring; building and navigating relationships with teachers, administrators, and the community; establishing and maintaining learning communities; analyzing and evaluating educational structures and policies that affect students' equitable access to high quality mathematics instruction; leading efforts to assure that all students have opportunities to learn important mathematics; evaluating the alignment of mathematics curriculum standards, textbooks, and required assessments and making recommendations for addressing learning and achievement gaps; developing appropriate classroom or school-level learning environments; and collaborating with school-based professionals to develop evidence-based interventions for high- and low-achieving students.

REFLECTION

The candidate will reflect on the role of learning and teaching of mathematics, the role of mathematics instructional leaders, the improvement of student learning and continuing the implementation.

Professional Development Project Rubric (Course Performance-Based Assessment)					
Level/Criteria	4	3	2	1	
	Exceeds	Meets	Developing	Does Not Meet	
	Expectations	Expectations		Expectations	
PROFESSIONAL DEVE	LOPMENT EXPERIENCE	RATIONALE & PARTICI	PANTS	-	
PROFESSIONAL DEVELOPMENT PLAN RATIONALE NCTM Standard 6c s Plan, develop, implement and evaluate mathematics- focused professional development programs at the school and/or district levels.	The professional development description includes all of the following elements: • meets the school or district level's needs • promotes the improvement of mathematics within the school or district • explains how the facilitation of the professional development builds upon local/ state/national goals	 The description includes two of the following elements: meets the school or district level's needs promotes the improvement of mathematics within the school or district explains how the facilitation of the professional development builds upon local/ state/national goals 	 The description includes one of the following elements: meets the school or district level's needs promotes the improvement of mathematics within the school or district explains how the facilitation of the professional development builds upon local/ state/national goals 	The description does not include any of following elements: • meets the school or district level's needs • promotes the improvement of mathematics within the school or district • explains how the facilitation of the professional development builds upon local/ state/national goals	
CONNECTING TO RATIONALE NCTM Standard 7a Engage in a sequence of planned field experiences and clinical practice under the supervision of an experienced and highly qualified mathematics educator that involves the development of a broad experiential base of knowledge and skills working with a range of student and adult learners in a variety of school and professional development settings and	The professional development plan is based on observational data for the school or district. The plan includes an analysis of the school or district environment AND an explanation of how this professional development experience will impact student learning.	The professional development plan is based on observational data for the school or district. The plan includes an analysis of the school or district environment OR an explanation of how this professional development experience will impact student learning.	The professional development plan is based on observational data for the school or district. The plan does not include an analysis of the school or district environment and does not include an explanation of how this professional development experience will impact student learning.	The professional development plan is not based on observational data for the school or district.	

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the development of interpersonal skills critical for mentoring other teachers and working with school-based				
personnel, district				
administrators, and				
others.				
PARTICIPANT	Teachers and	Teachers and	Teachers and	Teachers and
INVOLVEMENT	leaders at the	leaders at the	leaders at the	leaders at the
NCTM Standard 7b	school or district level are	school or district level are	school or district level are	school or district level are not
Develop and use	participants in the	participants in the	participants in the	involved as
leadership skills to	professional	professional	professional	participants in the
improve	development	development	development	professional
mathematics	experience.	experience.	experience.	development
programs at the				experience.
school and/or	Teachers and	Teachers and	Teachers and	
district level, e.g.,	leaders at the	leaders at the school or district	leaders at the	
collaborating to create a shared	school or district level are	level are	school or district level are not	
vision and to	encouraged to try a	encouraged to try a	encouraged to try a	
develop an action	new practice that	new mathematical	new mathematical	
plan for school	enhances the	teaching practice.	teaching practice.	
improvement; and	current			
partnering with	mathematical			
school-based	teaching practices.			
professionals to				
improve each				
student's				
achievement.				
PROFESSIONAL DEVE		THE PLAN		
SESSION PLAN	The plan includes	The plan includes	Some details	No details for
NCTM Standard 7b	sufficient detail for someone else to	sufficient detail for someone else to	necessary for implementation of	implementation of the plan are given.
Develop and use	implement the	implement the	the plan are missing.	
leadership skills to	session.	session.		It would be very
improve			Some components	difficult for
mathematics	The organization of	Some components	of the plan may be	someone else to
programs at the school and/or	the plan is both	of the plan may be difficult to follow OR	difficult to follow OR	implement the
district level, e.g.,	logical AND clear.	lack logical and/or	lack logical and/or clear organization.	session due to a lack of logical and/or
coaching/mentoring		clear organization.	Cical Organization.	clear organization.
new and				olean organization.
experienced				
teachers to better				
serve students;				
sharing critical		1		
Sharing Chucal				
issues, policy				
-				

