

Appendix A

Interview Protocol, Coding Sheets, and Solicitation of Exemplary Practices

Interview Protocol

Interview Introduction

"My name is _____. I'm calling on behalf of the Commission on Teacher Credentialing. At the outset you should know that: 1) we are tape recording the conversation to use it as data for coding and analysis, 2) your answers will be confidential and your identity anonymous, and 3) the study will not report on individual institutions. The Commission on Teacher Credentialing appreciates your taking time from your busy schedule to respond to our questions.

The interview is designed to gather information from the faculty and administrative perspective for the Commission on Teacher Credentialing regarding the status of critical thinking in the instructional programs of teacher candidates.

You should understand that there are no particular answers we are looking for other than those which give us the benefit of your most accurate and candid views. If you feel that you are in no position to answer any given question (or set of questions) for any reason, we ask that you simply inform us that you lack the requisite information.

There are two sets of questions, the first set are multiple choice questions, the second set open-ended questions. When you give your answer to the open-ended questions, feel free to elaborate on or illustrate them in any way you want. When I ask follow-up questions, I am seeking to make clear what precisely is being asked in the question, since some of the questions can be interpreted in different ways. Feel free to ask me to clarify any question you don't understand."

Interviewee _____ Time _____ Date _____

Interviewer _____ Tape Number _____

(If the person elaborates on any of these multiple choice questions put an * next to the question. Also, put the tape counter reader number next to the questions which have been elaborated upon beyond the choices given. Also, mark the start of the open-ended questions from the tape counter reader. Remember to reset your tape counter to zero.)

Background Information Questions

- What courses do you teach most regularly? _____

- What would you identify as your specialty or domain of highest expertise?

- Have you read any articles or books, or attended any conferences on critical thinking in the last 5 years you can mention? _____

(1) How important is critical thinking to your instructional objectives?

- (a) of little or small importance
- (b) of secondary importance
- (c) of primary importance

(2) My concept of critical thinking is largely:

(For those who ask what we mean by "intuitive" the common answer should be, *"By an intuitive idea or concept, we mean one that you use without knowing you are using it and without basing your use on an explicitly formulated theory."*)

- (a) intuitive in my thinking, or
- (b) explicit in my thinking

(3) My concept of critical thinking is largely:

(If they say "b" or "both", say *"Could you please tell me which theories you subscribe to and/or which theorists you have read."*)

- (a) a product of my own thinking
- (b) a product of one or more particular theories of C.T. to which I explicitly subscribe

(4) In your concept of critical thinking do you explicitly distinguish critical thinking skills and traits?

- a) yes
- b) no

(5) In your view, do you think of knowledge, truth, and sound judgment as :

- (a) not fundamentally a matter of my own personal preference or subjective taste or,
- (b) fundamentally, a matter of my own personal preference or subjective taste

(6) Would you say that your department or school has a shared approach to the teaching of critical thinking or is it left more or less to individual faculty members' discretion to decide whether and how they approach critical thinking?

- (a) yes, a shared approach
- (b) no, left to individual faculty

(7) In your view, how important is it for students to acquire sound intellectual criteria or standards to use in the assessment of their own thinking and the thinking of others?

- (a) of little or small importance
- (b) of secondary importance
- (c) of primary importance

(8) In your view, how important is it for students to learn how to assess their own work?

- (a) of little or small importance
- (b) of secondary importance
- (c) of primary importance

(9) Do you feel that students generally come to your classes with well developed intellectual standards or criteria to use in assessing thinking?

(If an interviewee asks what we mean by "intellectual standards" the common answer should be: *"By intellectual standards we mean general criteria that one uses to decide what to accept as true or false, reasonable or unreasonable."* You could also say, *"Well, a concern for accuracy is an intellectual criterion or standard essential to science. That is the sort of thing we have in mind, general intellectual criteria that a thinker might use to assess what people assert or claim."*)

- (a) In general yes or
- (b) in general no

(10) Which of the following four descriptions best represents your assessment of the degree to which your department's graduates develop the ability to think critically as a result of their course work?

(If they say "Some students are good and some are poor ", then ask, *"How would rate the typical graduate from your department?"*)

- (a) little or no development of critical thinking ability
- (b) a low level of the development of critical thinking ability
- (c) a good level of development of critical thinking ability
- (d) a high level of development of critical thinking ability

- (11) Which of the following four descriptions best represents your assessment of the degree to which your department's graduates develop the knowledge and ability to foster critical thinking in their future students?

(If you are asked for a further explanation of the difference between this and the previous question, say "An individual might be a good critical thinker in their own affairs but not particularly knowledgeable about or skillful in teaching others to think critically.")

(If they say "Some students are good and some are poor", then ask, "How would rate the typical graduate from your department?")

