A discussion of discourse analysis focuses on its usefulness as a framework for analyzing and improving the communication skills of international teaching assistants (ITAs). The discussion is based on the transcript (appended) of a native Chinese-speaking ITA conducting an organic chemistry class in English. Using discourse analysis at one level, that of language beyond the sentence level, the errors in phonology (pronunciation), grammar, coherence, and cohesion can be perceived more clearly. A second level of discourse analysis can be used to examine utterances in terms of communication intention and appropriateness to the social content, i.e., to interpret them. It is concluded that in the context of the interactions of ITAs and students, discourse analysis can serve an important function in helping ITAs improve communication on more than one level. (MSE)
Discourse analysis--why do we need it?

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I have been given a difficult task: give an introduction to discourse analysis. I'll tell you right off that I won't really be able to do that, but while I was thinking about the paper, I was reminded of, and reread, the first collection of studies that I know of, that were expressly devoted to DA and SLA: Larsen-Freeman (1980). It was introduced by a paper by Larsen-Freeman and Long, called "Discourse analysis-what's that?" So, I couldn't use that title and anyway, I figured that a lot of you already would know what it is. I was complaining of my dilemma to a graduate student who somewhat sheepishly asked, "Well, what exactly is discourse analysis? Is it kind of like all the other stuff after you finish phonology, morphology and syntax?" "Well, kind of," I replied, more sheepishly than she. "Well, then, what's the difference between sociolinguistics and discourse analysis? And also, is it the same as pragmatics?" I told her I would get back to her. So maybe I do need to write a paper on "Discourse analysis-what's that?" In particular, what is it to us in ITA research and education. I have called it instead "Discourse analysis--why do we need it?"

First, I have to say that I feel somewhat vindicated in my hesitation to give my graduate student a quick answer. In looking at definitions, I found that there was little consensus. I thought we would start off with the very basic question of why we, as a group, need discourse analysis in the first place. As we go through the various areas of discourse analysis, it is always be helpful to tie it to something concrete, so I have included some data on your handouts. It was hard to choose a piece of discourse that is digestible in this short period of time, yet illustrative of the issues we face. I hope this covers most of the territory. The first is a brief excerpt from the beginning of an organic chemistry discussion section, led by a Chinese speaking ITA.

First, this is a transcript, not a tape, so do we have one advantage: We don't have to wade through his accent. I will say right off, his accent is a problem, but I will argue that there are a lot of other things going on here as well. Second point-our disadvantage: I think it is safe to say that very few of us have a schema to activate for organic chemistry class. You may, as I did, have a hard time figuring out what he is talking about. So, I'll try to provide a little orientation. Essentially they are discussing planes of symmetry in isomers of organic molecules. That probably doesn't help much, but I can't tell you much more.
Now you have probably heard time and again, if you have come to any sessions on ITA discourse, that we cannot limit our analysis to issues of grammaticality. If you look at the transcript, you will notice that there are indeed quite a few grammatical errors in the production of the ITA, particularly when he speaks "off the cuff" in the beginning. He omits articles, prepositions and verbal morphology. He seems to do a bit better about halfway down the page, where he begins to consult his notes more closely. His tense usage is non-native-like and he has difficulty with complex syntax, particularly with what appear to be attempts in the beginning to form relative clauses. Without a doubt, these problems, combined with his accent contribute to communicative difficulty; as Tyler (1992) as noted, they are part of an accumulation of problems. But there is much more. And I would argue that much of the difficulty at the level of grammaticality in this transcript has less to do with actual comprehensibility than with the impression of non-proficiency that it gives the students. Students judge their ITAs on the basis of the interactions they have with them. They have little way of knowing whether their TAs are brilliant chemists, and they probably could not care less, even if they knew. What they know is what they see and hear in class--talk--and here we come to the object of discourse analysis and here I will quote Gumperz (1977), "talk is the basis for judgments about speakers' abilities and attitudes. The question we want to ask is, what is it about (in this case, ITAs') talk, other than grammar, that leads to such judgments?"

So, I have backed into the issue of our need for discourse analysis without defining it. As I mentioned I looked through a lot of definitions and they generally lead in two directions. I find that a discussion by Schiffrin (1991) puts the matter succinctly. I hope you will excuse my reading for a moment.

Discourse itself is defined in two different ways: as a unit of language that is larger than the sentence, and the use of language. Whereas the former definition focuses attention mostly on linguistic regularities characterizing text, the latter definition focuses attention mostly on the social and cultural functions underlying ways of speaking. Despite these two different foci, many who analyze discourse combine the two concerns, analyzing how the linguistic regularities found in ways of speaking are constrained not only by structures and patterns inherent in language, but also by social and cultural meanings which frame the production and interpretation of messages.
Most approaches in DA do seem to combine these two concerns, for language beyond the sentence level and for sociocultural context. I will not be able to look at all of them in this short talk, but I will try to show how several modes of inquiry within discourse analysis may be useful to us.