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related to				
mathematics				
teaching; keeping				
abreast of local,				
state, or national				
policy decisions				
related to				
mathematics				
education;				
communicating to				
educational				
constituents about				
students,				
curriculum,				
instruction, and				
assessment;				
collaborating to				
create a shared				
vision and to				
develop an action				
plan for school				
improvement; and				
partnering with				
school-based				
professionals to				
improve each				
student's				
achievement.				
COACHING	The professional	The professional	The professional	The professional
	The professional	The professional	The professional	The professional
ACTIONS	development	development	development	development does
ACTIONS		-		-
	development	development	development	development does not focus on one of
ACTIONS	development provides	development provides	development provides	development does
ACTIONS NCTM Standard 6d	development provides mathematics- focused instructional	development provides mathematics- focused instructional	development provides mathematics- focused	development does not focus on one of the following actions:
ACTIONS NCTM Standard 6d Demonstrate mathematics-	development provides mathematics- focused instructional leadership through	development provides mathematics- focused instructional leadership through	development provides mathematics- focused instructional	development doesnot focus on one ofthe followingactions:coaching
ACTIONS NCTM Standard 6d Demonstrate mathematics- focused	development provides mathematics- focused instructional	development provides mathematics- focused instructional leadership through one of the following	development provides mathematics- focused instructional leadership through	 development does not focus on one of the following actions: coaching /mentoring
ACTIONS NCTM Standard 6d Demonstrate mathematics- focused instructional	development provides mathematics- focused instructional leadership through one of the following actions:	development provides mathematics- focused instructional leadership through one of the following actions:	development provides mathematics- focused instructional leadership through one of the following	 development does not focus on one of the following actions: coaching /mentoring building and
ACTIONS NCTM Standard 6d Demonstrate mathematics- focused instructional leadership through	development provides mathematics- focused instructional leadership through one of the following actions: • coaching	development provides mathematics- focused instructional leadership through one of the following	development provides mathematics- focused instructional leadership through	 development does not focus on one of the following actions: coaching /mentoring
ACTIONS NCTM Standard 6d Demonstrate mathematics- focused instructional leadership through actions such as	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring	development provides mathematics- focused instructional leadership through one of the following	 development does not focus on one of the following actions: coaching /mentoring building and
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ACTIONS NCTM Standard 6d Demonstrate mathematics- focused instructional leadership through actions such as coaching /mentoring; building and navigating relationships with teachers,	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring • building and navigating relationships with teachers,	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring • building and navigating relationships with teachers,	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring • building and navigating relationships with	 development does not focus on one of the following actions: coaching /mentoring building and navigating relationships with teachers, administrators, and the community establishing and
ACTIONS NCTM Standard 6d Demonstrate mathematics- focused instructional leadership through actions such as coaching /mentoring; building and navigating relationships with teachers, administrators, and	 development provides mathematics- focused instructional leadership through one of the following actions: coaching /mentoring building and navigating relationships with teachers, administrators, and the 	 development provides mathematics- focused instructional leadership through one of the following actions: coaching /mentoring building and navigating relationships with teachers, administrators, and the 	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring • building and navigating relationships with teachers,	 development does not focus on one of the following actions: coaching /mentoring building and navigating relationships with teachers, administrators, and the community establishing and maintaining
ACTIONS NCTM Standard 6d Demonstrate mathematics- focused instructional leadership through actions such as coaching /mentoring; building and navigating relationships with teachers, administrators, and the community;	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring • building and navigating relationships with teachers, administrators, and the community	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring • building and navigating relationships with teachers, administrators, and the community	 development provides mathematics- focused instructional leadership through one of the following actions: coaching /mentoring building and navigating relationships with teachers, administrators, and the 	 development does not focus on one of the following actions: coaching /mentoring building and navigating relationships with teachers, administrators, and the community establishing and maintaining learning
ACTIONS NCTM Standard 6d Demonstrate mathematics- focused instructional leadership through actions such as coaching /mentoring; building and navigating relationships with teachers, administrators, and the community; establishing and	 development provides mathematics- focused instructional leadership through one of the following actions: coaching /mentoring building and navigating relationships with teachers, administrators, and the community establishing and 	 development provides mathematics- focused instructional leadership through one of the following actions: coaching /mentoring building and navigating relationships with teachers, administrators, and the community establishing and 	 development provides mathematics- focused instructional leadership through one of the following actions: coaching /mentoring building and navigating relationships with teachers, administrators, and the community 	 development does not focus on one of the following actions: coaching /mentoring building and navigating relationships with teachers, administrators, and the community establishing and maintaining learning communities
ACTIONS NCTM Standard 6d Demonstrate mathematics- focused instructional leadership through actions such as coaching /mentoring; building and navigating relationships with teachers, administrators, and the community; establishing and maintaining	 development provides mathematics- focused instructional leadership through one of the following actions: coaching /mentoring building and navigating relationships with teachers, administrators, and the community establishing and maintaining 	 development provides mathematics- focused instructional leadership through one of the following actions: coaching /mentoring building and navigating relationships with teachers, administrators, and the community establishing and maintaining 	 development provides mathematics- focused instructional leadership through one of the following actions: coaching /mentoring building and navigating relationships with teachers, administrators, and the community establishing and 	 development does not focus on one of the following actions: coaching /mentoring building and navigating relationships with teachers, administrators, and the community establishing and maintaining learning communities analyzing and
ACTIONS NCTM Standard 6d Demonstrate mathematics- focused instructional leadership through actions such as coaching /mentoring; building and navigating relationships with teachers, administrators, and the community; establishing and maintaining learning	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring • building and navigating relationships with teachers, administrators, and the community • establishing and maintaining learning	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring • building and navigating relationships with teachers, administrators, and the community • establishing and maintaining learning	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring • building and navigating relationships with teachers, administrators, and the community • establishing and maintaining	 development does not focus on one of the following actions: coaching /mentoring building and navigating relationships with teachers, administrators, and the community establishing and maintaining learning communities analyzing and evaluating
ACTIONS NCTM Standard 6d Demonstrate mathematics- focused instructional leadership through actions such as coaching /mentoring; building and navigating relationships with teachers, administrators, and the community; establishing and maintaining learning communities;	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring • building and navigating relationships with teachers, administrators, and the community • establishing and maintaining learning communities	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring • building and navigating relationships with teachers, administrators, and the community • establishing and maintaining learning communities	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring • building and navigating relationships with teachers, administrators, and the community • establishing and maintaining learning	 development does not focus on one of the following actions: coaching /mentoring building and navigating relationships with teachers, administrators, and the community establishing and maintaining learning communities analyzing and evaluating educational
ACTIONS NCTM Standard 6d Demonstrate mathematics- focused instructional leadership through actions such as coaching /mentoring; building and navigating relationships with teachers, administrators, and the community; establishing and maintaining learning	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring • building and navigating relationships with teachers, administrators, and the community • establishing and maintaining learning communities • analyzing and	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring • building and navigating relationships with teachers, administrators, and the community • establishing and maintaining learning communities • analyzing and	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring • building and navigating relationships with teachers, administrators, and the community • establishing and maintaining learning communities	 development does not focus on one of the following actions: coaching /mentoring building and navigating relationships with teachers, administrators, and the community establishing and maintaining learning communities analyzing and evaluating educational structures and
ACTIONS NCTM Standard 6d Demonstrate mathematics- focused instructional leadership through actions such as coaching /mentoring; building and navigating relationships with teachers, administrators, and the community; establishing and maintaining learning communities; analyzing and evaluating	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring • building and navigating relationships with teachers, administrators, and the community • establishing and maintaining learning communities • analyzing and evaluating	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring • building and navigating relationships with teachers, administrators, and the community • establishing and maintaining learning communities • analyzing and evaluating	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring • building and navigating relationships with teachers, administrators, and the community • establishing and maintaining learning communities • analyzing and	development does not focus on one of the following actions: • coaching /mentoring • building and navigating relationships with teachers, administrators, and the community • establishing and maintaining learning communities • analyzing and evaluating educational structures and policies that
ACTIONS NCTM Standard 6d Demonstrate mathematics- focused instructional leadership through actions such as coaching /mentoring; building and navigating relationships with teachers, administrators, and the community; establishing and maintaining learning communities; analyzing and	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring • building and navigating relationships with teachers, administrators, and the community • establishing and maintaining learning communities • analyzing and evaluating educational	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring • building and navigating relationships with teachers, administrators, and the community • establishing and maintaining learning communities • analyzing and evaluating educational	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring • building and navigating relationships with teachers, administrators, and the community • establishing and maintaining learning communities • analyzing and evaluating	development does not focus on one of the following actions: • coaching /mentoring • building and navigating relationships with teachers, administrators, and the community • establishing and maintaining learning communities • analyzing and evaluating educational structures and policies that affect students'
ACTIONS NCTM Standard 6d Demonstrate mathematics- focused instructional leadership through actions such as coaching /mentoring; building and navigating relationships with teachers, administrators, and the community; establishing and maintaining learning communities; analyzing and evaluating	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring • building and navigating relationships with teachers, administrators, and the community • establishing and maintaining learning communities • analyzing and evaluating educational structures and	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring • building and navigating relationships with teachers, administrators, and the community • establishing and maintaining learning communities • analyzing and evaluating educational structures and	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring • building and navigating relationships with teachers, administrators, and the community • establishing and maintaining learning communities • analyzing and evaluating educational	 development does not focus on one of the following actions: coaching /mentoring building and navigating relationships with teachers, administrators, and the community establishing and maintaining learning communities analyzing and evaluating educational structures and policies that affect students' equitable access
ACTIONS NCTM Standard 6d Demonstrate mathematics- focused instructional leadership through actions such as coaching /mentoring; building and navigating relationships with teachers, administrators, and the community; establishing and maintaining learning communities; analyzing and evaluating educational	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring • building and navigating relationships with teachers, administrators, and the community • establishing and maintaining learning communities • analyzing and evaluating educational	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring • building and navigating relationships with teachers, administrators, and the community • establishing and maintaining learning communities • analyzing and evaluating educational	development provides mathematics- focused instructional leadership through one of the following actions: • coaching /mentoring • building and navigating relationships with teachers, administrators, and the community • establishing and maintaining learning communities • analyzing and evaluating	development does not focus on one of the following actions: • coaching /mentoring • building and navigating relationships with teachers, administrators, and the community • establishing and maintaining learning communities • analyzing and evaluating educational structures and policies that affect students'

