Are Fluency Activities Useful in English Discussion Class?
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ABSTRACT

The purpose of this paper is to determine how relevant fluency activities (a speaking activity in which students speak to a partner without interaction and repeat the same content to new partners in shorter and shorter time intervals) are in the English Discussion Class, considering that fluency activities are unidirectional while discussion is bidirectional, requiring interaction. Classes of freshmen (mostly Japanese) in their first semester at Rikkyo University were divided into those receiving fluency activities and those receiving pairwork speaking activities instead. I explored (1) whether fluency activities were a help or a hindrance to the development of interaction skills such as asking questions or making comments in discussions and (2) whether pairwork activities instead were sufficient to improve students' fluency in English. The findings show fluency activities better improve students' fluency at higher levels, but that pairwork activities better improve both fluency and interaction skills at lower levels.

INTRODUCTION

Fluency activities (a speaking activity in which students speak to a partner without interaction and repeat the same content to new partners in shorter and shorter time intervals) are an integral part of the English Discussion curriculum. The purpose is to improve students' English fluency. However, fluency activities are unidirectional: only the speaker speaks. Although the listener makes reactions, no interaction—a necessary element in discussion—is required. Thus, fluency activities may detract from developing students' discussion skills. Pairwork activities, however, not only require interaction but may also improve students' English fluency equally effectively.

Fluency Activities: Fluency activities involve repetition of speech. The "4-3-2" fluency activity devised by Maurice (1983) involves talking to different partners in shorter and shorter time intervals (first for 4, then 3, and finally 2 minutes) after brief preparation. Such activities have been shown to improve fluency (increased word count, reduced hesitations and repetitions), accuracy (fewer errors), and content (increased ability to abridge one's speech) of English learners' speech (Nation, 1989).

As described previously (Bertorelli, 2012), studies on fluency activities seem only to have been carried out on unidirectional speech on advanced (Nation, 1989) or high intermediate (De Jong and Perfetti, 2011) students. Here, I explore the impact of fluency activities on fluency and interaction in discussion, namely, whether they help or hinder interaction skills such as asking questions and making comments, using both lower- and higher-level students.

Pairwork Activities: For the purposes of this paper, pairwork activities are speaking activities whereby two students communicate with each other to complete a task, typically answering a series of questions on a specific topic.

Research by Bygate (2001) suggests that task repetition may improve learners' fluency (fewer pauses in speech) and complexity (greater number of words per time unit) but not accuracy (grammatical errors), and that "a dialogic dimension to communication helps speakers structure their utterances" (Bygate, 2001, p. 38). The "dialogic dimension" relates to students being interviewed about content related to pictures versus recounting content after watching a video. This study was carried out on overseas non-native English speaking students at the University of Reading. Although no information is given regarding English proficiency level, it is assumed it is high or at least high-intermediate level for the students to be enrolled there.

It may be inferred from the findings of Bygate (2001) that pairwork activities, which include a "dialogic dimension," may improve fluency of students' English. If so, this should be reflected in the results of this paper's study. Moreover, pairwork activities have the advantage of harnessing listening skills in addition to speaking skills, allowing listeners to respond to speakers, which is in closer alignment with the skills required for discussion than are fluency activities.

The pilot study on four classes (Bertorelli, 2012) indicated fluency activities may better improve students' English fluency but do not hinder development of interaction skills, while pairwork activities may better foster interaction such as asking questions and making comments.

This paper reports on a more extensive study of 13 classes, incorporating a fuller range of levels that includes both lower and higher levels. The purpose of this study is to clarify whether fluency activities assist or hinder students in developing discussion skills, and whether pairwork activities instead are sufficient to improve students' fluency in English. In other words, is inclusion of fluency activities beneficial in the English Discussion curriculum?

METHOD

To compare the impact of fluency and pairwork activities on learners' English fluency and interaction skills in discussion, I measured the fluency of speaking and interaction skills within the context of discussion similar to that of the pilot study (Bertorelli, 2012): I collected data that could be relatively easily quantified without access to sophisticated analytical tools. Fluency and interaction measures were similar to those of the pilot study with some additions.