- (a) little or no development of such knowledge and ability
- (b) a low level of the development of such knowledge and ability
- (c) a good level of development of such knowledge and ability
- (d) a high level of development of such knowledge and ability

Beginning of Open-Ended Questions

Tape Counter Number: _____

- (12) Would you explain to me your concept of critical thinking? Perhaps you could begin by completing the following sentence: "To me, critical thinking is _____"

Follow-up:

- Could you elaborate further on your conception?
- Could you give me an example of your use of critical thinking outside the classroom that illustrates your concept of it? (e.g., as a consumer, as a parent, as a citizen, or in a personal relationship)
- In your answer you've mentioned processes such as analysis, synthesis, evaluation, and application. What intellectual standards would you use to distinguish whether or not these processes are being done critically vs. un-critically?
- Does your conception of critical thinking involve any traits of mind?
- An example of a trait that some might identify is open-mindedness.

If you do prime by mentioning this trait and value, and you receive an affirmative answer, ask for an elaboration "How do you teach for this trait in the classroom?", to determine whether the traits or values mentioned have actually been thought-through or are simply being rhetorically expressed. (Remember, you are looking here to determine the extent to which an interviewee has developed a clear, elaborated, and substantive conception of critical thinking.)

- (13) Is there anything you do on a daily basis in the classroom that you believe fosters critical thinking?

Follow-up Questions:

- Do you have any other structures that you find particularly effective in teaching your students to think critically about your subject?
- How do you emphasize critical thinking within that structure?

- (14) Some faculty feel they have too much content to cover to have much time left for fostering critical thinking. What is your view of this position?

Follow-up Questions:

- *Do you teach or have you taught any courses that require a great deal of coverage, and if so, how do you foster critical thinking in those courses?*
- *Could you please give me an example from the design of your classes?*

(Remember, here we are seeking to see if the interviewee understands how critical thinking can be used as a tool for the deeper understanding of content rather than to see the learning of critical thinking as a distraction from the learning of content/ In other words, a reconciliation occurs when a faculty member discovers that students truly learn content best when they think that content through critically).

- (15) What particular critical thinking skills do you believe are most important for your students to develop?

If they hesitate for 5-10 seconds, say *"Is the question clear or do you want some clarification?"*

Follow-up Questions:

- *In your answer you've mentioned processes such as analysis, synthesis, evaluation, and application. What intellectual standards would you use to distinguish whether or not these processes are being done critically vs. un-critically?*
- *Could you give me an example of how you teach critical thinking skills in the classroom?*
- *Could you give me an example of the use of one of those skills in some everyday context, outside of the classroom? (e.g., as a consumer, as a parent, citizen, in a personal relationship)*

If the interviewee asks what you mean by a particular or specific critical thinking skill, answer *"Well, some would identify the ability to assess information for its relevance to an issue or the ability to clarify an issue or problem as important component critical thinking skills."* *"In your view which are the most important component critical thinking skills?"* (Remember that we are seeking to determine here whether the interviewee has thought through distinguishable component critical thinking skills and can explain what those skills constitute).

- (16) If you had the task of assessing the extent to which some faculty member was or was not emphasizing or fostering critical thinking through his or her instruction, how would you go about making that assessment?

Follow-up Questions:

- *Could you elaborate further?*
- *Could you give me an example of how you would go about conducting this assessment?*
- *In your answer you've mentioned processes such as analysis, synthesis, evaluation, and application. What intellectual standards would you use to distinguish whether or not these processes are being done critically vs. un-critically?*

Prime if necessary by asking *"For example, would you use classroom visitation? What exactly would you be looking for if you did visit a class?"* If they say, *"I would look at their tests and questions,"* then ask *"What criteria would you use to evaluate your colleagues tests and test questions?"* If they say, *"I would look to see if their encouraging students to use their own thinking and ideas,"* then say *"How would you assess the quality of the students thinking and ideas?"* (Remember, you are looking here to

determine the extent to which a faculty has developed a clear, elaborated, and substantive conception of how to assess another faculty member to determine the extent to which that faculty member was or was not fostering critical thinking in his/her students.)

(17) What is your personal conception of intellectual criteria or standards?

Is the question clear to you? I can give you further clarification if you want.

Follow up Questions:

- *"What qualities do you look for in your students reasoning that tell you whether or not they are reasoning well or poorly?" For example, if you emphasize the importance of being accurate in their thinking, then "accuracy" is a general criteria or standard you value.*
- *In your answer you've mentioned processes such as analysis, synthesis, evaluation, and application. What intellectual standards would you use to distinguish whether or not these processes are being done critically vs. un-critically?*
- *If a student said to you, "what criteria should I use in deciding when to accept or reject some editorial or some position that someone defends?" what advice would you give them?*
- *What intellectual standards do you use to evaluate students' reasoning?*
- *Could you name some and elaborate on them?*

Here is another example to illustrate what we mean by "intellectual standards":

A study was conducted in which elementary students were asked, "There are 26 sheep and 10 goats on a ship. How old is the captain?" 76 of the 97 students "solved" the problem by adding, subtracting, multiplying or dividing. This example illustrates the intellectual standard of relevance. That is, the students did not recognize that the information they were given was not relevant to the question that they were asked.

