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ABSTRACT

An examination was conducted of the planned and unplanned speech of 24 native speakers of Mandarin and Korean who were serving as teaching assistants at the University of Illinois at Chicago. Each was videotaped on two occasions two weeks apart in a preparation course for international teaching assistants (ITAs), in which instruction in the use of discourse markers was a major focus. On the first occasion, the subjects pre-selected a concept or specific problem anticipated in an introductory course and prepared a presentation on it. On the second occasion, the subjects were given a list of 10 topics and had 3 minutes in which to prepare a presentation on one of them. For comparison, the responses of five native-English-speaking teaching assistants to questions posed to them were examined. Discourse features examined in all instances included definition, example/illustration, restatement/rephrasing, identification/naming, introduction/new topics, and summary/review. The ITAs' planned discourse was found to contain more elaborate marking and more of it, than the unplanned discourse. Native speakers did not do more marking than ITAs, contrary to expectation. However, raters understood the native speakers more easily, suggesting native speakers have other ways of making discourse comprehensible. A 32-item bibliography is included. (MSE)

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Discourse marking and elaboration and the comprehensibility of second language speakers¹

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An examination of the planned and unplanned speech of non-native-speaking teaching assistants suggests that the greatest variation between the two conditions lies in the use and elaboration of discourse marking. In the non-native speakers' planned production, discourse moves are more likely to be marked more overtly and elaborately than in the unplanned production, while the level of syntactic and morphological errors differ only slightly. These differences in marking appear to contribute significantly to comprehensibility ratings of the production of non-native speakers, but not that of native speakers. These results suggest native speaker production may not always be the appropriate target and that the elaboration of discourse, rather than morphosyntactic accuracy, may be a more effective focus of instruction for these speakers.

As an increasing number of universities come to depend on non-native-speaking graduate students to teach introductory undergraduate courses, more and more TESOL professionals are asked to develop programs which will improve their teaching effectiveness. In order to develop successful programs, it is first necessary to establish what it is about international teaching assistant (ITA) discourse, beyond obvious problems in pronunciation, which often renders it incomprehensible to the undergraduates towards whom it is directed. The present study will focus on the contributions which discourse marking and elaboration make to comprehensibility.

In an effort to address this issue, production data of ITAs in planned and unplanned explanations will be compared. The issue of planning is an important one in considering such data. Ellis (1987, 1989) and Tarone (1988) have proposed that planning time is important in distinguishing between kinds of production. One way in which these kinds of speech can be differentiated is along the dimension of automaticity. Tarone (1988) and McLaughlin, Rossman and McLeod (1983) have

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claimed that forms may enter a speaker's interlanguage as non-automatic knowledge, but may become automatized through practice. The present data show instances of planned, potentially non-automatic speech on the one hand, and on the other hand, unplanned production in which a number of forms, specifically discourse markers, have not yet become automatic.

We are most likely to find evidence of automatized forms in planned speech and of non-automatized forms in unplanned production. Many of the forms and constructions on which this study focuses were explicitly taught in an effort to improve the comprehensibility of ITAs in the classroom. It is likely, therefore, that these forms have entered the ITAs' repertoires as non-automatic items. Indeed, it has frequently been noted that forms which students control in formal exercises are often not used in spontaneous production. It is not surprising then that they are more prevalent in the planned production. Their presence in the unplanned explanations may be evidence of increasing automatization. It should be noted, however, that some forms and modes of presentation have been shown to be characteristic of unplanned production in general, even in that of native speakers (NSs) (Danielewicz, 1984; Ochs, 1979). For this reason, NS baseline data are included.

Planned versus unplanned production

It is perhaps belaboring the obvious to assert that planning has a significant effect on oral production. A number of studies attest to this, in the production of both NSs (Danielewicz, 1984; Givon, 1979; Ochs, 1979) and non-native speakers (NNSs) (Crookes, 1988; Ellis, 1987; Tomlin, 1984). Space does not allow a review of that literature here. An excellent review of research on the effect of planning on both NS and NNS production appears in Crookes (1988).

