

NIAGARA UNIVERSITY

COLLEGE OF EDUCATION

EDU 595C

Introduction to Educational Research

SYLLABUS

Rev. Stephen J. Denig, C.M., Ed.D.
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Instructor: Rev. Stephen J. Denig, C.M., Ed.D.
Office: ACAD 325A
Hours: Tuesday: 1:00 to 4:00 PM
Wednesday: 3:15 to 4:15
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Number of Credits

Three (3) credit hours

Course Description

This course is designed to introduce graduate students to the principles of research in education. Students will become effective consumers of educational research by analyzing the literature in a particular area of study and synthesizing the results into material that can be applied to diverse educational settings. Students will also develop practical research skills that they might use to assist them in their own professional development.

Method of Teaching

This course is framed within a constructivist perspective which embraces the belief that knowledge is socially constructed. Learning is viewed as a developmental process that is enhanced when students learn to view problems and issues from multiple perspectives, constructing knowledge from their own interpretations of numerous pieces of evidence. Teaching approaches are directed toward open-ended inquiry, critical thinking, and social interaction. Instructional methods will include whole class and small group discussion, individual and cooperative activities, presentations by the instructors and by the practicing and prospective teachers, internet and library searches, observations, interviews and action research.

Objectives

The aim of this course is for practitioners to develop skills for life-long learning within their educational concentration or field of interest. The requirements of this course will assist students to demonstrate important dispositions including a commitment to the profession and an orientation toward reflective practice.

Pre-service teachers and practitioners will be able to:

- 1) Define terminology associated with qualitative and quantitative research
- 2) Identify the strengths and weaknesses of written qualitative and quantitative research and the methods that are used in both types
- 3) Identify the problems that are associated with gathering, analyzing, implementing, and evaluating information and statistical data
- 4) Plan, implement, and assess educational research
- 5) Determine the productivity and professional practice and educational value of research
- 6) Demonstrate the knowledge of how to use the library at Niagara University for carrying out literature reviews

- 7) Apply the learning objectives of this course to affirm diversity and enable and empower learners with diverse backgrounds, characteristics, and abilities.
- 8) Implement a research project based upon the standards appropriate to the candidate's academic discipline

Required Texts

Howitt, D., & Cramer, D. (2009). *Introduction to SPSS in psychology*. Essex, GB: Pearson

Supplemental Tests

This section of 595 is intended for graduate students in counseling and school psychology, who already have a basic understanding of statistics. For those who have never had statistics, or who have forgotten their basic statistics, the following texts may prove helpful

Gravetter, Y. J., & Wallnau, L. B. (1996). *Statistics for the behavioral sciences: A first course for students of psychology and education*. Minneapolis: West.

Pyrczak, F. (2004). *Success at statistics: A worktext with humor*. Glendale, CA: Pyrczak.

Course Outline

01	09/03	Introduction and Overview of the Course Data Entry into SPSS Formation of Primary and Secondary Groups Howitt & Cramer*: Chapter 01
02	09/10	Class Meets in Library Using the NU Library What is Research? Ethics of Research Howitt & Cramer*: Chapters 02, 03, 04, and 05
03	09/17	Descriptive Data Graphing Data Howitt & Cramer*: Chapters 06, 07, 08
04	09/24	Using NAEP and NYS Data Bases Correlation and Regression Howitt & Cramer*: Chapters 09, 10, 11, and 12 Submission by Candidates of Selected Research Articles
05	10/01	Collecting Survey Data: Lime Survey t-tests Howitt & Cramer*: Chapters 16, 17, 18, and 19 Due: IRB Proposal
06	10/08	ANOVA Howitt & Cramer*: Chapters 20, 21, 22, 23, and 24

07	10/15	General Linear Model, ANCOVA, and MANOVA Howitt & Cramer*: Chapters 25, 26, 27, 28, and 29
08	10/22	Factor Analysis, and Reliability Tests Howitt & Cramer*: Chapters 28 and 29
9	10/30	Multiple Regression Howitt & Cramer*: Chapters 13, 14, and 15
10	11/05	Chi-square and Ranking
11	11/12	PowerPoint Discussion of Research Articles Howitt & Cramer*: Chapters 30, 31, and 32
12	11/19	Advanced Techniques
13	12/03	Discussion by Professors of Their Research
14	12/10	Discussion by Students of Their Research Due: Research Project

* Text Assignments are assigned on the date given and are to be read for the next class

