

ITA Transcripts

Title: Chemistry Lab 2
Focus: Communicative Competence
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Context: The Chinese TA is teaching a lab in General Chemistry, a course for non-majors. In the lab, the students were using titration to test the concentration of various solutions. This chemistry lab was videotaped in November 1996. The TA had good rapport with his students and handled the lab interaction fairly effectively, despite some limitations in language.

The following transcript comes from a short segment at the beginning of a first-year chemistry lab. Read through the transcript and answer the questions for discussion at the end of the transcript.

Transcription conventions

/ / overlapping speech
? rising intonation
, a slight pause
. a more noticeable pause
[4sec] a measurable pause
= = latched turns
[italicized] description of nonverbal behavior
<S: OK> backchanneling response
rub:ber lengthened syllables

TA: I think you can find the uh, one pipette in your drawer. here. [3sec] [TA opens drawer] Use your pipette, to measure exact, five milliliter OK? This one, this is five milliliter
[3sec][S1 is having trouble using her pipette.]
S1: I just rinsed mine out but it=
TA: =yeah=
S1: =how how can I but it mine always, well, here <TA: /OK?/> / I'll show / you with water real quick, I don't understand how you keep it from runnin out
TA: what is this, distilled water?
S1: yeah that's just distilled /water/, but what I'm sayin is OK/ so
TA: /OK /. / oh how to stop=
S1: =yeah how do you make it=
TA: =OK . that, needs practice [TA takes the pipette to demonstrate] [2sec] You see
S1: (Run it up to the line.) [5sec]
TA: when this when the level is reached to the mark . you just, OK you just stop, use your hand to control, the bubble OK [2sec] OK that is exactly 5
S1: OK . so it just takes a little practice?
TA: yeah=
S1: OK
TA: =and uh [2sec] push this this end into the the the [points to the rubber bulb] What is this? / . / rub:ber rubber what?
S1: /it's a /. rub:ber squeeze [both laugh] /yeah/

TA: / OK just /push it very, tight=
 S1: =OK=
 TA: =in case the is some gases leak, OK?
 S1: OK
 TA: OK .
 S2: TA?
 TA: Hi
 S2: do I need this [unintelligible] this NaOH do you just drop that into the=
 TA: =yeah=
 S2: =lemon juice until it turns
 TA: what is this?
 S2: lemon juice?
 TA: yeah lemon juice uh
 S2: until it turns purple? is it going to turn purple like it did last time? or pink?
 TA: pink, very faint pink just like last time
 S2: OK
 TA: OK? . and you also have to read the initial level, OK follow follow the table, over here
 [TA: continues handing back papers][13sec]
 TA: Eddie, it's yours lab report=
 S3: =all right=
 TA: =OK . next one is Nat.[sorting papers and talking to self] uh , Mike is here OK? . This one, this one . is yours [hands paper to Mike]
 S4: thank you [2sec]
 TA: hi Mike remember, put on your, goggles OK?
 [TA: continues sorting papers.] [2sec]
 TA: [unintelligible] not here? [10sec]
 [TA: continues handing back papers. Student waves him over.]
 S5: I forgot how to use this
 TA: OK
 S6: TA?
 TA: let's see.
 [TA: turns to S6]
 TA: So you have same question?
 S5: Ba:sically yeah I just=
 TA: =Oh, OK=
 S5: =for this you know I'm doin the vitamin C?=
 TA: =umhmm?=
 S5: =and the initial buret reading
 TA OK let me, before you start to titrate, read this, level=
 S5: =uh huh?=
 TA: =and when you finish, read again like this the final buret reading, and uh the difference between these two readings / are the . volume
 S5: / right if this is like uh point=
 TA: OK
 S5: =I'm not sure I was thinkin=
 TA: OK?
 S5: =[unintelligible] it's 12 milliliters
 TA: it is zero this is six at first between six and seven
 S5: so it's like 6.3 somethin=
 TA: uh huh uh huh
 S5: =and then it'll go down
 TA: Maybe maybe you use five, or maybe go down to here, 15 point what , just like this
 S5: / So I would put like 6.4, let's say, right?

[Student is looking down at his lab manual]

TA: [TA gestures to the buret.] Uh please read this uh exactly.

S5: uh huh?

TA: Uh OK. Maybe it is too high, oh we always keep this level with the same high with your your with your eye, at least it is too high for me so I always lower it down, and measure, and uh (unintelligible) OK?=
 [TA moves to S6.]

TA: =OK what's your question. You forget how to use this one, right?