Much of the work in this area of second language acquisition research involves the construct *attention to speech*, the central idea being that unplanned production requires less attention than planned production. The validity of this construct has been debated in both sociolinguistics and second language acquisition research (Bell, 1984; Preston, 1989; Rampton, 1987; Sato, 1985; Wolfson, 1976). One of the greatest difficulties in using attention to speech as a variable is ascertaining what sorts of tasks demand the most attention. Furthermore, one may ask whether increased planning opportunity necessarily leads to greater attention to form. Tarone (1982, 1985) examined morphological and grammatical features of second language learner (SLL)

discourse, mixing medium, genre, and planning opportunity. Her results could not be explained without recourse to variables other than attention to speech, such as the roles of forms like articles and pronouns in maintaining cohesive discourse. Sato (1985:195) questions the unitary nature of the notion *attention* in her study of interlanguage phonology. She points out that certain tasks "require a great deal of attention, but this attention must be paid, not simply to language form but also to other demands of real-time discourse production: recall and encoding of rhetorical structure, lexical items, clause sequencing, etc." In other words, increased attention need not necessarily lead to increased accuracy in the use of grammatical forms.

Ellis (1987) maintains that attention to form and time are separable, citing the work of Hulstijn and Hulstijn (1984), who found that time pressure alone had no effect on accuracy in the use of two Dutch word order rules, whereas focus on form increased significantly. Ellis (1989) also suggests that tasks must be differentiated by text type as well as by amount of planning time. He examined the effect of planning time on accuracy in grammatical morphology. Not surprisingly, in tasks in which speakers were given more time to plan, morphological accuracy was generally the highest. Tasks with greater time pressure showed more variation.

Research in psycholinguistics and cognitive science suggest that there are different kinds of planning. Within the field of second language production, the work of Faerch and Kasper (1983) and Lennon (1984), among others, suggests that there exists long-range "macro-planning" on the one hand, and more local "micro-planning" on the other. The first affects overall semantic and syntactic organization of discourse; it is more subject to advance planning. The second affects local organization and links between propositions as well as lexical selection, and tends to be mapped out as the speaker goes along.

Many of the earlier studies of planned and unplanned discourse were primarily descriptive. More recent studies give us a more detailed look at the differences between planned and unplanned SLL production. Crookes (1989) found that in the planned condition, NNSs produced more complex speech and a greater variety of lexis than in the unplanned condition, but that accuracy in the two conditions was not significantly different. We need to now ask why these differences should be characteristic of different kinds of discourse, especially as they relate to second language production. In the speech of SLLs, such variation may, in fact, be due to differences in control. In two major approaches to second language acquisition, control is invoked as a major explanatory factor (see Hulstijn, 1990). McLaughlin, Rossman and McLeod (1983) and McLeod and McLaughlin (1986) view second

language acquisition as similar to the development of other skills, involving a shift from controlled to automatic processes. These two kinds of processes represent very different ways of accessing and producing language. The shift from controlled to automatic involves a restructuring of the task. As regards the tasks here, it may be that forms which are new cannot be accurately or appropriately produced when there is little time to plan. This is the explanation given by McLaughlin (1987) for the findings of Tarone (1985), where time pressure led to a decrease in accuracy. According to him, this restructuring process may also be at the root of apparently unsystematic variation which is characteristic of SLLs' production.

Other conceptions of control exclude its role in the actual restructuring of knowledge. According to Bialystok and Sharwood-Smith (1985), control and competence must be kept separate from one another. Specifically, a distinction is made between how language is represented in the learner's mind and the ability to control that knowledge as part of real-time processing. Again, the question of planning time may be crucial. NNSs may have acquired the knowledge of a given form and even of how and when it should be used but, especially when there is little time to plan, a speaker may be unable to exercise control over that knowledge. This is particularly important to remember in this study where not only do the learners know that they are supposed to employ discourse markers, but they also report that the marking devices in their L1s are very similar. An important difference between these two approaches then is that within the information-processing framework advanced by McLaughlin, the development process is essentially a unitary one. As new knowledge is acquired, it is, at least initially, subject to controlled processes. Later, given practice, it may become automatic. Within the competence-control framework, on the other hand, competence and control may develop quite separately. Planning time would presumably affect the control portion rather than knowledge itself.