Expectations

- A. Candidates must attend each class on time and stay for the entire period. A sign-in list will be distributed at the beginning of each class. It is the responsibility of the candidate to sign the list. Candidates who are late for class should note the time that they entered class. Two or more absences will impact final course grade. Please email professor before class, if possible, with reason for absence.
- B. Candidates must complete assignments as scheduled and actively engage in class discussions.
- C. Candidates must complete all written assignments as required (Microsoft Word, using APA style, and model standard spelling, punctuation and grammar) and submit as an email attachment by the deadline.
- D. Barring unforeseen circumstances, all contacts should be made by email, and will be acknowledged within two business days. If more than three business days elapse without a response, please resend the message.
- E. Candidates must search for research material using appropriate technology and library materials. Candidates are encouraged to search for materials from diverse settings.
- F. Candidates will exhibit higher order thinking skills, especially skills involving analysis, synthesis, evaluation, and inquiry (Bloom).

Philosophy of Graduate Education and Grading

One of the ways in which graduate school differs from undergraduate is the role of the professor. The role of the professor is that of guide. The expectation is that the candidates are self-motivated learners who will take advantage of the opportunity to learn from the experiences and research of their professors and their peers.

A grade in the C range indicates that a candidate has demonstrated enough competencies to pass the course, but fewer competencies than should be demonstrated by a graduate candidate. A grade in the B range means that the candidate has demonstrated the competencies expected. A grade in the A range means that the candidate has demonstrated competency beyond that expected.

Professionalism

As professional commitment and conduct are integral to the profession, this grade will be holistically comprised of professional demeanor, the quality of class preparation and participation, the ability to work independently and cooperatively at a graduate level, and overall conduct becoming a member of the teaching, counseling, or psychological profession as outlined by the university and college mission statements. It is the responsibility of the candidates to familiarize themselves with the aforementioned document. Please note that dispositions also play an important role in your becoming a member of the profession; therefore, it is up to the candidates to review the college policy on dispositions and ensure that they are meeting or exceeding the requirements.

Daily Reflection

The focus of this component is on meta-cognition and intrapersonal intelligence. Learning is a process and should not be solely dependent upon product; therefore, in accordance with constructivist philosophy, it is necessary to ensure that candidates take the time to reflect upon each phase in this course. Candidates are to come to class having reflected on the previous class discussions and on the assigned readings for that day. Becoming a reflective practitioner requires that candidates are able to construct knowledge by placing what they read in a meaningful and personal context.

Class Discussion

The focus of this component is on social constructivism. In accordance with the philosophy of the department which stresses cooperative strategies and which social learning, candidates will be expected to share and discuss their interpretations and views of critical concepts during class. The emphasis is once again on the quality of discussion and the depth of understanding conveyed through questions and responses.

Professional Demeanor:

Candidates are expected to act in a professional manner which reflects the integrity of the position and the university as a whole. This includes such behaviors as being prepared for each class, submitting all work on time, attending all classes, arriving to class on time, and being dressed appropriately.

Attendance:

Attendance is considered an indicator of professional commitment and responsibility. Candidates are expected to be prompt for all classes. Candidates may be excused from attending class by the professor for absences due to illness or serious personal matters. Excessive absences will negatively impact the candidate's final grade and may, in some instances, jeopardize a candidate's course credit. An e-mail message is required in advance if you expect to miss a class or as soon as possible after an unexpected emergency.

Disclosure and Disabilities:

Candidates with disabilities who may need academic accommodations are encouraged to discuss options with their professors during the first two days of class to ensure that appropriate modifications are made. In addition, candidates with documented disabilities who may need accommodations, who have any emergency medical information the instructor should know of, or who need special arrangements in the event of an evacuation, should make an appointment with the instructor as early as possible in the semester, preferably no later than the first week of the semester. Candidates must also register with Diane Stoelting, Coordinator of Specialized Support Services (286-8076, ds@niagara.edu) in order to facilitate the provision of needed accommodations.

Counseling Services and Academic Support:

The strains and workload of student life can sometimes feel overwhelming and it is easy to lose perspective when faced with academic, social, and personal demands. The staff of the office of counseling services in the lower level of Seton Hall and the Academic Support staff in the Learning Center in the library are here to help students manage the stresses of university life. All private consultations are confidential and free of charge. Appointments can be scheduled by calling 286-8536 (Counseling) or 286-8072 (Office of Academic Support).

Diversity:

Because culturally diverse groups enrich our society, a better understanding of diverse cultures fosters respect and appreciation for all people; therefore, this class will examine implications of global education.