(If an interviewee asks what we mean by "intellectual standards" the common answer should be: "By intellectual standards we mean general criteria that one uses to decide what to accept as true or false, reasonable or unreasonable." You could also say, "Well, a concern for accuracy is an intellectual criterion or standard essential to science. That is the sort of thing we have in mind, general intellectual criteria that a thinker might use to assess what people assert or claim."

Last Two Questions To be Used as a Cross-check to Assess Faculty Knowledge of Critical Thinking Concepts

Read the following to interviewees: "To conclude the interview I have two final questions to help us assess the extent to which there are agreed-upon uses of some terminology frequently found in articles and books on critical thinking. The terms 'inference,' 'implication,' and 'assumption', have been selected as the focal point. Please answer these questions based on your use of these terms."

(18) How would you explain the difference between an assumption and an inference?

(19) How would you explain the difference between an inference and an implication?

Coding Sheet for Open-Ended Questions

Interviewee _____ Time _____ Date _____

Coder _____ Tape number _____

(12) Concept of Critical Thinking

- Some vagueness in answer 0
- Some misconception in answer 0
- Wanders from question 0
- Contradiction in answer (or in relation to another answer) 0

- (a) little or no conception
- (b) limited conception
- (c) elaborated conception

(13) Description of typical day in class that fosters critical thinking

- Some vagueness in answer 0
- Some misconception in answer 0
- Wanders from questio 0
- Contradiction in answer (or in relation to another answer) 0

- (a) little or no conception
- (b) limited conception
- (c) elaborated conception

(14) Reconciling Covering Content with Fostering Critical Thinking

- Some **vagueness** in answer 0
- Some **misconception** in answer 0
- **Wanders** from question 0
- **Contradiction** in answer (or in relation to another answer) 0

- (a) **little or no** conception
 - (b) **limited** conception
 - (c) **elaborated** conception
-
-
-
-

(15) Critical thinking skills that are most important for your students to develop

- Some **vagueness** in answer 0
- Some **misconception** in answer 0
- **Wanders** from question 0
- **Contradiction** in answer (or in relation to another answer) 0

- (a) **little or no** conception
 - (b) **limited** conception
 - (c) **elaborated** conception
-
-
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-

(16) How one would assess the extent to which a faculty member was/was not fostering critical thinking?

- Some **vagueness** in answer 0
- Some **misconception** in answer 0
- **Wanders** from question 0
- **Contradiction** in answer (or in relation to another answer) 0

- (a) **little or no** conception
 - (b) **limited** conception
 - (c) **elaborated** conception
-

(17) Your personal conception of intellectual standards.

- Some vagueness in answer 0
- Some misconception in answer 0
- Wanders from question 0
- Contradiction in answer (or in relation to another answer) 0

- (a) little or no conception
 - (b) limited conception
 - (c) elaborated conception
-
-
-

(18) Difference between assumption and inference

- Some vagueness in answer 0
- Some misconception in answer 0
- Wanders from question 0
- Contradiction in answer (or in relation to another answer) 0

- (a) little or no conception
 - (b) limited conception
 - (c) elaborated conception
-
-
-

(19) Difference between inference and implication

- Some vagueness in answer 0
- Some misconception in answer 0
- Wanders from question 0
- Contradiction in answer (or in relation to another answer) 0

- (a) little or no conception
 - (b) limited conception
 - (c) elaborated conception
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The interviewee did/did not mention the following:

- (1) **basic skills of thought....**such as clarifying the question; gathering relevant data

or information; formulating or reasoning to logical or valid conclusions, interpretations, or solutions; identifying key assumptions, tracing significant implications, entering accurately into alternative viewpoints...

not at all minimal or vague allusion mentioned elaborated

Comment _____

- (2) **important intellectual traits of mind....**such as intellectual humility, intellectual perseverance, intellectual responsibility, intellectual integrity, and fairmindedness...

not at all minimal or vague allusion mentioned elaborated

Comment _____

- (3) **teaching to facilitate reasoning within the subject...**teaching for historical thinking, sociological thinking, mathematical thinking, biological thinking, scientific thinking, philosophical thinking....

not at all minimal or vague allusion mentioned elaborated

Comment _____

- (4) **an emphasis on problem solving**

not at all minimal or vague allusion mentioned elaborated

Comment _____

(5) **the special need for critical thinking today** in virtue of such phenomena as accelerating change, intensifying complexity, and increasing interdependence (or analogous phenomena)

not at all

minimal or vague allusion

mentioned

elaborated

Comment _____

(6) **the need for a greater emphasis on peer and student self-assessment**

not at all

minimal or vague allusion

mentioned

elaborated

Comment _____
