

UC Merced
NSED 150: Research Methods
NSED Minor
4 units (3 units +1 Fieldwork unit)

Instructor Contact Information

Instructor: Somnath Sinha	Office Location: AOA 177
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Prerequisites

Students will have completed at least one lower division NSED course and a fieldwork in a local school.

Required Course Materials:

Dana, N. F., & Yendol-Hoppey, D. (2014). *The reflective educator's guide to classroom research: Learning to teach and teaching to learn through practitioner inquiry (Third Edition)*. Corwin Press: Thousand Oaks, Calif

Course Description

Instructional decisions are a crucial part of the day-to-day teaching and learning in classrooms. A successful and effective teacher is one who makes those decisions informed by the needs of his/her students, identified student learning goals and objectives, and current research on teaching and learning. Within this backdrop, the purpose of this course is to help educators develop the skills required to conduct research in classrooms and/or other learning environments (i.e., after school programs, tutorials, etc.).

Overall Goals

You will 1) gain hands-on experience conducting “action research”; 2) learn to identify useful educational research literature (both research and practitioner journals); 3) practice applying important research findings to inform instructional and curricular decisions and practices; and 4) explore various approaches, strengths, and challenges associated with conducting action research.

Professional Standards and Teaching Performance Expectations (TPEs)

Recognizing the outcome of educational inquiry and research informs all aspects of the classroom, this course is specifically designed to address the following Teacher Standards and Performance Expectations (2016).

Standard 1: Engaging and Supporting All Students in Learning

1.1 Apply knowledge of students, including their prior experiences, interests, and social-emotional learning needs, as well as their funds of knowledge and cultural, language, and socioeconomic backgrounds, to engage them in learning.

1.6 Provide a supportive learning environment for students' first and/or second language acquisition by using research-based instructional approaches, including focused English Language Development...

Standard 4: Planning Instruction and Designing Learning Experiences for All Students

4.6 Access resources for planning and instruction, including the expertise of community and school colleagues through in-person or virtual collaboration, co-teaching, coaching, and/or networking.

Standard 6: Developing as a Professional

6.1 Reflect on their own teaching practice and level of subject matter and pedagogical knowledge to plan and implement instruction that can improve student learning.

6.3 Establish professional learning goals and make progress to improve their practice by routinely engaging in communication and **inquiry** with colleagues.