These two views of control both suggest, however, that increased control and automaticity come with time and practice. By examining production in the planned and unplanned condition, we may be able to shed some light as to where these learners are in this process. It seems probable that the focus of recent instruction may not yet be subject to automatic processing, thus only likely to appear in the planned condition. No claims are made here as to the point at which these forms are effectively "acquired," only that there is potentially an important interaction between the effect of instruction, operationalized as exposure and practice, and planning opportunity. Having established that there are important differences between these two types of

production, we may then go on to look at the effect of these differences on comprehensibility.

Comprehensibility of ITA discourse

The "ITA problem" is by now well-known to TESOL professionals and to undergraduates alike. There have been several notable attempts to determine why at least some ITAs are so difficult to understand. Rounds (1987) notes in particular that in comparison to NS TAs, ITAs frequently fail to adequately elaborate the key points of their presentations. They often do not name important steps, mark junctures explicitly, or make cohesive links between ideas. Williams and Barnes (1987) came to similar conclusions, finding that ITAs often: fail to repeat or rephrase important points; digress from the main line of thought and move on to new topics without marking; do not overtly frame discourse items such as illustrations, examples, axioms; and fail to summarize material. It should not be surprising that listeners have trouble comprehending when all of these aspects of discourse go unmarked. Tyler (1988) maintains that unsuccessful ITAs consistently fail to orient their listeners adequately to the relative importance of ideas, as well as how they are linked to one another. According to Tyler, they misuse various cues on which NS listeners depend to interpret discourse. These include lexical, syntactic, and prosodic miscues. Taken together, these can seriously reduce comprehensibility. Tyler (1989) tested this notion, using undergraduate judges and found that the increased and accurate use of discourse markers greatly increased comprehensibility scores.

Research in the effectiveness of NS explanations is reported by Brown (1978:11). In a review of the relevant literature, he reports that "Good explanations usually involved task-orientation statements, such as 'Now, let's look closely at', " and further that, "Successful explanations contained signposts such as 'There are three main areas. First....' They also contain statements linking various elements of the explanation, such as, "So far, we have looked at Now."

This kind of marking has been shown to be an important factor in SLL listening comprehension. Chaudron and Richards (1986) found the use of what they call macro-markers to be the most facilitative. Such markers are important indicators of speaker planning and are also the ones which were missing or misused in the ITA discourse in the studies named above. Chaudron and Richards state that "macro-markers are explicit expressions of the planning of lecture information" (123f).

corresponding to the marco-planning described by Faerch and Kasper (1983). Chaudron and Richards found that micro-markers, the forms which mark temporal and logical relationships between propositions and segment the discourse into chunks, did not have a significant effect on comprehension by SLLs. However, since the listeners in the case of the present study are NS undergraduates, the results of the Chaudron and Richards research, which used SLL subjects, can only be generalized with caution.

The Study

The data in this study were collected over a two-year period from 24 first language Mandarin and Korean speakers who were teaching assistants in various departments at the University of Illinois at Chicago. Each of the TAs was videotaped on two separate occasions, two weeks apart as part of a ten-week ITA preparation course. On the first occasion, the students were permitted to choose their own topic. They were asked to explain a concept or specific problem which would be covered during a first-year introductory course in their field. They were given a week to prepare their presentations. They were allowed to bring note cards, but reading was not permitted. In the second instance, the TAs submitted a list of ten topics, similar to the first. The instructor chose from among them, giving each TA approximately three minutes to plan the presentation. In this way, practice effect was avoided, but the presentation remained relatively unplanned. In each case, they were given seven to eight minutes to speak.