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students' equitable access to high quality mathematics instruction; leading efforts to assure that all students have opportunities to learn important mathematics; evaluating the alignment of mathematics curriculum standards, textbooks, and required assessments and making recommendations for addressing learning and achievement gaps; developing appropriate classroom or school-level learning environments; and collaborating with school-based professionals to develop evidence- based interventions for high- and low- achieving students.	equitable access to high quality mathematics instruction • leading efforts to assure that all students have opportunities to learn important mathematics • evaluating the alignment of mathematics curriculum standards, textbooks, and required assessments and making recommendations for addressing learning and achievement gaps • developing appropriate classroom or school-level learning environments • collaborating with school-based professionals to develop evidence - based interventions for high- and low- achieving students The identified action is well-developed AND thoroughly described.	equitable access to high quality mathematics instruction • leading efforts to assure that all students have opportunities to learn important mathematics • evaluating the alignment of mathematics curriculum standards, textbooks, and required assessments and making recommendations for addressing learning and achievement gaps • developing appropriate classroom or school-level learning environments • collaborating with school-based professionals to develop evidence - based interventions for high- and low- achieving students The identified action is well-developed OR thoroughly described.	affect students' equitable access to high quality mathematics instruction leading efforts to assure that all students have opportunities to learn important mathematics evaluating the alignment of mathematics curriculum standards, textbooks, and required assessments and making recommendations for addressing learning and achievement gaps developing appropriate classroom or school-level learning environments collaborating with school-based professionals to develop evidence - based interventions for high- and low- achieving students The identified action is not well developed AND is	 mathematics instruction leading efforts to assure that all students have opportunities to learn important mathematics evaluating the alignment of mathematics curriculum standards, textbooks, and required assessments and making recommendations for addressing learning and achievement gaps developing appropriate classroom or school-level learning environments collaborating with school-based professionals to develop evidence - based interventions for high- and low- achieving students
OBJECTIVES &	Professional	Professional	not thoroughly described. Professional	Professional
ACTIVITIES NCTM Standard 6c	development is mathematics- focused.	development is mathematics- focused.	development is mathematics- focused.	development is not mathematics- focused.
Plan, develop, implement, and evaluate mathematics- focused professional	The plan clearly outlines objectives for the session AND describes detailed activities the	The plan outlines objectives for the session AND lists activities the teachers will engage	The plan outlines objectives for the session OR lists activities the teachers will engage	The objectives for the session and the opportunities for interaction are missing.
development programs at the	teachers will engage	in during the session.	in during the session.	

cohool and /ar	in during the			
school and/or	in during the			
district level.	session.	The share state		
		The plan provides		
	The plan provides	opportunities for		
	substantive	interaction and		
	opportunities for	discussion of the		
	interaction and	topics.		
	discussion of the			
	topics.			
RESOURCES &	Professional	Professional	Professional	Professional
SUPPLEMENTARY	development	development	development	development
MATERIALS	resources for	resources for	resources for	resources for
NCTM Standard 6c	teachers come from professional	teachers come from professional	teachers come from professional	teachers do not come from
Use and assist	mathematics	mathematics	mathematics	professional
	education	education	education	mathematics
teachers in using resources from				
	organizations.	organizations.	organizations.	education
professional				organizations.
mathematics	Dusfassianal	Duefersienel	Dusfassianal	Duefeesteurel
education	Professional	Professional development	Professional development	Professional development
organizations such	development	handouts and other		•
as teacher/leader	handouts and other		handouts and other	handouts and other
discussion groups,	documents (i.e.	documents (i.e.	documents (i.e.	documents (i.e.
teacher networks,	articles) meet all of	articles) meet two	articles) meet one	articles) do not
and print, digital,	the following	of the following	of the following	meet the following
and virtual	requirements:	requirements:	requirements:	requirements:
resources/	• easy to	• easy to	• easy to	• easy to
collections.	follow/read	follow/read	follow/read	follow/read
	 error-free 	 error-free 	 error-free 	 error-free
	 included or 			
	linked within	linked within	linked within	linked within
	the plan	the plan	the plan	the plan
MEETING	The professional	The professional	The professional	The professional
LEARNERS' NEEDS	development plan	development plan	development plan	development plan
	takes into	takes into	takes into	does not take into
NCTM Standard 7a	consideration adult	consideration adult	consideration adult	consideration adult
Engage in a	and student	and student	and student	and student
sequence of	learners.	learners.	learners.	learners.
planned field	icumers.	icumers.	icumers.	icumers.
experiences and	Specific	Specific	Specific	
clinical practice	considerations for	considerations for	considerations for	
under the	adult learners AND	either adult learners	adult learners and	
supervision of an	student learners are	OR student learners	student learners are	
experienced and	articulated in the	are clearly	not articulated in	
highly qualified	professional	articulated in the	the professional	
mathematics	development plan.	professional	development plan.	
educator that		development plan.		
involves the				
development of a				
broad experiential				
base of knowledge				
and skills working				
	1	1		1
with a range of				