Academic Honesty:

The integrity of an academic community necessitates the full and correct citation of ideas, methodologies, and research findings to the appropriate source. This is necessary to protect the original work, whether it is found in reference material, other published matter, or unpublished communication from faculty, other scholars, and fellow students. In addition, each student can promote academic honesty by protecting his or her work from inappropriate use. Academic honesty is essential to ensure the validity of the grading system and to maintain a high standard of academic excellence. The principal violations of academic honesty are cheating and plagiarism. Cheating includes the unauthorized use of certain materials, information, or devices in writing examinations, or in preparing papers or other assignments. Any candidate who aids another candidate in such dishonesty is also guilty of cheating. Other possible forms of cheating include submitting the same work in more than one class without permission. Plagiarism is the presentation of ideas, words, and opinions of someone else as one's own work. Paraphrased material, even if rendered in the student's own words, must be attributed to the originator of the thought. In short, plagiarism is the improper use of direct quotations, indirect quotations, and/or ideas that have not been credited to the original author. Whether intentional or unintentional, plagiarism is a serious academic offence that leads to substantial consequences. It is the responsibility of the candidate to provide sufficient evidence where he or she obtained the information. Penalties for dishonesty include but are not limited to: assigning an F for the assignment assigning an F for the course, suspension, and/or expulsion from the program. Please refer to the graduate catalogue for Niagara University's policy on cheating, plagiarism, procedures and penalties. For further information, consult Niagara University Student Handbook)

Course Assignments:

As candidates interested in the field of education, it is important that you see yourself as emerging scholars. This means that you will explore topics of interest and value to your growth, that you will practice articulating knowledge orally and in writing, and that you will continuously reflect on the meanings of what you are studying and doing. In order to evaluate this authentically, you need to participate in class discussions and small group work, write thoughtfully and with care, and continuously try to relate what you are learning to your thoughts about the type of teacher you want to become. Candidates are required to complete all assignments. Failure to do so by the end of the course without the consent of the instructor will result in the candidate receiving a final grade of F in the course. All assignments are to be submitted digitally as per the instructions of the professor.

Assignment Quality and Late Policy:

Because all students vary in their learning style, and in order to model multiple assessment and evaluation strategies, a variety of assignments will be used to evaluate your performance in the course. Assignments must be typed on a word processor unless otherwise specified. All assignments are expected to be turned in on time and should represent your best quality work. Students are required to submit to the professor, one electronic submission. Assignments will not be accepted after the due date and a grade of zero will be assigned.

Writing and Style:

It is imperative that teachers be able to write clearly and use correct grammar and sentence structure. As teachers you will be modeling and teaching writing skills to students. All written work will be equally assessed on content and form. Work must be proofread to remove all typos and other types of errors that can be found when care is taken to finalize a paper before submission. If issues of grammar and sentence structure are problematic for you, please use the services of the Writing Center on campus. You are expected to use the APA Style for research writing in your course assignments. The APA Style Manual is a recommended text for the course and all papers are to be submitted in accordance with the latest edition of this manual. Further online assistance with respect to APA format can be found at <http://apastyle.apa.org/>. A required outline for each assignment is also provided on Blackboard. All assignments must be submitted using MS Word. Hand written assignments will not be accepted. Papers that are not written in accordance with the required formats (i.e., the latest edition of the APA manual or the outline provided) will not be accepted and a grade of zero will be recorded.

The assignments in this course are based on a Research Project completed during this semester and should apply directly to your field. This activity will introduce candidates to the research process and demonstrate one method for studying and improving upon professional practice for use in one's own classroom. The assignments described below are meant to pace you in the completion of this project. Your final course grade will be determined by your successful completion of all the following assignments:

Participation (30% of final grade)

Since graduate candidates should learn from one another, it is required that candidates not merely sit in class and listen. They must actively engage with the classmates in the process of learning.

IRB Proposal (15% of final grade)

You need to design a plan for collecting and analyzing your own data. In each of these proposals, you must outline the methodology including: the participants/sample, data collection method, data collection instruments, and data analysis method following the guidelines outlined in course material and through class discussions. Any research tools (e.g. questionnaires, observation tools, etc.) must be attached as an appendix. Your completed paper should be no more than 7 double spaced pages including appendices.