Also included in this study were five native-speaking teaching assistants (NSTAs). This cannot be called a control group however since their tasks were somewhat different. The NS data consist of segments taken from actual classes. This corpus also included instances of relatively planned and unplanned speech, but NS tasks cannot be viewed as comparable to the NNS tasks. The unplanned speech for the NSs occurred when a student, by prearrangement, asked an unexpected question or asked the TA to go over problems not assigned specifically for that day. However, these segments were not as long as the unplanned presentations of the NNSs. The data are included here primarily to verify whether the features found in the NNS corpus are, in fact, characteristic of such speakers or if they are common to both speaker groups, suggesting that they are simply typical of production in either the planned or unplanned condition. This is important since we may frequently attribute

behavior to NNSs which is in fact also apparent in the spontaneous production of NSs. Tyler (1989), for instance, in her study of NNS comprehensibility, compared undergraduate intelligibility evaluations of a transcript of the actual production of NNSs with a transcript which contained the same information, but had been altered by inserting and changing various macro- and micro-cues. Thus, although these results do provide insight into the effect of the use of these cues, they do not shed any light on how the performance of these NNSs might have compared to that of NSs.

The analysis of the discourse was carried out in several ways. First, the videotapes of both the NSs and NNSs were played to undergraduates and ESL specialists. The tapes were played to these two groups in batches of eight to avoid fatiguing the raters. Speakers were presented in random order. In order to get a general impression of their level of comprehension, the raters were asked to answer two questions for each presentation: first, they were asked to name the topic and second, to name the main idea. More detailed questions were not asked since much of the material was difficult for the undergraduates as well as the ESL experts to understand in detail. The evaluation scores alone have high face validity in that what undergraduates perceive at this level, may, in turn, determine whether they simply tune out in the first place. The comprehension scores were added simply to corroborate these results. The comprehension scores, with a few exceptions, demonstrate that the judges were at least able to understand the main idea of the presentations, and in both conditions.

The use of Chaudron and Richards' discourse cues, specifically macro-cues, was the focus of this investigation, in particular, the level of explicitness in their explanations. This is not to suggest that pronunciation and prosody were not a problem; they very clearly were. However, interviews with the undergraduate raters in this study revealed that ITA pronunciation is often an initial problem, but may not be as significant in the long term. Many of the undergraduates who had had an ITA over an entire term maintained that although the ITA's accent was an obstacle in the beginning, they eventually adjusted to it, making the appropriate substitutions and even filling in some of the syntactic gaps. This seemed to suggest that there may be more important aspects of the comprehensibility problem, aspects which, furthermore, may be more amenable to instruction than pronunciation.

Instruction in the use of discourse markers and effective packaging of information was a major focus in the ITA preparation course. In effect, since most of the ITAs perceived this task as a test situation, they were aware that a "good" performance would include the accurate and explicit use of these markers. This usage

had been practiced previously in more abbreviated exercises and activities in class by all the ITAs in this study. NS participants in the study received no instruction.

Method of Analysis

A number of discourse features were examined. It was predicted that ITA discourse would contain more unmarked key statements than that of the NS TAs. Similarly, it was predicted that this feature would be more characteristic of the structure of the argument or explanation (Brown 1978). There are various types of key statements contained in these explanations. In each case, it was hypothesized first, that the NSTA discourse would contain more overt marking as to the function of these key statements than that of ITAs and second, that planned ITA explanations would be richer in marking than unplanned. Richer is taken to mean a greater absolute number of markings as well as greater elaboration of them. No great difference between the NSTA unplanned and planned speech was predicted, since the earlier hypotheses were based on the idea that the ITAs had not yet automatized the use of these markers. The corollary to this argument is that the NSTAs had done so, and in both conditions. Otherwise this would simply be a case of planned versus unplanned speech of the two speakers' groups with their characteristic formats, without any role for automatization, or learning. Support for these hypotheses can be found in the work of Crookes (1989) for L2 and Danielewicz (1984) for L1. Crookes, in investigating the organization of discourse under the two conditions found that there was greater use of discourse markers in one of his experimental tasks.

