

Appendix 3-D
APS Semi-structured Ethnographic Interview Guide Examples

Interviewer's Guide (2004)J-2
Interviewer's Guide (2007)J-7

Academic Pathways Study Ethnographic Interview Protocol
Interviewer's Guide
March 7, 2004

This document is intended as a **guide** to be used by interviewers in conducting the APS Ethnographic Interviews. It is not a “script.” Because ethnographic interviews are intended to be semi-structured and open-ended, the exact wording of the questions will change depending on the context. Furthermore, the questions below are not meant to “stand alone,” but rather to elicit responses that will be followed up on by the interviewer in order to explore the participant’s perspective further.

The questions are listed in the order that we would like topics to be introduced. However, you might find that a participant brings up a topic on his or her own before the scheduled point in the interview. For example, a participant might mention issues of gender or ethnicity before you have reached these topics in question 18. In this case, it is useful and perfectly appropriate to explore the topic when it is first introduced. (The later “slot” for that topic can then be used to address the topic further, if in your judgment there is more insight into the participant’s perspective to be gained from this.)

There is no scripted introduction to be used in the interviews with the 8 ethnographic participants – we want you to adopt the style, phrasing, and tone that is most comfortable for you. In general, we would suggest that you first introduce, or re-introduce, yourself. Remind the participant that this is the yearly interview that he or she has agreed to participate in, and that the interview will last approximately 2 hours.¹ Tell the participant that you will be talking with them about a number of topics that are of interest for the Academic Pathways Study. These topics are about themselves and their experiences in and out of school. Stress that you’re interested in *their* ideas, opinions, and perspectives, and let them know that you appreciate whatever they’re able to tell you about the topics you’ll be exploring with them.

Please feel free to use your judgment to explore potential points of interest that might arise, whether or not they are included in the questions below. Sometimes the most important issues are those that aren’t anticipated by the researchers at the outset.

¹ The ethnographic interview will last less than 2 hours with the 8 participants who will be participating in both the formal and the ethnographic interviews.

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1. Let's start by talking a bit about your time in high school.

a. Where did you go to high school? *NOTE: This is intended as a warm up question, just to get the interview underway, and can be followed up with a few other "small talk" questions, like "Where is that?" etc.*

b. How would you describe yourself as a student in high school?

2. Can you tell me how you decided to come to [School Name]?

3. Can you tell me how you became interested in engineering?

a. *Explore further, if needed, with:* What were some of the experiences that were important in getting you interested in engineering?

4. Thinking about yourself before you came to [School Name] – are there things that you would say prepared you to succeed in engineering?

5. Tell me about your first year at [School Name] so far. How are things going?

a. *Explore further on specifics of response, if student doesn't provide details:* e.g., if student says, "It's been a lot harder than I thought," ask, "In what ways?"

6. Can you take me through a typical day for you here at [School Name]?

7. I'd like to ask about your classes and other academic experiences you've had since you've been here.

- a. Have you had academic experiences here so far that you would describe as particularly good? Can you tell me about one of those? *If necessary, make sure to follow up with a question like: "So what was it that made that a good experience?"*
- b. Have you had academic experiences that you would describe as particularly bad? Can you tell me about one of those? *Again, if necessary, make sure to follow up with a question like: "So what was it that made that a bad experience?"*

8. I asked you earlier to describe the student you were in high school. How would you describe yourself as a student now?

- a. *If relevant, explore further to get student to account for the differences.*

9. Let me ask you to think about the other engineering students you've come across here. Would you say that in general they are more different from you or more similar?

- a. *Explore further: "How are they similar?" (or "How are they different?")*

10. Have you had much contact with non-engineering students? Would you say that there are things that distinguish engineering students from students in other majors?

- a. *Explore further as needed to get details.*

11. What would you say has been the most difficult thing here for you so far? *[Students might mention non-academic difficulties. Make sure to explore further to get at academic difficulties.]*

- a. How did you handle (or how are you handling) that?

The following sub-questions can be asked if time permits.

- b. What else have you found difficult?
 - i. How have you handled that?
- c. Do you have strategies for handling difficult situations?
 - i. *Explore further for specific examples.*

12. What's been easy for you here so far?

- a. *Explore further if subject doesn't elaborate.*

13. Has anything surprised you about your classes?

14. Let me ask you about your strategies for deciding what classes to take.

- a. What kinds of things do you think about when you're deciding what classes to take?
- b. Do you talk to other people when you're making your decisions about classes?
 - i. *Explore further to get at who these other people are as well as the role they play.*

Note: Be prepared to explore further on issues such as the following: what is an easy (or good, or interesting, etc.) course, what is a hard (or bad, or boring, etc.) course; what's an easy (or good, etc.) professor, what's a hard (or bad, etc.) professor; and how do they know about particular professors, courses, etc.