First let's look at an area of DA that is essentially linguistic, is that of coherence and cohesion, that is, the extent to which the text hangs together and makes sense. There are a couple of sections of these excerpts that are problematic in these areas. In the second excerpt, for instance, I have highlighted the ITA's use of so. So has a variety of functions, even in NS discourse, but one major function is as a cohesive tie indicating causality. The ITA does use it in this manner, as in say, line 6, but he also uses it when causality is a possible interpretation but is not, in fact warranted, as in lines 9 and 13. The speaker seems to use it as a sort of filler, but not with the extended intonation contour that we might expect of "filler so" in NS discourse ("Sooooo"). I don't know for sure that this was a source of confusion to the student, but it easily could have been One other example, this time of coherence, that might be worthy of mention is the response to negative questions in lines 21-28 of the second excerpt. This is a common problem with L1 Chinese speakers, often leading to the perception of incoherence.

You can also see a little bit of another difficulty that occurs in the first transcript in lines 30-36. Essentially, the student is unclear as to what the it refers to. The ITA is trying to explain that in this particular methyl group, the two sections of the molecule are identical, but in some of the instances of it, the it is referential--to the CH3 group, and in other cases, it is non-referential. The ITA repeats, "It's important" but the student doesn't understand what is important. In the second transcript, there is complete communicative breakdown over an admittedly difficult concept, three dimensional axes of rotation. The ITA makes assumptions about the students' understanding and fails to make explicit which axis he is talking about. Since it is difficult for him to fill in the gaps in comprehension by drawing (the figure has to actually come out of the blackboard), the students become totally confused. This is clearly not an issue of grammaticality. The ITA obviously mispronounces the word superimposable (corrected by the student and interestingly, ignored by the ITA), but this does not seem to be the source of the problem. The two interlocutors are simply working with different frames of references and in fact, never resolve the impasse. The student left class still not understanding.
As I mentioned, these communication problems belong to the first sphere of DA, language beyond the sentence level. There is little need to refer to the social context to explain what is going awry. That belongs to the second strand of DA and, I will argue, is of equal value and importance. Again, a complete survey of this area of DA is way beyond what I can accomplish today, so I will have to be content with a selective sampling of them. I will begin with speech act analysis which explicitly links language structure with language function. If we look at the first excerpt, if we only look at language structure, we would miss the force of several of the ITA's utterances. In other words, an analysis which includes an examination of speech acts will also take into account speaker intention. In the first transcript, starting in line 11, the student attempts to divert the ITA from his lesson plan. He tries to introduce material from a problem from an earlier unit. His attempt is deflected by the ITA with an utterance that is essentially a directive in function (lines 17-18). We might say that the illocutionary force of this statement is "don't ask me about that material now." The perlocutionary force of his utterance is to escalate the conflict that ends with a tittering class. It was unclear to me from the video, who lost more face in this encounter, the student or the ITA—it was probably both. The point of this example is that an analysis of directives, other speech acts and politeness strategies more generally, in ITA and NSTA classrooms might be a key to understanding conflict and communicative breakdown. This is clearly not an example of incomprehension; it may not even be a problem that is exclusively associated with ITAs. Only an analysis of the discourse would tell us. There are, of course, limitations, to this kind of analysis, in particular, the problem of assigning speaker intention and of isolating speech acts from the total discourse. Nevertheless, this could be a profitable avenue of exploration, particularly since these situations involve cross-cultural interaction where speaker intention may often be misinterpreted, a point to which I will return later.

A still broader view of DA is quite simply the analysis of language use with reference to its social context; that is, how speakers (and readers) construct messages and how those messages are interpreted. This would subsume the material we have just looked at: ways of structuring information in an utterance, including grammatical structures, phonological cues, markers of cohesion and relation, as well as issues of intentionality. However, it differs from what I have spoken of earlier, or I might be more accurate in saying that it builds on them. Such an approach sees discourse as jointly constructed, focusing on
interpretation as well as production and intention. It also links the discourse to social and cultural context and therefore will include the expectations, schemata and values that speakers bring to the interaction. It asks, how, in turn, does language reflect social circumstances? How are aspects of the social situation in which the interaction takes place, presented, framed and negotiated? Messages may be contextualized in a variety of ways: from word choice to prosodic cues, to turn-taking, to body language. There are many approaches, each with somewhat different orientations that fall within this type of discourse analysis: the ethnography of communication, interactional sociolinguistics, social semiotics, among others. Could analyses that take into account such factors shed light on the problems experienced by ITAs and their students? Might knowledge gained from such analyses inform our educational efforts. In my view, it is clear, that the answer is a resounding yes.