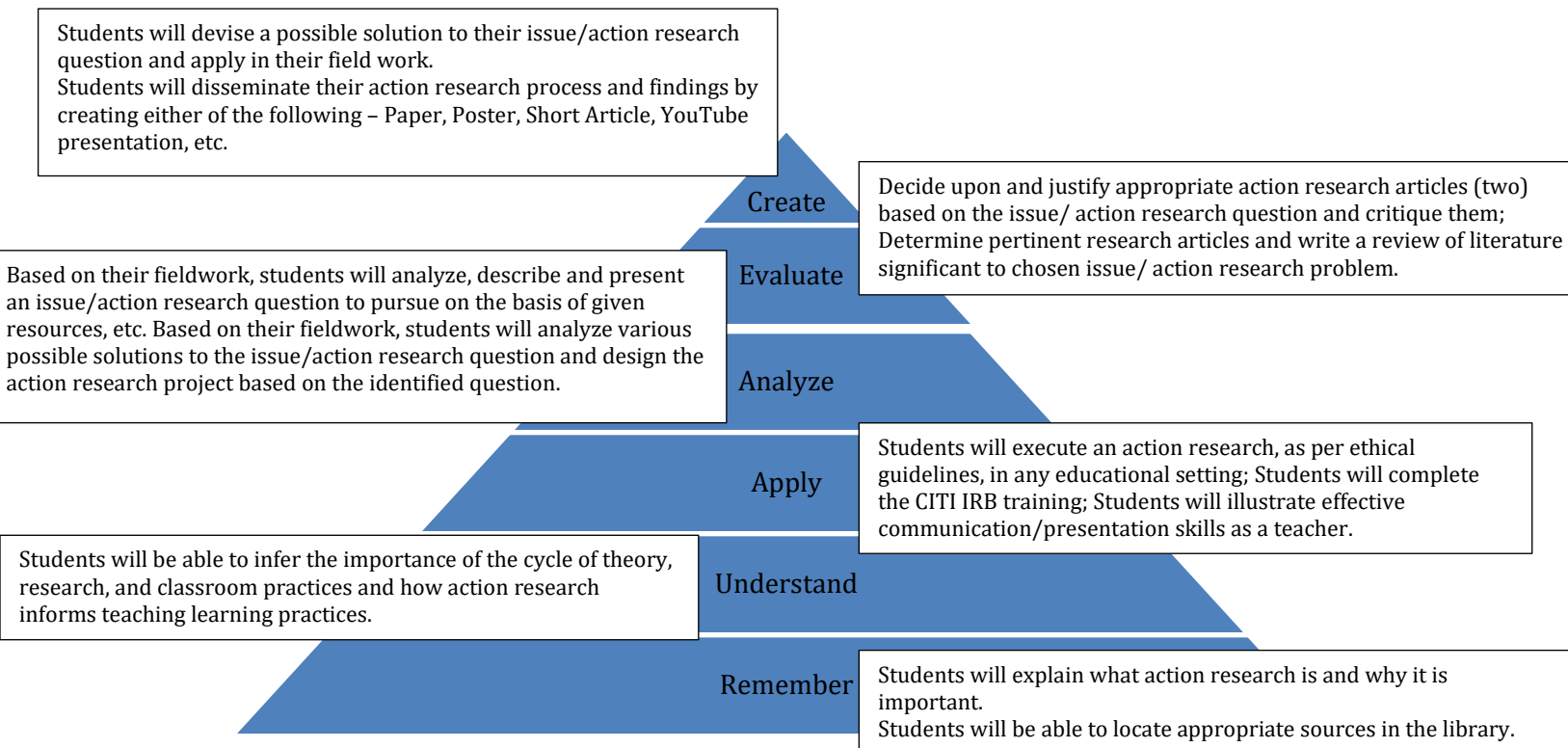
Course Performance Expectation

By the end of the course, the student will....

Performance Expectation	Assessment/Evidence
1. <i>Explain</i> what action research is and why it is important. 2. <i>Infer</i> the importance of the cycle of theory, research, and classroom practices and <i>provide examples</i> of how action research informs instructional decision making.	Online reflection based on questions. Quiz or essay describing importance and connection among the cycle of theory, research, and classroom decisions and practices.
3. <i>Locate</i> appropriate sources in the library with regard to carrying out a literature review. 4. <i>Determine</i> pertinent research articles, <i>write a review of literature</i> significant to a chosen issue/ action research problem, and <i>present two articles</i> to class. 5. <i>Decide and justify</i> appropriate action research articles (two) based on the issue/ action research question and critique them. 6. <i>Demonstrate</i> effective communication/presentation skills.	Annotated bibliography of sources; Review of literature; Classroom presentation of articles

<p>7. <i>Successfully complete</i> the CITI IRB training.</p> <p>8. Based on their fieldwork, students will <i>analyze, describe and present</i> an issue/action research question to pursue on the basis of given resources, etc.</p> <p>9. Based on their fieldwork, students will <i>analyze and present various possible solutions</i> to the issue/action research question.</p> <p>10. Students will <i>design and execute an action research study</i>, as per ethical guidelines, in any educational setting, <i>presenting a possible solution and application</i> to the setting.</p> <p>11. Students will disseminate their action research process and findings by creating either of the following aimed at new teachers as the audience:</p> <ul style="list-style-type: none"> ○ Paper/ Short Journal-Type Article ○ Poster Presentation ○ YouTube/TedTalk-Type Presentation ○ Other Creative Work with Permission 	<p>CITI IRB Training Certificate;</p> <p>Action Research Proposal;</p> <p>Final Action Research Project with its dissemination product.</p>
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Course Performance Expectations & Blooms Taxonomy



Required Course Elements and Assignments

1) Attendance and Participation (Journal Entry; Classroom Discussion)

Classes will consist largely of discussions and presentations by instructors and groups of students. Active participation in discussion is an essential part of learning and, hence, of evaluating your work. Participation means listening as well as talking, monitoring your own contributions to a discussion, helping others develop their ideas, and, of course, expressing your own thoughts in whole and small-group discussions. Participation also includes making every effort to arrive to class promptly and using electronic devices only for course-related purposes. Because the course emphasizes the creation of community in the classroom, participation and attendance are critical. All anticipated absences should be communicated to the instructors prior to occurring (i.e., via email).

2) Field Work

You will have to complete 30 hours in a local school and the placements based on your interest will be determined at the beginning of the semester.

3) Review of Literature and Presentation

- Annotated Bibliography – In preparation of your literature review assignment and to demonstrate your learning about using library resources, you will have to create an annotated bibliography of article resources exclusive to your focused area of action research.
- Based on your area of interest, topic, and action research question in the field of mathematics and science education, you will review the literature in that area. You can choose articles from both peer reviewed research journals and practitioner journals. You will also have to present your literature review – its process, findings, and instructional implication to the class.
- Article Analysis Classroom Presentation – You will read and analyze at least two published action research articles, contextualizing them with regard to the usefulness to your area of action research. You will present your analysis, including but not limited to the research question(s), significant supporting literature, study design/methodology, findings, and conclusions.