student and adult learners in a variety of school and professional development settings and the development of interpersonal skills critical for mentoring other teachers and working with school-based personnel, district administrators, and others.				
QUESTIONS FOR TEACHERS NCTM Standard 6c Support teachers in systematically reflecting on and learning from their mathematical practice.	The plan includes questions for teachers with all of the following characteristics: • high cognitive demand (requiring higher- order thinking) • alignment with objectives/plan for the session • conducive to group/partner discussion The plan includes anticipated questions from teachers.	The plan includes questions for teachers with two of the following characteristics: • high cognitive demand (requiring higher-order thinking) • alignment with objectives/plan for the session • conducive to group/partner discussion The plan includes anticipated questions from teachers.	The plan includes questions for teachers with one of the following characteristics: • high cognitive demand (requiring higher-order thinking) • alignment with objectives/plan for the session • conducive to group/partner discussion The plan does not include anticipated questions from teachers.	The plan includes does not include questions for teachers or includes questions without the following characteristics: • high cognitive demand (requiring higher-order thinking) • alignment with objectives/plan for the session • conducive to group/partner discussion The plan does not include anticipated questions from teachers.
COLLABORATION NCTM Standard 7a Engage in a sequence of planned field experiences and clinical practice under the supervision of an experienced and highly qualified mathematics	The professional development plan includes potential responses to the anticipated teacher questions. Potential responses are framed positively and highlight the important mathematical	The professional development plan includes potential responses to the anticipated teacher questions. Potential responses are framed positively but do highlight the important mathematical	The professional development plan includes potential responses to the anticipated teacher questions. Potential responses are not framed positively and do not include the important mathematical	The professional development plan does not include potential responses to the anticipated teacher questions.

	the survey of the state of the	the meters to t	4h]
the development of	the professional	the professional	the professional	
interpersonal skills critical for	development.	development.	development.	
mentoring other				
teachers and				
working with				
school-based				
personnel, district				
administrators, and				
others.				
ASSESSMENT OF	The professional	The professional	The professional	The professional
PARTICIPANT	development	development	development	development does
KNOWLEDGE AND	includes an	includes an	includes an	not include an
NEED	assessment (i.e. exit	assessment (i.e. exit	assessment (i.e. exit	assessment (i.e. exit
NCTM Standard Ch	ticket).	ticket).	ticket).	ticket).
NCTM Standard 6b				
Advance the	The assessment	The assessment	The assessment	
	identifies teachers'	identifies teachers'	does not identify	
development in	perceptions of	perceptions of	teachers'	
themselves and	newly acquired	newly acquired	perceptions of	
others as reflective	knowledge and	knowledge and	newly acquired	
practitioners.	professional	professional	knowledge and	
	practices in their	practices in their	professional	
	mathematics	mathematics	practices in their	
	teaching AND allows	teaching OR allows	mathematics	
	teachers to indicate	teachers to indicate	teaching AND does	
	their needs and	their needs and	not allow teachers	
	support required for	support required for	to indicate their	
	implementation.	implementation.		
	implementation.	implementation.	needs and support	
			required for	
			implementation.	
SEQUENCE OF	The candidate uses	The candidate uses	The candidate uses	Three or more of
PLANNED FIELD	the all steps in the	at least four steps in	at least three steps	the following steps
EXPERIENCE	following sequence	the following	in the following	in the sequence are
	to develop/	sequence to	sequence to	missing as the
NCTM Standard 7a	implement their	develop/ implement	develop/ implement	candidate develops/
Engage in a				
	professional	their professional	their professional	implements the
sequence of	development:	development:	development:	professional
planned field	1. Develop a plan	1. Develop a plan	1. Develop a plan	development plan:
experiences and	with peer	with peer	with peer	1. Develop a plan
clinical practice	collaboration.	collaboration	collaboration	with peer
under the	where feedback is	where feedback is	where feedback is	collaboration
supervision of an	provided	provided	provided	where feedback is
experienced and	2. Modify the plan to	2. Modify the plan to	2. Modify the plan to	provided
highly qualified	include peer	include peer	include peer	2. Modify the plan to
mathematics	feedback.	feedback	feedback	include peer
educator that	3. Submit the plan to	3. Submit the plan to	3. Submit the plan to	feedback
	-	an experienced	an experienced	3. Submit the plan to
involves the	an experienced	an experienceu	-	
development of a	an experienced	and highly	and highly	
	and highly	and highly	and highly	an experienced
development of a	and highly qualified	qualified	qualified	and highly
development of a broad experiential	and highly qualified mathematics	qualified mathematics	qualified mathematics	and highly qualified
development of a broad experiential base of knowledge	and highly qualified mathematics educator in	qualified mathematics educator in	qualified mathematics educator in	and highly qualified mathematics
development of a broad experiential base of knowledge and skills working	and highly qualified mathematics	qualified mathematics	qualified mathematics	and highly qualified

learners in a variety of school and professional development settings and the development of interpersonal skills critical for mentoring other teachers and working with school-based personnel, district administrators, and others.	 4. Implement the plan in a school or district setting. 5. Reflect deeply after implementation of the plan. 	 4. Implement the plan in a school or district setting. 5. Reflect deeply after implementation of the plan. 	 4. Implement the plan in a school or district setting. 5. Reflect deeply after implementation of the plan. 	advance of implementation 4. Implement the plan in a school or district setting. 5. Reflect deeply after implementation of the plan.
	LOPMENT EXPERIENCE			
THE ROLE OF LEARNING & TEACHING OF MATHEMATICS NCTM Standard 6a Take an active role in their professional growth by participating in professional development experiences that directly relate to the learning and teaching of mathematics.	The reflection clearly identifies how the professional development experience directly related to the learning and teaching of mathematics. The reflection clearly describes the impact of the professional development experience on the candidate's personal learning and teaching of mathematics.	The reflection identifies how the professional development experience is directly related to the learning and teaching of mathematics. The reflection clearly describes the impact of the professional development experience on either the candidate's personal learning and or the candidate's personal teaching of mathematics.	The reflection identifies that the professional development experience is directly related to their learning and teaching of mathematics. The explanation of the professional development experience is not connected to the candidate's personal teaching and learning of mathematics.	The reflection does not mention the candidate's personal teaching or learning of mathematics.
THE ROLE OF MATHEMATICS INSTRUCTIONAL LEADER NCTM Standard 6a Take an active role in their professional growth by participating in professional development experiences that directly relate to their development	The reflection clearly identifies how the professional development experience directly related to the candidate's development as a mathematics instructional leader.	The reflection identifies how the professional development experience directly related to the candidate's development as a mathematics instructional leader.	The reflection does not clearly identify how the professional development experience directly related to the candidate's development as a mathematics instructional leader.	The reflection does not mention the candidate's development as a mathematics instructional leader