One way a key statement may be marked is by indicating speaker intention, as in example (1):

1. *Today I want to spend a few minute to explain what trigonometric function are.*

Another form of marking is the identification of the actual function of the statement within the explanation, as in example (2):

2. *The second element of physiology is study about transport system. For example, our heart will transport blood to all the part of our body.*

Some statements may be marked for both speaker intention and function in the explanation, as in example (3):

3. *Now I'd like to give you the definition of molecule.*

In contrast, some statements may go unmarked, as in examples (4) and (5):

4. This cotangent involving adjacent and opposite.
5. This the change of the chromosome in cell division.

In fact, example (4) was meant to be a definition, or at least instructions for using the trigonometric function. Example (5) was meant as a summary of the previous material. In all likelihood, however, and this was borne out by the undergraduates' evaluations, the combination of the sentence-level grammatical problems and the lack of external marking resulted in the relative incomprehensibility of explanations like these.

The following six discourse moves were examined: definition, example/illustration, restatement/rephrasing, identification/naming, introduction/new topic, and summary/review. The coding of the discourse cues was done by the researcher and a graduate student. Disputed items were removed from the analysis. Examples of the macro-markers included in this study are given below. Some are overtly marked, while others are not; some contain reference to the discourse function itself, while others introduce a portion of the explanation which will presumably follow the utterance given here.

Definition:

6. I give you the definition of instantaneous velocity.

Example:

7. We know in the early 1976 (sic) Challenger falling down.

Restatement:

8. That means between these times the car we think it's the same acceleration.

Identification:

9. Physiologist call this protective reflexion.

Introduction/new topic:

10. I want speak something about temperature.

Summary:

11. That's what it mean a binary operation.

Results

The following are the pooled responses for the two groups of raters. Raters were asked to evaluate various components of the speakers' language proficiency and ability to explain on a scale of 0 to 3, with a total possible score of 18. Clearly, on the language proficiency portions, the NSs would be expected to receive a score of 3. Table 1 displays group scores of how undergraduates and experts rated the three sets of data. The NSTAs are not divided into planned and unplanned since both were part of a single presentation.

Table 1: Average Ratings given to NSTAs and ITAs			
	<u>Unplanned</u>	<u>Planned</u>	<u>NS</u>
Undergraduates	9.48	10.79	17.73
ESL specialists	10.81	12.23	17.78

Clearly, the NSs are rated by both groups as the more comprehensible and the more skilled at providing explanations. There is a less drastic but still noticeable difference between the evaluation of the NNS planned and unplanned presentations. Post-evaluation interviews with the raters confirmed this finding. When asked to rate which among the NNSs were the easiest to understand, they generally rated the planned production higher than the unplanned. In each batch of eight, judges were asked to pick the two speakers they thought were the most effective. Planned presentations were chosen by 78%, 83% and 67% of the judges for the three batches. The raters had not been informed of the difference between the presentations; they were simply told that they would see each ITA twice.

An examination of the production data points to two questions: first, whether certain moves are marked at all, and second, the degree of elaboration in marking. The percentage of marked discourse moves in the six categories under investigation for the two groups is given in Table 2. The first column in each section shows the number of discourse moves made in each category by each speaker group and in each condition. It can be seen that the absolute *number* of moves does not differ a great deal for the ITAs in the unplanned and planned conditions. The NSTAs of course have lower numbers since there were only five of them, compared to 24 ITAs, and since their unplanned segments were much shorter than their planned segments.