15. Are there any groups that you've become part of since you came here to [Name of Institution]?

- a. *Explore further for each group (or, if there are a lot, for what the subject would say are the "most important" ones)*
 - i. Can you tell me about [group].
 - ii. What role has [group] played in your education?

Note: This may need some prompting to establish the range of places we are interested in, both on and off campus, both social and para-professional. Explore further to see if they have answered with respect to both on and off campus groups.

16. Think about your professors here at [Name of Institution]. What would you say they think it means to be a good engineer?

- a. How does that fit with your own image of a good engineer ?

17. Knowing what you know now, as you look back on the time that you've been here so far, is there anything that you would do differently?

18. One of the things that our research team is interested in is diversity in engineering and engineering education, in terms of race, ethnicity, and gender. I'd like to ask you some questions related to this.

- a. (This is a question that you've already answered on the survey, but your survey responses aren't available to me yet.) Can you tell me how you identify yourself racially or ethnically?
- b. Are there supports or barriers, advantages or disadvantages, for you as a [ethnic identification] engineering student?
 - i. How about for people of other racial or ethnic groups?
- c. Do you think that there are differences between the experiences of male and female engineering students?

- d. How has it been for you here, as a [male/female] engineering student?

19. What are you planning to major in?

- a. How did you choose (xxx)?
- b. Have you considered other majors?
- c. Have you considered other kinds of engineering?
- d. Are there certain fields of engineering that you just can't see yourself going into? Why?

20. Let me ask you to think about the next several years that you'll be spending at [School Name].

- a. What are you looking forward to in your time here?
- b. What are you concerned about?

21. Okay, let's imagine it's a few years from now, and you've graduated with a degree in (student's planned major).

- a. What's next for you?
 - i. *Or, if not planning on becoming an engineer, explore why they've made this decision.*
- b. What do you imagine yourself doing on a day-to-day basis?
 - i. *Or, if not planning on becoming an engineer: What do you imagine engineers do on a day-to-day basis?*
- c. What would you say it takes to be a good (insert student's career choice)?

- d. How are you at (insert characteristics student mentions)?
- e. Are there things about yourself that you think you need to work on to become a successful (xxx)?

22. Here's a more personal question. I've been asking a lot of questions so far about your academic experiences. What else do you do in your life besides being an engineering student?

(Question 23 is partially redundant with question 17; ask if time permits.)

23. Here's a scenario I want to ask you about: There's a high school student who's interested in pretty much what you were interested in when you were in high school. This student comes to you for advice. Knowing what you now know, what advice would you give them?

24. If you could whisper in the ear of the people who set up the pre-engineering (or engineering) program here at [Name of Institution], what advice would you give them about improving things?

25. Is there anything that I haven't asked you about that you think I should? Anything else that's relevant in an interview like this, do you think?

26. Do you have any questions you'd like to ask me?

**Academic Pathways Study Ethnographic Interview
Interviewer's Guide
February 23, 2007**

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The questions are listed in the order that we would like topics to be introduced. However, you might find that a participant brings up a topic on her/his own before the scheduled point in the interview. For example, a participant might mention issues of gender or ethnicity before you have reached these topics in Question 17. In this case, it is useful and perfectly appropriate to explore the topic when it is first introduced. (The later “slot” for that topic can then be used to address the area further, if in your judgment there is more insight into the participant’s perspective to be gained from this.)

There is no scripted introduction to be used in the interviews with the 8 ethnographic participants – we want you to adopt the style, phrasing, and tone that are most comfortable for you. In general, we would suggest that you first introduce, or re-introduce, yourself. Remind the participant that this is the yearly interview that he or she has agreed to participate in, and that the interview will last approximately 2 hours. Tell the participant that you will be talking with her/him about a number of topics that are of interest for the Academic Pathways Study. These topics are about the student and his/her experiences in and out of school. Stress that you’re interested in *the student’s* ideas, opinions, and perspectives, and let her/him know that you appreciate whatever he/she is able to tell you about the topics you’ll be exploring.

We have tried to indicate the kinds of follow up questions you might make in the context of the questions below. However, following up on evaluative statements is generally important, and warrants mentioning here. Whenever possible, follow up on subjects’ evaluative statements: e.g., S: “That was a hard class” ...Int: “What was hard about it?” or “How was it hard?”; S: “I like math”...Int: “What do you like about math? Can you give me a specific example?”