as a mathematics				
instructional leader.				
IMPROVE STUDENT UNDERSTANDING NCTM Standard 7a Engage in a sequence of planned field experiences and clinical practice under the supervision of an experienced and highly qualified mathematics educator that involves the development of a broad experiential base of knowledge and skills working with a range of student and adult learners.	The reflection identifies two important understandings of elementary student mathematical development that were highlighted as a result of this professional development experience.	The reflection identifies one important understanding of elementary student mathematical development that was highlighted as a result of this professional development experience.	The reflection identifies one understanding of elementary student mathematical development. The understanding was not connected to the professional development experience.	The reflection does not identify any important understandings of elementary student mathematical development that were highlighted as a result of this professional development experience.
CONTINUING IMPLEMENTATION NCTM Standard 7b Develop and use leadership skills to improve mathematics programs at the school or district level, e.g. collaborating to create a shared vision and to develop an action plan for school improvement.	The reflection describes the next steps that the candidate would take as a mathematics instructional leader implementing the identified action. The next steps clearly articulate a plan to meet colleagues' needs with a timeline for implementation.	The reflection describes the next steps that the candidate would take as a mathematics instructional leader implementing the identified action. The next steps of include either a plan to meet colleagues' needs or a timeline for implementation.	The reflection describes the next steps that the candidate would take as a mathematics instructional leader implementing the identified action. The next steps of implementation do not include a plan to meet colleagues' needs nor a timeline for implementation.	The reflection does not describe the next steps that the candidate would take as a mathematics instructional leader implementing the identified action.

Self-Study Research Project Description

Course Performance Based Assessment

This is a Performance Based Assessment. The final research report will be submitted on Blackboard in Tk20. In addition to the final report, students will submit assignments throughout the semester that will support the development and implementation of their project including a research proposal and a draft literature review. Finally, students will present their findings in the last class session of the semester.

FIELD EXPERIENCE SEQUENCE

Throughout the semester the students will engage with both their peers and a highly qualified mathematics educator to gain individualized feedback on their projects. Students will use the following sequence to develop, implement and reflect deeply on the self-study project experience: develop planned field experience with peer collaboration where feedback is provided by a critical friend; modify planned field experience based upon peer feedback; frequently submit plan to an experienced and highly qualified mathematics educator for individualized feedback; and implement planned field experience in a school or district setting. Specific deadlines will be ongoing and provided by the highly qualified mathematics educator.

RESEARCH REPORT

You are required to write a final report that includes the following sections: Abstract, Rationale, Research Problem and Questions, Review of Related Literature, Method, Conceptual Framework, Context and Participants, Data Collection, Self-Study and Reflection, Findings, Implications on Teaching and Learning, Implications on Educational Field, and Critical Friend Collaboration Reflection. Your project should be useful to you and your students. A written report that includes the specific headings and subheading are listed in Chapter 12 of the textbook. Exemplars are provided on Blackboard.

The paper should be formatted in APA style with references cited appropriately. For a complete rubric and grading criteria please see the rubric at the end of the syllabus.

CLASS PRESENTATION

You are required to present your research project to your peers on the last class. Your presentation must include a one-page handout that includes: your research question, rationale/purpose/data collection/resources and tools, findings, implications for math specialists and your practice. You may use bullets, write sentences, incorporate images or charts, and add additional information as needed.

SELF-STUDY PROJECT FINAL REPORT

Write a final report that is useful to you and your context. Include the following sections:

- Rationale Introduction
- Research Question
- Review of Related Literature
- Method
- Context
- Participants
- Data Collection
- Analysis
- Findings
- Limitations
- Discussion
- Implications & Reflection

Role of Critical Friend

Additionally, the project should focus on making a mathematics-focused shift through one of several actions: coaching /mentoring; building and navigating relationships with teachers, administrators, and the community; establishing and maintaining learning communities; analyzing and evaluating educational structures and policies that affect students' equitable access to high quality mathematics instruction; leading efforts to assure that all students have opportunities to learn important mathematics; evaluating the alignment of mathematics curriculum standards, textbooks, and required assessments and making recommendations for addressing learning and achievement gaps; developing appropriate classroom or school-level learning environments; and collaborating with school-based professionals to develop evidence-based interventions for high- and low-achieving students.

Include specific headings and subheadings in your report listed in Chapter 12 of the textbook. The final report should be well organized, and follow APA formatting. Submit the final report on Blackboard in Tk20.

Self-Study Project Rubric (Course Performance-Based Assessment)				
Level/Criteria	4	3	2	1
	Exceeds	Meets	Developing	Does Not Meet
	Expectations	Expectations		Expectations
SELF-STUDY PROJECT	FIELD EXPERIENCE SEC	QUENCE		•
SEQUENCE OF	The candidate uses	The candidate uses	The candidate uses	The candidate uses
PLANNED FIELD	each of the steps in	four of the steps in	three of the steps in	fewer than three
EXPERIENCE	the following	the following	the following	steps in the
	sequence to	sequence to	sequence to	following sequence
NCTM Standard 7a	develop, implement	develop, implement	develop, implement	to develop,
	and reflect on the	and reflect on the	and reflect on the	implement and
Engage in a	self-study project:	self-study project:	self-study project:	reflect on the self-
sequence of	1. Develop planned	1. Develop planned	1.Develop planned	study project:
planned field	field experience	field experience	field experience	1. Develop planned
experiences and	with peer	with peer	with peer	field experience
clinical practice in	collaboration	collaboration	collaboration	with peer
an elementary	where feedback	where feedback is	where feedback is	collaboration
setting and are	is provided by a	provided by a	provided by a	where feedback
supervised by an	critical friend	critical friend	critical friend	is provided by a
experienced and	2. Modify planned	2. Modify planned	2. Modify planned	critical friend
highly qualified mathematics	field experience	field experience	field experience	2. Modify planned
educator.	based upon peer feedback	based upon peer feedback	based upon peer feedback	field experience based upon peer
	3. Frequently	3. Frequently	3. Frequently	feedback
	submit plan to an	submit plan to an	submit plan to an	3. Frequently
	experienced and	experienced and	experienced and	submit plan to an
	highly qualified	highly qualified	highly qualified	experienced and
	mathematics	mathematics	mathematics	highly qualified
	educator for	educator for	educator for	mathematics
	individualized	individualized	individualized	educator for
	feedback	feedback	feedback	individualized
	4. Implement	4. Implement	4. Implement	feedback
	planned field	planned field	planned field	4. Implement
	experience in a	experience in a	experience in a	planned field
	school or district	school or district	school or district	experience in a
	setting	setting	setting	school or district
				setting
	Reflect deeply upon	Reflect deeply upon	Reflect deeply upon	
	experience during	experience during	experience during	Reflect deeply upon
	and after	and after	and after	experience during
	implementation	implementation	implementation	and after
				implementation
SELF-STUDY PROJECT		The chaturation	The chaturation	Ne electro ct :-
ABSTRACT	The abstract has all	The abstract has	The abstract has	No abstract is
	of the following characteristics:	two of the following characteristics:	one of the following characteristics:	included or the abstract has none of
				the following
	• Ono paragraph	• One paragraph	• One paragraph	characteristics:
	 One paragraph with no more than 	 One paragraph with no more than 	 One paragraph with no more than 	
	150 words	150 words	150 words	 One paragraph
	T20 MOLO2	100 00103	100 00105	with no more than
				150 words
L	l	1	1	100 00103