Table 2: Percentage of marked discourse moves

	NNS unplan		NNS plan		NS unplan		NS plan	
	disc. moves	% marked	disc. moves	% mark	disc. moves	% mark	disc. moves	% mark
definitions	81	55.56%	69	68.12%	5	80.00%	20	70.00%
illust/examples	62	61.29%	77	77.92%	17	70.59%	37	62.16%
restatements	73	41.10%	85	64.71%	21	52.38%	42	59.52%
identifications	75	49.33%	70	58.57%	9	55.56%	24	54.17%
introductions	16	62.50%	21	76.19%	0	00.00%	16	87.50%
summaries	11	54.55%	20	70.00%	2	100.00%	11	81.82%
TOTALS	318	52.20%	342	68.13%	54	62.96%	150	65.33%

The second issue to be addressed is the degree and kind of elaboration. As mentioned earlier, some marking contains reference to speaker intention or some sort of advance warning regarding the information which is about to be transmitted, as in examples (1) and (3). In these cases, the discourse move is decomposed. First, the speaker announces what he is going to do, then he does it. This presumably would increase the salience of the point being made. In other instances, there is no such decomposition, but the utterance contains some sort of identification of its function, such as in examples (2) and (3). These are what are called explicit markers in Tables 3 through 6. In other cases, the function of the discourse move is more implicit, with the clarity of the move's function perhaps depending on other contextual factors in the presentation. In example (12), we see a more implicitly marked introduction or topic shift. Algebraic calculations were, in fact, only introduced into the lecture after this point:

12. We talk a little bit algebra.

In unmarked utterances, of course, there is no such identification and the function of the utterance is relatively difficult to discern. Example (13) is actually a definition which was used to introduce this topic for the first time:

13. Contour line is the symbol in topographic map we can project the two dimension to the three dimension shape.

The lack of functional markings, along with the use of simple juxtaposition in place of syntactically marked embedding make this utterance extremely difficult to process.

The following four tables show the degree of elaboration present in each of the marked discourse moves for the two speaker groups under the two conditions.

Table 3: Kind of elaboration in marking of discourse moves: ITA Unplanned

	Total	spkr intent %	explicit %	implicit %
definitions	45	28.99%	53.33%	17.78%
illust/ex:amples	38	7.89%	68.42%	23.68%
restatements	30	13.33%	70.00%	13.33%
identifications	37	00.00%	67.57%	32.43%
introductions	10	50.00%	20.00%	30.00%
summaries	6	16.67%	33.33%	50.00%
TOTALS	166	15.66%	59.64%	23.49%

Table 4: Kinds of elaboration in marking of discourse moves: ITA Planned

	Total	spkr intent %	explicit %	implicit %
definitions	47	34.04%	59.57%	6.38%
illust/examples	60	21.67%	73.33%	5.00%
restatements	55	16.36%	78.18%	5.45%
identifications	41	2.44%	75.61%	21.95%
introductions	16	75.00%	25.00%	00.00%
summaries	14	50.00%	42.86%	7.14%
TOTALS	233	24.89%	66.95%	8.15%

Table 5: Kinds of Elaboration in Marking of Discourse Moves: NS Unplanned

	Total	spkr intent %	explicit %	implicit %
definitions	4	0.00%	50.00%	50.00%
illust/examples	12	33.33%	50.00%	16.67%
restatements	11	18.18%	63.64%	18.18%
identifications	5	0.00%	40.00%	60.00%
introductions	0	0.00%	0.00%	0.00%
summaries	2	0.00%	100.00%	0.00%
TOTALS	34	17.65%	55.88%	26.47%

Table 6: Kinds of Elaboration in Marking of Discourse Moves: NS Planned

	Total	spkr intent %	explicit %	implicit %
definitions	14	35.71%	57.14%	7.14%
illust/examples	23	21.74%	65.22%	13.04%
restatements	25	16.00%	68.00%	16.00%
identifications	13	0.00%	76.92%	23.08%
introductions	14	71.43%	28.57%	0.00%
summaries	9	55.56%	33.33%	11.11%
TOTALS	98	29.59%	58.16%	12.24%