Before interviewing a subject, remember to *re-read and familiarize yourself with relevant data* collected on that subject, including fieldnotes, the Year 1-3 ethnographic interviews, and any informal interviews that may have been conducted. Also review the current state of the analysis of that subject’s data. This will allow you, on a case-by-case basis, to tailor questions to a particular subject. This will greatly increase the comparative power of the interviews for the longitudinal aspect of the study. We are including a formula for constructing a question based on this data in the interview this year. A good place to start might be looking at what a student was “concerned about” when they were asked the question in the year 3 interview.

So, find an interesting topic you would like to ask the student about based on the data collected from previous years focusing upon year 3 interviews or concerns students brought up in the

informal interviews in the Fall of '06. If the piece of data you are using comes from an old interview, then a natural place to ask them about this topic again would be the same question it came up the first time. For example, lets say in year 3 interview a subject, "Leslie" said that she was really worried about finding a job before graduation. When I get to question #18 this year, before I ask the question I will say "Leslie, last year in our interview you talked about finding a job before graduation, can you talk about how that has gone?"

So our formula would be....

[Last year/when I observed you...] you talked about **[insert student's topic of concern/excitement...]**, talk about how that has gone this year.

In the protocol below we have inserted this placeholder in a few places where we believe that the question is important. Please feel free to use your judgment to explore potential points of interest that might arise based on your review of your past transcripts. Sometimes the most important issues have not been anticipated by the researchers at the outset.

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1) Tell me how things are going for you?

a. *Explore further on specifics of response, if student does not provide details: e.g., if student says, "It's been a lot harder than I thought," ask, "In what ways?"*

Note: Follow the subject's lead on how to handle this question. In some cases, it might be best used as an icebreaker, just to begin the conversation and move on to other questions. However, some subjects (most, based on our informal interviews at LPub this year) will have quite a lot to say, on a range of topics. In this case, don't be too quick to move off of this question – explore all of the issues the subject seems willing to get into.

b. *Before moving on to other questions, give subject a chance to say more, e.g., "What else is happening with you these days?"*

c. *Either here or in the context of another question ask the student the question that revisits previous years' interviews or field work and is specific to them.*

[Last year or this past Fall/when I observed you...] you were concerned about [insert student's topic of concern/excitement...], talk about how that has gone this year.

2) We talked about this some last year, but I'd like to ask about it again: Can you tell me how you became interested in engineering?

a. *Explore further, if needed, with:* What were some of the experiences that were important in getting you interested in engineering?

b. [If they do not mention a specific person] Was there an individual who influenced or guided you to study engineering?

3) Thinking about yourself before you came to [School Name] – are there things that you would say prepared you to succeed in engineering?

4) What are you majoring in (*or planning to major in*)?

a. How did you choose (xxx)?

- b. What other majors did you consider?
- c. What other kinds of engineering did you consider?
- d. Are there certain fields of engineering that you just can't see yourself going into? Why?

4x) Did you have an internship during the last four years? Tell me about it. What did you do on a day-to-day basis? How has that internship related to school?

5) Can you take me through a typical day for you here at [School Name]?

6) I'd like to ask about your classes and other academic experiences you've had since you've been here.

- a) Have you had academic experiences that you would describe as particularly bad? Can you tell me about one of those? *Again, if necessary, make sure to follow up with a question like: "So what was it that made that a bad experience?"*
- b) Have you had academic experiences here so far that you would describe as particularly good? Can you tell me about one of those? *If necessary, make sure to follow up with a question like: "So what was it that made that a good experience?"*
- c) Tell me about your capstone/senior project?

7) How would you say that you changed as both a person and student since you were a freshman? How are you the same? *(ask them at the same time and let them respond)*

8) Let me ask you to think about the other engineering students you've come across here. Would you say that in general they are more different from you or more similar?

- a. *Explore further: "How are they similar?" (or "How are they different?")*

9) Have you had much contact with non-engineering students? Would you say that there are things that distinguish engineering students from students in other majors?

- a. *Explore further as needed to get details.*

10) What would you say has been the most difficult thing here for you so far? *[Students might mention non-academic difficulties. Make sure to explore further to get at academic difficulties.]*

Note: this would be a good spot to use the placeholder noted above:
[Last year/when I observed you...] you talked about [insert student's topic of concern/excitement...], being difficult for you, talk about how that has gone this year?

a. How did you handle (or how are you handling) that?

11) What's been easy for you here so far?

a. *Explore further if subject doesn't elaborate.*

12) Has anything surprised you about your engineering education? Did you believe that it would be different than what you experienced?