S6: yeah

TA: So first of all clean the buret . [TA takes out rubber stopper] uh=
 S6: =(Take it out?)=
 TA: =take this out OK?[7sec] [TA loosens the ring stand to remove the buret.]
 Well, is impossible? And uh , discard water here, and use a distilled water to rinse,
 2 or 3 time
 S6 OK . And then=
 TA: =And then=
 S6: =just pour this in or you what
 TA: Well . so we assume you have already uh clean the burette, then you fill the buret with the sodium hydroxide solution=
 S6: =OK=
 TA: =over there in the plastic bottle OK?
 S6: How much do you put in?
 TA: We almost, uh full fill /OK?/=
 S6: /OK /
 TA: = (unintelligible)and uh=
 S6: would that be that then?
 TA: =yeah and uh you have to skip the air bubble, since you your always have air bubble when you first, fill the buret=
 S6: yeah?
 TA: =so . you such like uh such like this, (lose) your air bubble here you just turn the stop, open, OK uh let the sodium hydroxide uh go through, and uh skip all the air bottle uh air bubbles, and then ,close, and then , and then you can read the initial , buret reading <S6:OK> OK. OK you go ahead and if you have any questions just ask me again
 S6: OK
 TA: Hi Nat
 S7: Hi TA. Little late today
 TA: yeah [laughs] uhhhh let's see. [rubs head] OK I just tell you something you have know is, first, you have to choose three chemicals we have nine chemicals you have do three of them, at least three of them, if you want to do more of them that's fine
 S7: OK, that's it?
 TA: Uh huh, and uh . at least one chemicals for each group we have two group one is acid and one is base, un huh, at least one of each , <S7:OK> and that's it
 S7: All righty / sounds good/
 TA: /uh huh uh huh/ And uh, wear goggles
 S7: All right

Questions for Chemistry Lab 2

Sociolinguistic Competence

TASK 1 - Acknowledging students

The TA uses the word “hi” three times. Which one of these seems most appropriate? What are some alternative ways that he could acknowledge students? When is “hi” appropriate in a lab setting?

S1: OK.

TA: OK .

S2: TA?

TA: Hi

S2: Do I need this (unintelligible) this NaOH do you just drop that into the=

TA: [sorting papers and talking to self] Uh , Mike is here, OK? This one, this one, is yours. [hands paper to Mike]

S4: Thank you [2sec]

TA: Hi Mike, remember, put on your, goggles OK?

TA: OK. OK, you go ahead, and if you have any questions just ask me again.

S6: OK.

TA: Hi Nat.

S7: Hi TA. Little late today.

TASK 2- Giving advice

It is often necessary for TAs to give students various kinds of advice in the chemistry lab, and effective TAs are able to establish a positive relationship with their students as they do so. What features of TA’s language help to establish a positive relationship with the students?

TA: Hi Mike remember, put on your, goggles OK?

TA: Uh OK. Maybe it is too high. Oh we always keep this level with the same high with your your with your eye. At least it is too high for me, so I always lower it down, and measure, and uh. . . OK?

TA: OK. OK, you go ahead, and if you have any questions just ask me again.

Strategic competence

Communication strategies

In a lab setting, students' questions may be particularly difficult to comprehend. TA usually manages to understand his students, and he uses some positive communication strategies. What strategies is TA using in the following interactions?

S1: How how can I but it mine always, well , here. <TA: OK?> I'll show you with water real

quick. I don't understand how you keep it from runnin out

TA: What is this, distilled water?

S1: Yeah that's just distilled /water, but what I'm sayin is OK/ so

TA: / oh how to stop=

S1: Yeah how do you make it. . .

S2: Lemon juice until it turns

TA: What is this?

S2: Lemon juice?

TA: Yeah lemon juice /uhhh/

S2: /Until it/ turns purple? Is it going to turn purple like it did last time or pink?

TA: Pink, very faint pink just like last time.

Linguistic Competence

Vocabulary

TA struggles at times to find the subtechnical vocabulary he needs for describing the lab procedures. List some terminology that he would find useful for describing how to use the pipette and buret. What compensating strategies does he use when he does not know a word?

TA: When this when the level is reached to the mark, you just, OK you just stop, use your

hand to control the bubble. OK? [2sec] OK that is exactly 5.

S1: OK, so it just takes a little practice?=
TA: =yeah=
S1: =OK=
TA: =and uh [2sec] push this this end into the the the [points to the rubber bulb]
What is this? <S1: it's a> rub:ber rubber what?
S1: Rub:ber sque:eze [both laugh] / yeah/
TA: / OK just /push it very, tight=

S6: How much do you put in?

TA: we almost, uh full fill OK?=
S6: =OK=
TA: = (unintelligible)and uh=
S6: Would that be that then?
TA: =Yeah and uh you have to skip the air bubble, since you your always have air bubble when
you first, fill the buret=
S6: yeah?

TA: =So, you such like uh such like this. (lose) your air bubble here. You just turn the stop, open, OK uh let the sodium hydroxide uh go through, and uh skip all the air bottle uh air bubbles, and then, close, and then, and then you can read the initial, buret reading

Discourse Competence

Handling turn-taking

In the lab, a TA may find that several students are asking for attention at once. In the following transcript, how does TA deal with this situation. Is there another way he could have handled the situation?

[TA continues handing back papers. Student, S5, waves him over.]

S5: I forgot how to use this

TA: OK

S6: TA?

TA: Let's see.

[TA turns to S6, who is standing next to S5.]

TA: So you have same question?

S6: Ba:sically yeah I just=

TA: Oh, OK

S6: =for this you know I'm doin the vitamin C?=
TA: umhmm?

S6: =and the initial buret reading

TA OK let me, before you start to titrate, read this, level=

. . . [TA continues to explain to S6.]

TA: uh OK. Maybe it is too high, oh we always keep this level with the same high with your your with your eye, at least it is too high for me so I always lower it down, and

measure, and uh (unintelligible) OK?=
[TA turns back to S5.]

TA: =OK what's your question. You forget how to use this one, /right?/
S6: /yeah/

TA: so first of all clean the buret . [TA takes out rubber stopper] uh=