	· · ·			
	 Clear and concise 	Clear and concise	 Clear and concise 	
	word choice	word choice	word choice	 Clear and concise word choice
	• A description of	• A description of	• A description of	word choice
	• A description of	• A description of	• A description of	• A description of
	the purpose,	the purpose,	the purpose,	• A description of
	context, method,	context, method,	context, method,	the purpose,
	key findings, and	key findings, and	key findings, and	context, method,
	significance	significance	significance	key findings, and
				significance
RATIONALE	A rationale is	A rationale is	A rationale is	A rationale is
	included that	included that	included that	included that
NCTM Element 7a	provides all of the	provides four of the	provides three of	provides two or
	following:	following:	the following:	fewer of the
Demonstrate a				following:
broad experiential	 Clearly and 	 Clearly and 	 Clearly and 	
base of knowledge	concisely explains	concisely explains	concisely explains	 Clearly and
and skills working	the personal	the personal	the personal	concisely explains
with a range of	importance of this	importance of this	importance of this	the personal
student and adult	research	research	research	importance of this
learners in varied				research
school and	 Clearly and 	 Clearly and 	 Clearly and 	
professional	concisely explains	concisely explains	concisely explains	 Clearly and
development	the importance of	the importance of	the importance of	concisely explains
settings.	this research to	this research to	this research to	the importance of
	the teachers in	the teachers in	the teachers in	this research to
	the school or	the school or	the school or	the teachers in
	district setting.	district setting.	district setting.	the school or
		0	0	district setting.
	 Clearly and 	 Clearly and 	 Clearly and 	J. J
	concisely explains	concisely explains	concisely explains	 Clearly and
	the importance of	the importance of	the importance of	concisely explains
	this research to	this research to	this research to	the importance of
	the students in	the students in	the students in	this research to
	the school or	the school or	the school or	the students in
	district setting.	district setting.	district setting.	the school or
	, i i i i i i i i i i i i i i i i i i i			district setting.
	Provides	 Provides 	 Provides 	-
	perspectives that	perspectives that	perspectives that	Provides
	have shaped the	have shaped the	have shaped the	perspectives that
	research question	research question	research question	have shaped the
				research question
	Addresses the	Addresses the	Addresses the	'
	broader educational	broader educational	broader educational	Addresses the
	and social	and social	and social	broader educational
	significance of the	significance of the	significance of the	and social
	research	research	research	significance of the
				research
RESEARCH	The paper includes	The paper includes	The paper includes	The paper includes
PROBLEM &	all of the following:	three of the	two of the	fewer than two of
QUESTIONS		following:	following:	the following:
	• The research	_	_	_
NCTM Standard 7b	problem and	• The research	• The research	• The research
	questions are	problem and	problem and	problem and
Develop and use	connected to	questions are	questions are	questions are
leadership skills to	improving	connected to	connected to	connected to
	1 20			

		1		
improve	mathematics	improving	improving	improving
mathematics	programs at the	mathematics	mathematics	mathematics
programs at the	school and/or	programs at the	programs at the	programs at the
school and/or	district level.	school and/or	school and/or	school and/or
district level, e.g.,		district level.	district level.	district level.
coaching/mentoring	 The research 			
new and	problem is clearly	 The research 	 The research 	 The research
experienced	and concisely	problem is clearly	problem is clearly	problem is clearly
teachers to better	stated.	and concisely	and concisely	and concisely
serve students;		stated.	stated.	stated.
sharing critical	• The main research			
issues, policy	question is clearly	• The main research	• The main research	• The main research
initiatives, and	and concisely	question is clearly	question is clearly	question is clearly
curriculum trends	stated.	and concisely	and concisely	and concisely
related to		stated.	stated.	stated.
mathematics	• The sub research			
teaching; keeping	questions (if	• The sub research	• The sub research	• The sub research
abreast of local,	applicable) are	questions (if	questions (if	questions (if
state, or national	clearly and	applicable) are	applicable) are	applicable) are
policy decisions	concisely stated.	clearly and	clearly and	clearly and
related to		concisely stated.	concisely stated.	concisely stated.
mathematics				
education;				
communicating to				
educational				
constituents about				
students,				
curriculum,				
instruction, and				
assessment;				
collaborating to				
create a shared				
vision and to				
develop an action				
plan for school				
improvement; and				
partnering with				
school-based				
professionals to				
improve each				
student's				
achievement.				
REVIEW OF THE	The literature	The literature	The literature	The literature
LITERATURE	review includes all	review includes two	review includes one	review does not
	of the following	of the following	of the following	include the
NCTM Standard 7a	elements:	elements:	elements:	following elements:
Develop a broad	 It is connected to 			
experiential base of	the research	the research	the research	the research
knowledge and	study.	study.	study.	study.
skills working with a				
range of student	 It is adequate, 			
and adult learners	coherent and	coherent and	coherent and	coherent and
in varied school and	analytical.	analytical.	analytical.	analytical.
professional				

development	• It includes	It includes	It includes	It includes
settings.	references from a	references from a	references from a	references from a
-	variety of sources.	variety of sources.	variety of sources.	variety of sources.
CONCEPTUAL	The candidate	The candidate	The candidate does	No conceptual
FRAMEWORK	connects and	connects and	not connect and	framework is
	explains theories,	explains theories,	explain theories,	included.
NCTM Standard 7a	literature, and	literature, and	literature, and	
	phenomena in a	phenomena in a	phenomena in a	
Demonstrate a	way that informs	way that informs	way that informs	
broad experiential	the research study	the research study	the research study	
base of knowledge	AND integrates the	OR integrates the	AND does not	
and skills working	literature review	literature review	integrate the	
with a range of	into the conceptual	into the conceptual	literature review	
student and adult	framework.	framework.	into the conceptual	
learners in varied			framework.	
school and professional				
development				
settings.				
RESEARCH	The research	The research	The research	The research
METHOD: CONTEXT	method includes all	method includes	method includes	method includes
& PARTICIPANTS	of the following:	two of the	one of the	none of the
	or the ronowing.	following:	following:	following:
NCTM Standard 7b	 A description of 			
	the overall	• A description of	 A description of 	• A description of
Participate and	research context	the overall	the overall	the overall
encourage teachers		research context	research context.	research context
to participate in	 A description of 			
innovative or	the specific	 A description of 	 A description of 	• A description of
transformative	community,	the specific	the specific	the specific
initiatives,	school, and	community,	community, school	community,
partnerships, or	classroom context	school and	and classroom	school and
research projects		classroom context	context.	classroom
related to the	Demographic			context
teaching of	information for the	Demographic	Demographic	
elementary	participants	information on the	information on the	 Demographic
mathematics.		participants.	participants.	information on
				the participants
RESEARCH	The research	The research	The research	The research
METHOD: SELF-	method includes all	method includes	method includes	method includes
STUDY &	of the following:	two of the	one of the	none of the
REFLECTION	or the following.	following:	following:	following:
	 A reflection on 	ionowing.	ionowing.	ionowing.
NCTM Standard 7b	the problem (e.g.	 A reflection on 	• A reflection on the	 A reflection on
	observations,	the problem (e.g.	problem (e.g.	the problem (e.g.
Develop and use	possible causes,	observations,	observations,	observations,
leadership skills to	etc.)	possible causes,	possible causes,	possible causes,
improve		etc.)	etc.)	etc.)
mathematics	• An explanation for			
programs at the	the chosen	• An explanation for	• An explanation for	• An explanation for
school and/or	pedagogies based	the chosen	the chosen	the chosen
district level, e.g.,	on the noticing of	pedagogies based	pedagogies based	pedagogies based
coaching/mentoring	the environment			