As well, it is required that students obtain informed consent from all participants prior to their data collection; therefore, a sample letter of consent is available on Blackboard. A consent letter that is written in accord with the sample letter must accompany your proposal. As written consent is required of all participants, and as individuals under the age of 18 are not able to legally grant consent, NU students are not permitted to interview or engage in any conversation for the purpose of extracting information, beyond that which would be seen as within the scope of normal activities of the school day. Recall that a person under the age of 18 years of age can not give consent. Therefore, please structure your research accordingly. Again, violation of this stipulation will constitute a breach of ethics and will result in the student receiving a grade of zero on the paper. Candidates will submit one electronic copy. A format for your papers, a grading rubric, and a sample letter of consent are provided on Blackboard. It is the responsibility of the student to access and utilize this information. Failure to submit work in accordance with the required format will not be accepted and a grade of zero will be entered. (This assignment is to be completed independently)

PowerPoint Discussion of Research Articles (15% of the final grade)

Candidates may work independently or in groups of two to present a research article to the class. The candidates will select a substantive (at least ten pages) research article from a journal and submit to the professor an Adobe Acrobat copy of the article by September 24. These will then be published on Blackboard and every candidate must read all the articles. On November 12, candidates will use PowerPoint to lead a discussion on the merits, strengths, and weakness of the research. It is NOT merely a discussion of the theme of the article. It is a critical analysis of the research techniques employed by the authors.

Final Project: (40% of final grade)

This assignment is structured to introduce graduate candidates to the principles, processes, and practices of research that are applicable to their specific field of education. The assignment will include a presentation of theory and strategy for practical application in diverse educational environments as well as a formal paper. This assignment should lead to an understanding of the need for continuous professional development using the tools that educational researchers employ. NU students are not to interview or engage in any conversation for the purpose of extracting information, or to, in any way, infringe upon what would be seen as that which occurs beyond the scope of normal activities of the school day, any person under the age of 18 years of age as this would constitute a serious breach of ethics thereby resulting in a grade of zero for the paper. Therefore, please structure your research accordingly.) Further, **YOU MAY NOT BEGIN YOUR RESEARCH UNTIL YOUR PROPOSAL HAS BEEN ACCEPTED.**

Beginning your research prior to receiving approval is also breach of ethics and a grade of zero will be given for the assignment.

Candidates/Practitioners will explore research in their area of concentration and their own professional environment and present the information in both a written a form for presentation. The formal paper should be no more than 10 pages in length and be written in accord with the requirements of research as outlined in the most recent edition of the APA Manual for Publication. The presentation portion of this assignment is an abbreviation of our work that may be presented using either a PowerPoint or poster format that will include the following information.

- a) Topic/Research Question
- b) Brief overview of the literature
- c) Brief summary of methods
- d) Brief description of the sample
- e) Presentation of qualitative findings
- f) Interpretation of the findings (discussion)
- g) Limitations of the study, instruments used, and alignment of findings with existing literature (conclusions)
- h) Possible questions for further research (further research).
- i) References

Candidates will submit one electronic copy of this presentation and one electronic copy of the formal paper. A format for your presentation and a grading rubric are provided on Blackboard. It is the responsibility of the student to access and utilize this information. (Should you include human subjects above the age of 18 please adapt and submit for approval, a letter of consent. You will find a sample letter provided on Blackboard. It is the responsibility of the student to access and utilize this information. **Failure to submit work by the due date and in accordance with the required format will not be accepted and a grade of zero will be entered. (This assignment is to be completed independently).**

Candidates will also be required to lead a discussion with PowerPoint of their research.

Course Evaluation

Each assignment in the course will be graded using the rubrics found on the Blackboard site. Your work will be graded fairly in accordance with the criteria found on the rubrics. These rubrics are meant to be utilized by the student as a means of formative instruction. Please review them prior to submitting assignments. Course performance will be evaluated on the basis of combining individual grades from the assignments described above and absences. Assignment and final grades will be based on the following grading scale.

Final grades will be assigned in accord with the following scale:

97-100	A+	87-89	B+	77-79	C+	Below 70	F
94-96	A	84-86	B	74-76	C		
90-93	A-	80-83	B-	70-73	C-		

Outline for Final Project

- I. Introduction to topical research study
 - State research problem
 - State your research question.

- State your hypotheses (include both the null and the alternate hypothesis)

II. Conceptual Framework

- Identify the dependent variable(s) for your study. (i.e., what variable are you measuring?)
- Identify the instrument of measure that you will use to measure the dependent variable.
- Identify the independent variable(s) for your study. (i.e., what variables do you believe will contribute to a change in your dependent variable?)

