

Critical Thinking and Problem Solving

Submitted by the Education Department

The Education Department requires that candidates for a Paraeducator Certificate submit a portfolio to demonstrate their competency in the statewide outcomes associated with this certificate. Problem solving and critical thinking are also part of many of the statewide outcomes in which have to apply research and other knowledge to practical situations. In addition, the portfolio process itself involves major problem solving and critical thinking. Candidates must decide how to demonstrate skills and knowledge in this format, choosing which set of artifacts will serve as the best evidence and communicating their thinking about how and why they do so. A written piece must accompany each artifact. This piece must describe the context of the artifact, explain how it demonstrates competency in the outcome for which it was chosen, and reflect upon the candidate's learning in relation to the artifact. Artifacts and reflections must be arranged in a format that enables reviewers to clearly understand the connections made in order to determine the candidate's competency related to each outcome without the candidate being physically present to explain himself/herself.

The following attributes of Critical Thinking and Problem Solving are addressed in this process:

- Formulate and articulate ideas.
- Weigh connections and relationships.
- Distinguish relevant from non-relevant data, fact from opinion.
- Identify, evaluate and synthesize information (obtained through library, world-wide web, and other sources as appropriate) in a collaborative environment.
- Engage the imagination to explore new possibilities.
- Reason toward a conclusion or application.
- Understand the contributions and applications of associative, intuitive and metaphoric modes of reasoning to argument and analysis.
- Determine the extent of information needed.
- Access the needed information effectively and efficiently.
- Evaluate information and its sources critically.
- Incorporate selected information into one's knowledge base.
- Understand the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally.
- Research and analyze data relevant to issues from a variety of media.
- Select and use appropriate concepts and methods from a variety of disciplines to solve problems effectively and creatively.
- Form associations between disparate facts and methods, which may be cross-disciplinary.
- Identify and use appropriate technology to research, solve, and present solutions to problems.
- Understand the roles of collaboration, risk-taking, multi-disciplinary awareness, and the

imagination in achieving creative responses to problems.

-Make a decision and take actions based on analysis.

-Interpret and use written, quantitative, and visual text effectively in presentation of solutions to problems.

The statewide outcomes and rubric are attached.

Note: Individual courses also have many assignments that address this outcome including a philosophy of education, lesson plans to address particular learning outcomes and/or assessed needs, essays connecting social, cultural, political, and historical contexts to educational practice, etc.

Of the six students in the portfolio class Spring Term, 2010, five have taken Incompletes and are finishing up their work this summer. The one completer rated highly (3/3) on all ratings involving higher level thinking skills.