new and		on the noticing of	on the noticing of	on the noticing of
experienced	 An explanation for 	the environment	the environment	the environment
teachers to better	the chosen			
serve students;	pedagogies based	 An explanation for 	 An explanation for 	 An explanation for
sharing critical	on the literature	the chosen	the chosen	the chosen
issues, policy	reviewed	pedagogies based	pedagogies based	pedagogies based
initiatives, and		on the literature	on the literature	on the literature
curriculum trends		reviewed	reviewed	reviewed
related to				
mathematics				
teaching; keeping				
abreast of local,				
state, or national				
policy decisions				
related to				
mathematics				
education;				
communicating to				
educational				
constituents about				
students,				
curriculum,				
instruction, and				
assessment;				
collaborating to				
create a shared				
vision and to				
develop an action				
plan for school				
improvement; and				
partnering with				
school-based				
professionals to				
improve each				
student's				
achievement.				
DATA COLLECTION	All of the following	At least three of the	At least two of the	Less than two of the
	are included in the	following are	following are	following are
NCTM Standard	data collection:	included in the data	included in the data	included in the data
5c		collection:	collection:	collection:
Collect	A detailed			
Collect, organize,	description of the	A detailed	A detailed	A detailed
analyze, and reflect	data collected,	description of the	description of the	description of the
on diagnostic,	how it was	data collected,	data collected,	data collected,
formative, and	collected, and	how it was	how it was	how it was
summative	when it was	collected, and	collected, and	collected, and
assessment	collected	when it was	when it was	when it was
evidence and		collected	collected	collected
determine the				
extent to which	 Data from a 			
students'	variety of sources.	variety of sources.	variety of sources.	variety of sources.
mathematical				
proficiencies have	 A timeline of the 	 A timeline of the 	 A timeline of the 	• A timeline of the
	data collection	data collection	data collection	data collection

increased as a	process and	process and	process and	process and
result of their	process and planned	process and planned	planned	process and planned
instruction or their	interventions	interventions	interventions	interventions
efforts in				
coaching/mentoring teachers.	• A detailed explanation of the data analysis process so that someone else would be able to analyze the data and find similar results	• A detailed explanation of the data analysis process so that someone else would be able to analyze the data and find similar results	• A detailed explanation of the data analysis process so that someone else would be able to analyze the data and find similar results	• A detailed explanation of the data analysis process so that someone else would be able to analyze the data and find similar results
	• An explanation of the role of the critical friend(s) in data interpretation.	 An explanation of the role of the critical friend(s) in data interpretation. 	• An explanation of the role of the critical friend(s) in data interpretation.	 An explanation of the role of the critical friend(s) in data interpretation.
	 A visual and coherent presentation of the data 			
FINDINGS:	The findings include	The findings include	The findings include	The finding include
PRESENTATION	all of the following:	three of the	two of the	fewer than two of
		following:	following:	the following:
NCTM Element 7a	 The findings are 	0	0	U U
	clearly and	 The findings are 	 The findings are 	 The findings are
Demonstrate a	thoroughly and	adequately	adequately	adequately
broad experiential	presented.	presented.	presented.	presented.
base of knowledge	- 1 (
and skills working with a range of	• Themes from the			
student and adult	findings are	findings are	findings are	findings are
learners in varied	connected and	connected and	connected and	connected and
school and	coherently presented.	coherently presented.	coherently presented.	coherently presented.
professional	presenteu.	presenteu.	presenteu.	presenteu.
development	 Convincing 	 Convincing 	 Convincing 	 Convincing
settings.	evidence is	evidence is	evidence is	evidence is
Ŭ	provided that	provided that	provided that	provided that
	supports	supports	supports	supports
	identified themes.	identified themes.	identified themes.	identified themes.
	The research	The research	The research	The research
	questions and the	questions and the	questions and the	questions and the
	findings are	findings are	findings are	findings are not
	connected.	connected.	connected.	connected.
	: IMPLICATIONS & REF			
IMPLICATIONS:	Both of the	One of the	Neither of the	No implications for
TEACHING &	following	following	following	the teaching and
	•	_	_	-
LEARNING	implications for the teaching and	implications for the teaching and	implications for the teaching and	learning of students are included.