4) Ethics Assignment (IRB Training)

Every student must complete the University of Merced Human Subjects Training in order to pass this class. In addition, students must review the class protocol for conducting the classroom observation (approved in advance by the IRB) and take a short quiz demonstrating that they understand the requirements.

(Not Mandatory -- In addition, and if needed, either working in small groups or individually, students will complete an IRB human subjects form to conduct a classroom study. Each small group will present the ethical issues and proposed means to protect the human subjects, to the class. A detailed assignment guide will be provided in class, along with the assessment criteria for the group, and for each individual student.)

5) Action Research Proposal

You will prepare a proposal for your study including all the sections you will have in your final Action Research Project, such as discussion of the problem/ question you will address, literature review, methodology, and time table for your study.

6) Final Action Research Project -- Design and with Dissemination/Presentation

The final project requires a prospectus, a draft, and a final paper. In this assignment, you will gain experience conducting an action research project. We will work on this project over the course of the semester so that by the end, you will have an entire plan to conduct an action research project (including a human subjects IRB application, where appropriate). You will choose whether you want to conduct classroom research or research in another type of college learning environment. A detailed assignment guide will be provided in class, along with the assessment criteria.

Grading

The use of grades is meant to record your accomplishments, as well as to guide focused feedback and progress. Letter grades are not used to rank or sort students; instead, they are meant to aid in your understanding of completing assigned tasks as outlined. Expectations are set high in this course, and we will do our best to ensure that you are supported in meeting these expectations. Given the focus of this course, we hope that the outlined evaluation process will contribute to and inform your developing sense of teaching and learning.

Grade Composition

Assignment	Percentage of Grade
Attendance and Participation (Quizzes)	20%
Field Work Verification (30 Hours)	20%
Ethics/IRB Training	10%
Bibliography, Review of Literature and Presentation	15%
Action Research Proposal	15%
Final Research Project and Dissemination	20%

Course Assignment Requirements

- All assignments are due on the date indicated by the instructor and must be formatted according to APA style (e.g., 12 pt. Times New Roman font, double-spaced, etc.) unless otherwise indicated by the instructor.
- Assignments must be submitted to Cat Courses by the specified deadlines. Late assignments will only be accepted for full credit if prior arrangements have been made in a timely manner with the instructors. All other late assignments are not guaranteed to receive credit.
- Tardiness and absences will be recorded in Cat Courses. Unexcused absences will negatively affect your grade (i.e., your attendance grade for the day of absence will be 0%), so please demonstrate a commitment to the educational process.
- Attention to writing conventions (i.e., spelling, grammar, syntax and format) is critical to your success in this course and as a teacher. Please edit your papers before submitting them in Cat Courses.
- Students identified with special needs (i.e., ADA; registered with Student Accessibility Services) are a) required to make an appointment with the instructor during the first week of class in order to assure that requested necessary accommodations will be made.

Accommodations for Students with Disabilities

The University of California Merced is committed to ensuring equal academic opportunities and inclusion for students with disabilities based on the principles of independent living, accessible universal design and diversity. Students with special needs should contact Jesus Jimenez (jjimenez22@ucmerced.edu) in the School of Natural Sciences Office - Student Advising. Requests for academic accommodations are to be made during the first three weeks of the semester, except for unusual circumstances. Students are encouraged to register with Student Accessibility Services Center to verify their eligibility for appropriate accommodations.

Academic Honesty and Integrity:

Each student in this course is expected to abide by the University of California, Merced's Academic Honesty Policy. For this course, collaboration is allowed. You are encouraged to study together and to discuss information and concepts covered in lecture and the sections with other students. You can give "consulting" help to or receive "consulting" help from such students. However, this permissible cooperation should never involve one student having possession of a copy of all or part of work done by someone else, in the form of an e-mail, an e-mail attachment file, a diskette, or a hard copy. Should copying occur, both the student who copied work from another student and the student who gave material to be copied will both automatically receive a zero for the assignment. Penalty for violation of this Policy can also be extended to include failure of the course and University disciplinary action.

The information listed above is for individual assignments. There are group assignments in this class, which require full cooperation and participation of all group members. If a group member has not completed and/or contributed his/her portion of group work by the due date of the assignment, that group member will neither receive credit for the assignment nor have any opportunity to make up the work at a later date.