Let us look once again, at the transcripts. What do we know about the ITA independent of the utterances on this page? I can tell you. He was an outstanding student in his institution in China, though his institution was not among the most prestigious. He is therefore at UIC and not, for instance, at Berkeley. Chemistry was not his first choice for a career. It was "suggested" to him. He takes four difficult courses, mostly in organic chemistry and is studying for his doctoral exams. He is responsible for one lab section and two discussion sections for the introductory organic course. He taught chemistry for three years in China. He would like a research assistantship, rather than a teaching assistantship. He lives with two other Chinese TAs from the university in a one-bedroom apartment. His wife and child are in China. He hopes they will join him soon. He is paid about $6000 a year. His English is fair. He got a 600 on his TOEFL and a 160 on the SPEAK.

What about the students? UIC is for kids who were pretty smart in high school but they either weren't quite smart enough to go to Urbana or else can't afford to go-- they need to live at home and keep working. The vast majority of UIC students do work part-time, a particular burden on science students who have to take lengthy lab courses. Virtually all of them are from Chicago and the surrounding counties. Their cross-cultural exposure is generally limited, though many are third generation Europeans. All the students in this particular section are white. The kids in this class are science majors--lots of them are premed. This is a gatekeeping course. Success in this course determines what happens to you next. They are unlikely to blow off this course. There is an urgent need, at
least on their side, for successful communication. This is in contrast to say, a
class of rather hostile arts students who are taking an introductory class to fulfill
a science requirement.

Thus, we have still another layer in our picture. Instead of interactants
with shared assumptions and expectations, we have parties that, in all likelihood,
come to the interaction with very different schemata for them, and ideas about
what is appropriate, relevant or significant. There is no speech community as
such. The fact that they are members of the same academic "discourse
community" cannot paper over the lack of shared context. In addition, and less
obviously, they may, in Gumperz's words, differ systematically in the way they
convey meaning and attitude in talk. These differences may result either in the
communicative conflict we see in the first transcript or communicative
breakdown that we see in the second. We also see the same kind of discontinuity
that has been repeatedly shown to effect the academic success of young children
from non-mainstream backgrounds. The ITAs confront a system with norms and
expectations that is quite different from the one for which they have been
prepared. They are prepared for problems stemming from their lack of English
proficiency. They may be less prepared for the problems stemming from these
more subtle differences.

In the first excerpt, the ITA begins the class with little introduction and
shortly, a directive, one that I think most students would consider too direct and
perhaps more appropriate for children. In short, the very opening words signal
to the students a power relationship, perhaps unintended by the ITA, that the
students may find anywhere from inappropriate to offensive. The ITA then
begins with some background for the review, whereupon he is interrupted by a
student, who, the ITA reports, is often disruptive, with the summons "Hey!" in
line 11. I have not given any indication of prosody here, but it does sound like a
summons: Hey! Joe! The ITA has given the students permission to call him by
his first name, but he says it is not customary in China and he has had some
trouble getting used to calling everyone by the first name. His decision to take an
English name, rather than use his own Chinese name, has mitigated his
discomfort somewhat. Still, the summons must appear rather abrupt to him,
interrupting as it does his presentation. (parenthetically, with this student, I did
wonder if he was operating within native speaker norms of TA-student
interaction. This interaction and a few others I have documented lead me to
believe that when student's initial expectations are not met, some no longer feel
any obligation to operate within accepted norms. This can lead to rudeness and outright hostility.) In any event, the ITA responds, though the irritation in his voice is evident. The student's question in line 13, in the eyes of the ITAs, is off-topic, though because the student doesn't really understand the material, he sees it as relevant. Thus, the two are already righteously at odds. The ITA assumes that the student's irrelevant contribution must not be cooperative and therefore, a threat to his authority. He cuts him off. The student, believing his contribution is relevant, finds the rebuff unwarranted and tries again. And they go one more round. The student, (probably not having done the reading) attempts to find the connection to the present material to his question, by asking for a definition in line 19. For the ITA perhaps, it is an appropriate response to a student who often comes to class unprepared. Also, in his own experience, students generally do not interrupt a teacher, even an assistant. Even solicited questions may be relatively rare in his experience. He claims that his response should be taken at face value, that his intention was not to embarrass. However, his tone suggests to this ear, at least, otherwise. A quick repetition of the definition would not have taken a great deal of effort. In addition, the class's response "ooooo" and laughter, suggests that they too felt it was a rebuff. So, although the ITA's intentions may have been neutral, our (I include myself with the students) interpretation of his utterance was at odds with that intention. And, the student never did get his question answered. Another student interrupts about a minute later. This one does so in a less peremptory way, but she too, is deflected until the ITA is ready. In fact, that student doesn't get a satisfactory answer either, but I think there are different reasons for that, as I noted briefly earlier.