Gain an in-depth understanding of the mathematical development of students across all of the elementary grades.are included:are included:• The reflection identifies the important grades.• The reflection identifies the important understandings of student development and learning that were highlighted as a result of this experience.• The reflection identifies the important understandings of student mathematical development and learning that were highlighted as a result of this experience.• The reflection identifies the important understandings of student mathematical development and learning that were highlighted as a result of this experience.• The reflection identifies the important understanding as a result of this experience.• The reflection explains the possible implications of student understanding and learning for teaching.• The reflection explains the possible implications of student understanding and learning for teaching.		looming of student	loorning of student	loorning of student	
Gain an in-depth understanding of the mathematical development of students arous sall of the elementary grades.• The reflection identifies the important understandings of student mathematical development and learning that were highlighted as a result of this experience.• The reflection identifies the important understandings of student mathematical development and learning that were highlighted as a result of this experience.• The reflection explains the possible implications of student understanding and learning for teaching.• No implications for the educational field are included.IMPLICATIONS: EDUCATIONAL FIELD STATE & LOCALThe reflection includes all the following:The reflection includes two of the following:No implications for the educational field results for the educational and state education future research and results on the national and state education future research and results on the rational and state education future research and results on the rational and state education future research and fresults on the rational and state education future research and results on the rational and state education future research and results on the rational and state education future research and results on the ration	NCTM Element 7a	learning of students	learning of students	learning of students	
IMPLICATIONS: EDUCATIONAL FIELD, STATE & LOCALThe reflection includes all the following:The reflection includes two of the following:The reflection includes one of the following:No implications for the educational field are included.NOTM Element 7b-An explanation of the implications of the research and results for the educational field-An adequate results for the educational field-An adequate results for the educational field-An adequate results for the educational field-An adequate results for the educational field0-An explanation of the implications of the implications of the implications of the implications of the implications of the implications of the research and results for the educational field-An adequate explanation of the implications of the research and results for the educational and state education-An adequate explanation of the implications of the results on the national and state education-An adequate explanation of the implications of the results on the national and state education-A discussion of limitations and future research possibilities-A discussion of limitations and future research possibilitiesReflection on the critical friend collaborationReflectio	understanding of the mathematical development of students across all of the elementary	 The reflection identifies the important understandings of student mathematical development and learning that were highlighted as a result of this experience. The reflection explains the possible implications of student understanding and learning for 	 The reflection identifies the important understandings of student mathematical development and learning that were highlighted as a result of this experience. The reflection explains the possible implications of student understanding and learning for 	 The reflection identifies the important understandings of student mathematical development and learning that were highlighted as a result of this experience. The reflection explains the possible implications of student understanding and learning for 	
NCTM Element 7b• An explanation of the implications of the research and results for the educational field• An adequate explanation of the implications of the research and results for the educational field• An adequate explanation of the implications of the research and results for the educational fieldDevelop and use leadership skills to improve mathematics programs at the school and/or district level.• An explanation of the implications of the research and results on the national and state education standards• An adequate explanation of the implications of the research and results on the national and state education standards• An adequate education explanation of the implications of the research and results on the national and state education standards• An adequate education explanation of the implications of the research and results on the national and state education standards• An adequate education results on the national and state education standards• A discussion of limitations and future research possibilities• A discussion of limitations and future research possibilitiesCOLABORATION: COLLABORATIONReflection on the critical friend collaborationReflection on the critical frien	EDUCATIONAL FIELD, STATE &	The reflection includes all the	The reflection includes two of the	The reflection includes one of the	
programs at the school and/or district level.the implications of the research and results on the national and state education standards• An adequate explanation of the implications of the 	NCTM Element 7b Develop and use leadership skills to improve	the implications of the research and results for the educational field	explanation of the implications of the research and results for the	explanation of the implications of the research and results for the	
possibilitieslimitations and future research possibilitieslimitations and future research possibilitiesCOLABORATION: CRITICAL FRIEND COLLABORATIONReflection on the critical friend collaboration	programs at the school and/or	the implications of the research and results on the national and state education standards • A discussion of	explanation of the implications of the research and results on the national and state education	explanation of the implications of the research and results on the national and state education	
CRITICAL FRIEND COLLABORATIONcritical friend collaborationcritical friend collaborationcritical friend collaborationcritical friend collaboration		future research	limitations and future research	limitations and future research	
NCTM Element 7a following: the following: following: two of the	CRITICAL FRIEND COLLABORATION	critical friend collaboration includes all of the	critical friend collaboration includes three of	critical friend collaboration includes two of the	critical friend collaboration includes less than

Demonstrate interpersonal skills critical for mentoring other teachers and working with school-based personnel, district administrators, and others.	 A self-assessment of how the self- study methodological components were addressed using the Five Foci chart A discussion of how critical friend feedback changed practice using evidence of deep reflection and self-study of teaching A description of the mentoring and use of inter- personal skills A discussion of original research questions as a retrospective journey of "self", role, and the conscious (and perhaps at the time unconscious) consequences of actions in the study 	 A self-assessment of how the self- study methodological components were addressed using the Five Foci chart A discussion of how critical friend feedback changed practice using evidence of deep reflection and self-study of teaching A description of the mentoring and use of inter- personal skills A discussion of original research questions as a retrospective journey of "self", role, and the conscious (and perhaps at the time unconscious) consequences of actions in the study 	 A self-assessment of how the self- study methodological components were addressed using the Five Foci chart A discussion of how critical friend feedback changed practice using evidence of deep reflection and self-study of teaching A description of the mentoring and use of inter- personal skills A discussion of original research questions as a retrospective journey of "self", role, and the conscious (and perhaps at the time unconscious) consequences of actions in the study 	 A self-assessment of how the self- study methodological components were addressed using the Five Foci chart A discussion of how critical friend feedback changed practice using evidence of deep reflection and self-study of teaching A description of the mentoring and use of inter- personal skills A discussion of original research questions as a retrospective journey of "self", role, and the conscious (and perhaps at the time unconscious) consequences of
	of teaching practice	of teaching practice	of teaching practice	actions in the study of teaching practice
SELF-STUDY PROJECT	: FORMATTING			
REFERENCES	The references meet all of the following requirements: • All print and non- print (internet)	The references meet four of the following requirements: • All print and non- print (internet)	The references meet three of the following requirements: • All print and non- print (internet)	The references meet two or fewer of the following requirements: • All print and non- print (internet)
	 references are listed. References and citations meet APA formatting cuidelines 	 references are listed. References and citations meet APA formatting cuidelines 	 references are listed. References and citations meet APA formatting cuidelines 	 references are listed. References and citations meet APA formatting
	guidelines.References are current.	guidelines.References are current.	guidelines.References are current.	guidelines.References are current.

	 References are	 References are	 References are	 References are
	from varied high-	from varied high-	from varied high-	from varied high-
	quality sources. All references cited	quality sources. All references cited	quality sources. All references cited	quality sources. All references
	in the research	in the research	in the research	cited in the
	report are included	report are included	report are included	research report
	in the list of	in the list of	in the list of	are included in the
	references.	references.	references.	list of references.
REPORT ORGANIZATION	The report organization includes all of the following:	The report organization includes five of the following:	The report organization includes four of the following:	The report organization includes three or fewer of the following:
	 A cover page with	 A cover page with	 A cover page with	 A cover page with
	title, author's	title, author's	title, author's	title, author's
	name, and	name, and	name, and	name, and
	professional	professional	professional	professional
	affiliation	affiliation	affiliation	affiliation
	• The report is well-	• The report is well-	• The report is well-	 The report is well-
	organized,	organized,	organized,	organized,
	grammatically	grammatically	grammatically	grammatically
	correct, coherent,	correct, coherent,	correct, coherent,	correct, coherent,
	and complete.	and complete.	and complete.	and complete.
	 The report has	 The report has	 The report has	 The report has
	distinctive focus	distinctive focus	distinctive focus	distinctive focus
	and voice.	and voice.	and voice.	and voice.
	 The report uses	 The report uses	 The report uses	 The report uses
	professional	professional	professional	professional
	language (i.e., no	language (i.e., no	language (i.e., no	language (i.e., no
	jargon).	jargon).	jargon).	jargon).
	 The report is	 The report is	 The report is	 The report is
	presented in an	presented in an	presented in an	presented in an
	accessible style.	accessible style.	accessible style.	accessible style.
	• The report and	• The report and	• The report and	 The report and
	the appendices	the appendices	the appendices	the appendices
	meet APA	meet APA	meet APA	meet APA
	formatting	formatting	formatting	formatting
	guidelines.	guidelines.	guidelines.	guidelines.