13) If you were to advise me, as a freshman student, about what classes to take --- when, in what combinations, and taught by whom, what would you tell me?

a. Besides from courses is there anything else that you would advise me as far as getting involved with the engineering community on campus?

14) Are there any groups that you've become part of since you came here to [Name of Institution]?

a. *Explore further for each group (or, if there are a lot, for what the subject would say are the "most important" ones)*

i. Can you tell me about [group]?

Note: This may need some prompting to establish the range of places we are interested in, both on and off campus, both social and para-professional. Explore further to see if they have answered with respect to both on and off campus groups.

b. Is there someone you met (professor, engineer, advisor) since you began school here who you would say has filled a mentor role for your engineering interests?

16) Knowing what you know now, as you look back on the time that you've spent here, is there anything that you would do differently?

17) One of the things that our research team is interested in is diversity in engineering and engineering education, in terms of race, ethnicity, and gender. I'd like to ask you some questions related to this.

Note: this series of questions may be another area where the placeholder will work well: [Last year/when I observed you...] you talked about [insert student's topic of concern/excitement...], talk about how that has gone this year.

a (This is a question that you've already answered on the survey, but your survey responses aren't available to me yet.) Can you tell me how you identify yourself racially or ethnically?

b. Are there supports or barriers, advantages or disadvantages, for you as a [ethnic identification] engineering student?

i. How about for people of other racial or ethnic groups?

c. Do you think that there are differences between the experiences of male and female engineering students?

d. How has it been for you here, as a [male/female] engineering student?

18) I want to ask you to think about the rest of the time that you'll be spending at [School Name].

a. What are you looking forward to during the rest of your time here?

b. What are you concerned about?

19. This is likely the last time we'll interview you, so I'd like you to talk about what happens for you after this interview.

a) Tell us what happens next for you? This summer? This fall? Beyond?

Note: this should be another question where the placeholder may be relevant: [Last year/when I observed you...] you talked about [insert student's topic of concern/excitement...], talk about how that has gone this year.

Here we are trying to get the students to frame their future on their terms. If these topics don't come up probe to steer the conversation to topics including, but not limited to:

- i) when he/she is graduating (if graduating at all)?
 - ii) Job search, how it went? Does he/she already have job?, etc.
 - iii) What about grad school?
 - iv) Options other than working in engineering? (teaching, starting a business)
 - v) What about ten years from now?
- b) What do you imagine yourself doing on a day-to-day basis?
- i) AND, if not planning on becoming an engineer: What do you imagine engineers do on a day-to-day basis?*

20. Here's a more personal question. I've been asking a lot of questions so far about your academic experiences. What else do you do in your life besides being an engineering student?

22. If you could whisper in the ear of the people who set up your engineering program here at [Name of Institution], what advice would you give them about improving things?

26. You are asked to testify in front of a congressional committee that is investigating the entire institution of engineering. As a [xxx] engineer, defend your discipline.

- a) Why do we need [xxx] engineers?
- b) What have [xxx] engineers done to make my life better?

23) This is the last of our four interviews with you. I'd like you to comment on what you thought about this interview process. Is there anything that is relevant to this study that you think I've missed?

PERFORMANCE TASK

TRANSITION FROM ETHNOGRAPHIC INTERVIEW:

The last part of today's session has a different format from the interview we just completed. I will be reading instructions and questions from a script.

INSTRUCTIONS:

At this time, I'd like to ask you to work on a short activity. This is the kind of activity that has many different kinds of answers. We would like you to give it your best effort. You have up to fifteen minutes to work on it. I will let you know when there is five minutes left, so you have an idea about how much time has passed. Please let me know if you are done before the fifteen minutes is up. Do you have any questions? OK, here is the activity. You might remember this activity if you were asked to do it two years ago as part of this study. (CHECK START TIME ON AUDIO RECORDER AND INDICATE IT IN THE BOX BELOW. THEN HAND R THE FOUR-PAGE PERFORMANCE TASK PACKET.)

Start time:

:	:
HH	MM SS

PTQ1. (ALLOW THE STUDENT TO READ AND SOLVE THE PROBLEM ON THEIR OWN)

TRANSITION:

(CHECK END TIME ON AUDIO RECORDER, AND IF NECESSARY):

Okay, it's been 10 minutes now; you have 5 more minutes to solve the problem.

Okay, it's been 15 minutes now, please stop.

End time:

:	:
HH	MM SS

(IF YOU HAVE A YEAR 2 STREET CROSSING WRITTEN RESPONSE FOR R, GIVE IT TO THEM AND PROCEED TO PTQ2 ON THE NEXT PAGE. IF NOT, SKIP AHEAD TO PTQ4, WHICH IS MARKED WITH A ▼.)