So, how can we figure some of these things out? You will have noticed that I have given the data my own interpretation, but have also talked a little bit about the view of the participants, ratified and non-ratified, that is, the principles as well as onlookers. I think this is an essential element of doing effective analysis of ITA-student interaction which has been underutilized. The participants have a unique perspective on what is happening here. Only they know why they said something and how they have interpreted what they hear. I have some insight into the conventions of Chinese education and maybe a bit more about US. undergraduates' expectations (though perhaps not much more), but probably not enough to give these data the rich interpretation that they can. I have given fairly obvious instances of communicative difficulties, but there were other problems that I had been unaware of until the participants pointed them
out. Sometimes onlookers saw what the participants could not. They have been in the class since the beginning of the semester. They know what the established relationships and rituals are. I don't. So I asked them what they think is going on; where they things went awry. I haven't done this as systematically as perhaps I should and I will freely admit there are lots of things that the participants can't tell you. They just add one more layer of insight to the analysis.

I want to conclude by stressing that these are the interactions that will shape the attitudes and indeed the stereo-types of both parties. If they are negative, it is part of our job as ITA educators to help them find their way past them. These attitudes will live beyond this classroom, they will live beyond their stay at the University of Illinois. Only by understanding them can we be of any assistance, and that, at least in part, is why we need discourse analysis.


Discourse Analysis--Who needs it?
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Part 1

ITA: Well. Before quiz... Be quiet! Before quiz, let's have brief review of last chapter, OK?

Chapter one, two, three, we have learned three kind of isomer. The first kind is structural.

Structural isomer, OK? Let's draw. We learn another kind of isomer is configurational isomer, OK? And the third kind is configurational isomer. Another word is cis-trans. Alright?

OK? In chapter four we learn another kind of isomer is called optical isomer. OK. And this is optical isomer of this molecule.

S: Hey Joe!

ITA: Yes?

S: In number two (a homework problem), which one is which?

You said--

ITA: --Today, we will--

S: --An ellipse is the first one--

ITA: --We will not deal with configurational isomer. We just talking about the optical isomer, OK?

S: Do you have a definition for optical isomer?

ITA: You can find it in your textbook.

Laughter among students.

ITA: Now, first, let's talk about...uh mirror image, OK? As we know, every object has a mirror image, OK? Let's consider, the following molecule. In order to get a mirror image of this molecule, first we draw a mirror (draws), OK? Now consider the reflection of the object. Now we get--

S: ------I have a question.

ITA: Wait a minute. Wait a minute. First let me see. It's the same thing. CH3. It's the same thing, It's the same thing, It doesn't matter. It's a methyl group. In this methyl group, it doesn't matter. Now, any questions?

S: I have a question. So, does it matter which way you write it as long as you have like the dotted line or the mirror or whatever?

ITA: No. It's important. It's important.

S: So, those are the only things that matter? Like you could have H3C?

ITA: No, Yes. This symbol is very important.

S: But is that the only thing we have to worry about?

ITA: Well, yes, well.
ITA: So we get uh...mirror image of this molecule. And if we consider this molecule's...further so we can...find this is super...possible. Right?
S: Posable.
ITA: Because we can turn...we can rotate this one 180 degree, so we get......OK? And this is same thing...as this. So the mirror image is super-possible. OK?
S: Um.
ITA: and how about this? So, we can rotate the same way.....and we can get. I'm sorry there's a double bond here. Right? So, we should turn this molecule 180 degrees...we get this.
S: Why did you put the double bond on the bottom then?
ITA: I'm sorry I forgot the double bond here. So, we get double bond here......double bond here. So, we turn each one.....180 degree. So, double bond is here.
S: But there's one on the top.
ITA: What?
S: It would be on the top then.
ITA: No, we turn this molecule, OK? This is double bond. OK? We turn it 180 degree, so....come here. Right? (not a command so (the molecule) come(s) here.)
S: No, it'd be on top.
ITA: LOOK. This double bond.
S: So, they're not superimposable?
ITA: Yeah, it's uh...different from this molecule.
S: So it's NOT superimposable?
ITA: LOOK----
S: -----non-----
ITA: -----so, it's non--
S: -----non...non-----
A: -----non-superpossible, right?
S: It doesn't......how come the mirror image is....
ITA: What?
S: If I turn it around----
ITA: ------LOOK, this is a plane of molecule, right? And here is double bond, OK? And its reflection is still here and so we turn it 180 degree. Now it come here.
S: It would still be on top. I mean-----
ITA: ------NO, just consider it's a plane.
S: I got the plane, but I don't understand why it would....unless you turn it this way.
ITA: No, this way.
S: Why can't you just turn it ———
ITA: ———LOOK. It turns this way. Understand me? Yes?
S: I'm trying to understand this.