III. Methodology

- State how each type of data is reported (i.e., nominal, ordinal, interval, and ratio).
- Describe the sample
 Note: As written consent is required of all participants, and as individuals under the age of 18 are not able to legally grant consent, NU students are not to interview or engage in any conversation for the purpose of extracting information, or to, in any way, infringe upon what would be seen as that which occurs beyond the scope of normal activities of the school day, any person under the age of 18 years of age as this would constitute a serious breach of ethics thereby resulting in a grade of “F” for the paper. Therefore, please structure your research accordingly.)
- Briefly explain how you will collect the data or what data you will be using (i.e., existing test scores)
- Identify the test that you will be performing
- Explain why this test is most appropriate for your data set.

IV. Data analysis

- Perform the appropriate test(s) and report your results.

V. Discussion and conclusion

- Explain your results in terms of its application to the instructional environment and how it can inform improved practice.
- Recommendations for further study

Final Project Grading Rubric

Criteria	Level 1: Unsatisfactory	Level 2: Satisfactory	Level 3: Exceptional
Section I			
• research question	The research question is too specific or too vague	The research question is clearly stated	The research question is clearly stated and the wording indicates the type of research that will be conducted
• hypotheses	The hypotheses do not align with the research question. Neither the alternate or null hypotheses are included	The hypothesis is clearly stated Both alternate and null hypotheses are included	The hypotheses are clearly stated and the wordings indicate the type of research that will be conducted Both alternate and null hypothesis are included
Section II			
• Identify the dependent variable(s) for your study.	Dependent variable is incorrectly identified	Dependent variable is correctly identified	

<ul style="list-style-type: none"> Identify the instrument of measure 	Instrument of measure is incorrectly identified	Instrument of measure is correctly identified	
<ul style="list-style-type: none"> Identify the independent variable(s) for your study. 	Independent variable is incorrectly identified	Independent variable is correctly identified	
Section III: <ul style="list-style-type: none"> State how each type of data is reported 	Data is not reported in an appropriate format	Data is reported in an appropriate format but is not complete	Data is reported in an appropriate format that is clear, complete and understandable.
<ul style="list-style-type: none"> Briefly describe the sample group 	Sample group is not clearly identified in size or characteristics	Sample group is identified in size and in its characteristics but several factors are missing	Sample group is clearly identified in size or characteristics and all elements are known.
<ul style="list-style-type: none"> Data collection process 	Data collection is not clearly delineated	Data collection is delineated but several elements are unclear	Data collection is clearly delineated and all elements are discussed.
Identify the test that you will be performing	Test is not identified, or is vague in its description	Test is identified and clearly described	Test is identified and described in detail.
<ul style="list-style-type: none"> Explain why this test is most appropriate for your data set. 	Explanation is excluded or vague. The test is inappropriate for use with this data set	Explanation is clear. The test is appropriate for use with the data set and requires the use of simple statistics.	Explanation is detailed. The test is appropriate for the data set and requires the use of advanced statistics
Section IV: <ul style="list-style-type: none"> Perform the appropriate test(s) and report your results. 	Calculations are inaccurate and/or incomplete, Inappropriate graphs have been selected, and/or the data is not accurately presented.	Calculations are mostly accurate, choice of graph is appropriate, and information is accurately presented.	Calculations are completely accurate, choice of graph is enhances data presentation and information is accurately presented.
Section V: <ul style="list-style-type: none"> Explain your results. 	Explanation is weak and/or inaccurate	Explanation is accurate.	Explanation is accurate, detailed and shows evidence of critical thinking
Disposition The candidate maintains the legal and human rights of the student throughout the project. Recognizes diversity of individuals and groups in the assessment sample.	The report fails to maintain the legal and human rights of the student throughout the project by identifying the sample in an inappropriate manner or recognizing the diversity of the student.	The report maintains the legal and human rights of the student throughout the project by maintaining confidentiality and recognizing the diversity of the sample.	The report maintains the legal and human rights of the student throughout the project by maintaining confidentiality and recognizing and promoting the diversity of the sample.
Writing Conventions The report follows standard writing conventions using appropriate grammar, spelling, syntax, and voice.	The report does not follow standard writing conventions using appropriate grammar, spelling, syntax, and voice.	The report follows standard writing conventions using appropriate grammar, spelling, syntax, and voice.	The report demonstrates outstanding comprehension of standard writing conventions using appropriate grammar, spelling, syntax, and voice.
Technology The candidate utilizes technology to develop an understanding of the means to improve classroom practices.	The report does not show evidence of effective use of technology.	The report shows some evidence of effective use of technology.	The report shows clear evidence of effective use of technology.