Here's a copy of your responses from back in 2005, when you first did the street crossing activity.

PTQ2: *Take a look at both the responses you just wrote today and your responses from two years ago. What similarities and differences do you notice between the two sets of responses?*

PTQ3: *You've told me a little about how your responses are similar or different. How about how you came up with them? Consider how you thought about the activity and how you came up with the responses you wrote down, both today and two years ago. What similarities and differences do you notice?*

(IT'S FINE IF **R** ALREADY BEGAN COMPARING THOUGHT PROCESSES (VS. COMPARING RESPONSES) IN ANSWERING THE PREVIOUS QUESTION (PTQ2). ASK THEM TO CONTINUE, E.G., "*Do you notice any other similarities or differences in the way you came up with your response?*")



PTQ4: *To what extent do you feel this is an engineering problem?*

PTQ4a: (IF NOT ALREADY ANSWERED) *And why?*

PTQ5: *What knowledge and skills helped you solve the problem?*

PTQ6: *Where did you develop your knowledge and skills to solve the problem?*

PTQ6a: (IF NOT ALREADY ANSWERED) *Please describe those experiences in more detail.*

PTQ7: *Are there any everyday situations from your life that remind you of the situation described in the problem?*

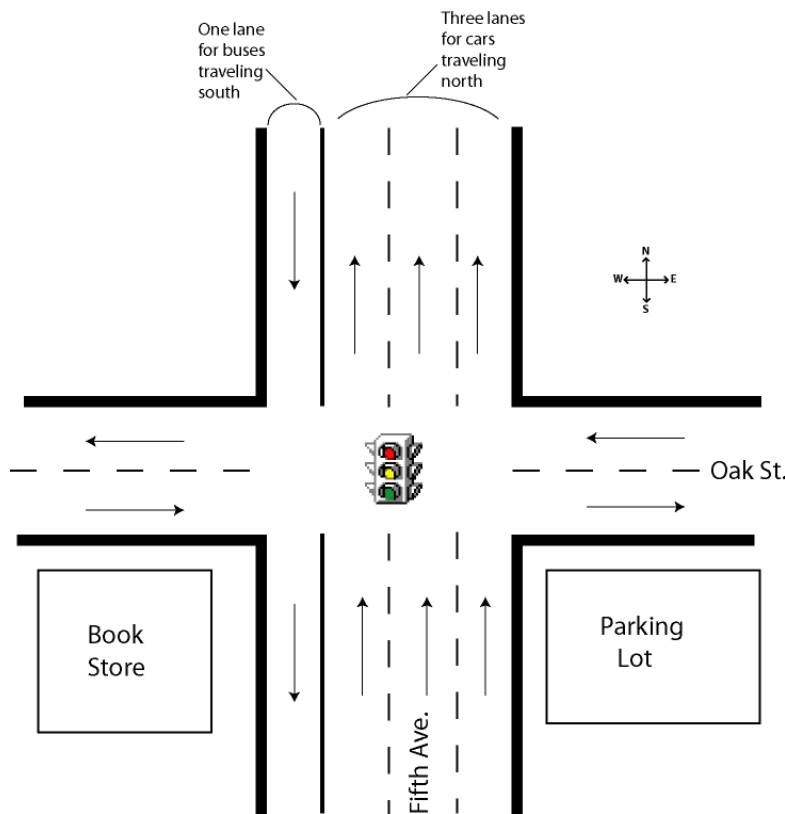
TRANSITION:

(COLLECT PAPER) *Great! Thank you. We hope that you've enjoyed this activity and we want to make sure that you know that there are many right answers. We've used it to collect information from engineering students across the nation to understand the types of things students think about.*

Respondent ID: _____

As an engineer, you have been asked to solve a problem on the State University campus. Just like campuses across the country, the State University campus is often overcrowded with pedestrians crossing the streets.

One busy intersection on campus is the crossing of Fifth Ave. in front of the bookstore. Dangers at this intersection include heavy traffic and busses which run against the general traffic flow (see diagram below). The University would like to design a cost effective method for students to cross Fifth Ave. which would reduce the possibility of accidents at this intersection. You have been assigned to design a solution to this problem for presentation to the University Traffic Committee.



In the process of designing your solution you have been asked to respond to the set of questions on the following pages. The interviewer has more paper if you need it.

2007 rev.

1 – What is the problem as you see it?

2 – List potential solution(s) for this problem.

3 – From your list in Question 2, choose the potential solution you think is best and provide a detailed evaluation of your solution.

4 – What kinds of additional information would help you solve this problem?