Discussion

For the ITAs, the planned discourse was found to contain more elaborate marking and more of it than the unplanned. But unsupported was the idea that NSTAs do considerably more marking than ITAs. In fact, Tables 4 and 6 show the degree of elaboration in the ITA and NSTA planned presentations to be remarkably similar. Table 2 also shows that the degree to which NSTAs mark their discourse moves at all is very similar to that of the ITAs in the unplanned condition. Although the cell sizes are too small to draw any definitive conclusions, there seems to be minimal difference between the planned and unplanned conditions for the NSTAs, at least insofar as the absolute use of marking is concerned. There is also no clear trend in the kinds or degree of elaboration used by the NSTAs in the planned versus the unplanned condition.

The big difference lies between the ITA planned and unplanned conditions. Yet, in spite of the minimal difference in marking and elaboration between the ITA planned and the NSTA data, undergraduate and ESL instructor raters understood the NSTAs far more easily. This would indicate that the NSTAs do not need to mark as much or as elaborately as the ITAs in order to be understood. They have other ways of making their presentations comprehensible. Tyler's research (1988, 1989) certainly indicates that comprehensibility, or lack thereof, has multiple sources. It is possible that the NSTAs choose to exploit other means of expressing themselves clearly than the extensive use of macro-markers. For ITAs, on the other hand, the increased and more elaborated use of marking appeared to enhance comprehensibility considerably.

Table 7: Grammatical Accuracy and Complexity

	Mean clauses/T-unit	SD	t	Mean err/clause	SD	t
Unplanned	1.20	.20	4.92*	.54	.13	.92**
Planned	1.44	.14		.62	.12	

*p<.01 **n.s.

It is, of course, possible that there were other differences between the planned and unplanned conditions which had little to do with discourse marking, namely, grammatical accuracy and complexity. A two-minute section from each of the ITA tapes was scored for these features, following the method suggested by Bardovi-Harlig and Boffman (1989). The results are seen in Table 7. The measure of complexity is T-units per clause. The measure of accuracy is errors per clause. The

three error types described by Bardovi-Harlig and Boffman--syntactic, lexical-idiomatic, and morphological--were combined for a general error count.

As can be seen from Table 7, it appears that differences in accuracy level cannot explain the differences in ratings, since the two presentations do not differ significantly in this respect. This is consistent with Crookes (1989), who used error-free T-units as a measure of accuracy and found no significant differences between the two conditions. As regards complexity, the planned production is indeed more complex than the unplanned. Again, these results are similar to those of Crookes who found that on several different measures, the planned condition was favored, but that the differences did not reach significance. Differences in phonological accuracy and speaking rate, while certainly important (see Anderson-Hsieh and Koehler, 1988) were not specifically measured here. The planned speech did appear to be somewhat more rapid, as seen in a slightly higher T-unit count for the two-minute coded segments.

The implication of these findings on discourse marking is that ITAs need to use more elaborated discourse markers in order to overcome other comprehensibility difficulties that may be the result of more local problems, such as pronunciation. This means that they should *not* necessarily be targeting NS behavior. In this instance, they may need to go beyond it in order to achieve the same result as the NSTAs in terms of comprehensibility. Of course, we can only speculate as to whether further elaboration would increase student comprehension. It may be that these ITAs have gone as far as they can go in improving comprehensibility by increasing marking of discourse moves and that further increases can only come from other improvements in other skill areas.

The results of this study indicate that we need to take into account the tasks involved in measuring the efficacy of instruction. In the unplanned condition, these ITAs were unable to put into operation what they had been taught to the same extent as in the planned condition. Since the macro-markers at issue here are signals of long-range planning, it seems likely that the speakers were only able to encode them when there was sufficient planning time. The use of such elaborated marking does not appear to be automatic for these speakers. For the NSTAs, on the other hand, the lack of planning time seemed to make relatively little difference in whether and how much they marked their discourse moves. For them, the use of such marking appears to be relatively automatic and, at least in the case of these NSTAs who had had no specific training in presentation skills, independent of instruction.

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