EDU 595 section C is a required course for students in the counseling and school psychology programs.

CACREP Core Area(s) reflected in this course:

8. Research and Program Evaluation

The School Psychology program adheres to standards of the National Association of School Psychologists or NASP.

NASP Standards reflected in this course:

2.9 Research and Program Evaluation

2.11 Information Technology

NASP Domains of Practice

2.1 Data-Based Decision-Making and Accountability

2.2 Consultation and Collaboration

2.3 Effective Instruction and Development of Cognitive/Academic Skills

2.4 Socialization and Development of Life Skills

2.5 Student Diversity in Development and Learning

2.6 School and Systems Organization, Policy Development, and Climate

2.7 Prevention, Crisis Intervention, and Mental Health

2.8 Home/School/Community Collaboration

2.9 Research and Program Evaluation

2.10 School Psychology Practice and Development

2.11 Information Technology

2.1 Data-Based Decision-Making and Accountability: School psychologists have knowledge of varied models and methods of assessment that yield information useful in identifying strengths and needs, in understanding problems, and in measuring progress and accomplishments. School psychologists use such models and methods as part of a systematic process to collect data and other information, translate assessment results into empirically-based decisions about service delivery, and evaluate the outcomes of services. Databased decision-making permeates every aspect of professional practice.

2.2 Consultation and Collaboration: School psychologists have knowledge of behavioral, mental health, collaborative, and/or other consultation models and methods and of their application to particular situations. School psychologists collaborate effectively with others in planning and decision-making processes at the individual, group, and system levels.

2.3 Effective Instruction and Development of Cognitive/Academic Skills: School psychologists have knowledge of human learning processes, techniques to assess these processes, and direct and indirect services applicable to the development of cognitive and academic skills. School psychologists, in collaboration with others, develop appropriate cognitive and academic goals for students with different abilities, disabilities, strengths, and needs; implement interventions to achieve those goals; and evaluate the effectiveness of interventions. Such interventions include, but are not limited to, instructional interventions and consultation.

2.4 Socialization and Development of Life Skills: School psychologists have knowledge of human developmental processes, techniques to assess these processes, and direct and indirect services applicable to the development of behavioral, affective, adaptive, and social skills. School psychologists, in collaboration with others, develop appropriate behavioral, affective, adaptive, and social goals for students of varying abilities, disabilities, strengths, and needs; implement interventions to achieve those goals; and evaluate the effectiveness of interventions. Such interventions include, but are not limited to, consultation, behavioral assessment/intervention, and counseling.

2.5 Student Diversity in Development and Learning: School psychologists have knowledge of individual differences, abilities, and disabilities and of the potential influence of biological, social, cultural, ethnic, experiential, socioeconomic, gender-related, and linguistic factors in development and learning. School psychologists demonstrate the sensitivity and skills needed to work with individuals of diverse characteristics and to implement strategies selected and/or adapted based on individual characteristics, strengths, and needs.

2.6 School and Systems Organization, Policy Development, and Climate: School psychologists have knowledge of general education, special education, and other educational and related services. They understand schools and other settings as systems. School psychologists work with individuals and groups to facilitate policies and practices that create and maintain safe, supportive, and effective learning environments for children and others.

2.7 Prevention, Crisis Intervention, and Mental Health: School psychologists have knowledge of human development and psychopathology and of associated biological, cultural, and social influences on human behavior. School psychologists provide or contribute to prevention and intervention programs that promote the mental health and physical wellbeing of students.

2.8 Home/School/Community Collaboration: School psychologists have knowledge of family systems, including family strengths and influences on student development, learning, and behavior, and of methods to involve families in education and service delivery. School psychologists work effectively with families, educators, and others in the community to promote and provide comprehensive services to children and families.

2.9 Research and Program Evaluation: School psychologists have knowledge of research, statistics, and evaluation methods. School psychologists evaluate research, translate research into practice, and understand research design and statistics in sufficient depth to plan and conduct investigations and program evaluations for improvement of services.

2.10 School Psychology Practice and Development: School psychologists have knowledge of the history and foundations of their profession; of various service models and methods; of public policy development applicable to services to children and families; and of ethical, professional, and legal standards. School psychologists practice in ways that are consistent with applicable standards, are involved in their profession, and have the knowledge and skills needed to acquire career-long professional development.

2.11 Information Technology: School psychologists have knowledge of information sources and technology relevant to their work. School psychologists access, evaluate, and utilize information sources and technology in ways that safeguard or enhance the quality of services.