Fluency was measured according to smoothness of speaking in terms of length of speaking turn (the longer the turn, the higher the fluency); and number of self-corrections of grammar or vocabulary and repetitions of words or word strings, and hesitations (for example, "er", "uhm") (the lower the number, the higher the fluency).

Interaction was measured according to the number of questions and comments by listeners per speaker's turn (the higher the number of questions and comments, the greater the interaction). A turn was considered the introduction of a new idea that was expanded on, otherwise a comment. Subcategories of follow-up questions and comments were added to provide further detail: Follow-up questions, questions to get more information from the speaker, were categorized into (1) Why?/For example? follow-up questions, which were taught asking functions included in the curriculum, and (2) other follow-up questions such as "Which cram school did you go to?" Comments were categorized into (1) agree/disagree comments, which were taught communication skills, for example, "I agree with your idea and I think …" (if the utterance was just "I agree." without elaboration, this was treated as a reaction and not included in the comments count), and (2) comments providing new information, such as "Cram school it is too expensive." Number of seconds of silence per discussion group was also counted.

Data Sample and Collection: As my sample, I matched pairs of classes according to similar scores on GTEC, a standard test for assessing reading and listening skills. One class was given fluency activities ("fluency group") with the paired class given pairwork activities ("pairwork group") instead. I included my highest level class from the Faculty of Intercultural Communications, for which there was no match, as a reference for the fluency activity groups.

The data was collected by recording Discussion Test 1 at Week 5 and Discussion Test 3 at Week 13 using a voice recorder. The discussions were then transcribed by the author. Although ideally Week 1 should be the starting point, the reason to use Week 5 (Test 1) as the starting point was that students may have different speaking levels at the start of the semester, but by Week 5 these differences should be leveled out. Further, if there are any influences of the fluency and pairwork activities, these should progress throughout the semester.

Timing and Positioning of Fluency and Pairwork Activities: The fluency and pairwork

activities were of the same time length and at the same position during class, prior to the first of two discussions held each class. In the pilot study, the fluency and pairwork activities had been carried out after the quiz. In this study, the position was switched to later in the lesson to double up as content preparation to make it easier to incorporate in the lesson. The fluency or pairwork activities were carried out from Weeks 2 to 13 inclusive.

Fluency Activities: Fluency activities related to the topic to be discussed for a particular lesson. For example, for the topic of technology, students were asked to talk about which technologies are useful, waste or save people's times, or are harmful. The fluency activities were a 2-1.5-1 (2 minutes-1.5 minutes-1 minute) pattern instead of the traditional 4-3-2 pattern because I wanted to ensure all students could participate and that I could include the fluency activities each lesson (the 2-1.5-1 pattern takes up 9 minutes compared with 18 minutes for the 4-3-2 pattern). This was longer than in the pilot study (2-1-0.5) to more closely match the time reductions in the 4-3-2 pattern.

For the fluency activities, students lined up in two rows facing each other, with one line assigned as speakers and the other as listeners. Speakers spoke three times, changing partners each time. Listeners could make reactions but no questions or comments. Speakers and listeners then changed roles, with the author participating as a listener if an uneven number of students.

Pairwork Activities: Pairwork activities included the same topic and questions as the fluency activities, but students interacted with each other, exchanging ideas and asking questions. Pairwork activities were the same total time as the fluency activities (9 minutes), on the assumption that students talking in pairs would talk half the time and listen half the time.

Attendance: Attendance was high. Data of students absent >2 times from the fluency or pairwork activities (one) and those not attending both Tests (ten, but no more than two per class) were omitted from the fluency but not the interaction results as discussion depends on interaction of all participants.

RESULTS

The fluency and interaction results are summarized in Table 1 and Table 2 (see below), respectively. The classes are organized into groups, Group I being the highest and Group VII the lowest level. The tables include the results of Tests 3 and 1, and the percentage differences between Tests 3 and 1 per group, and between the Test 3 fluency and pairwork groups (shaded block in the tables).

Fluency: Comparing the fluency results between Test 3 and Test 1 of the fluency and pairwork groups (Table 1), all groups show fewer turns and increased words per minute except for the lowest level fluency group. The fluency groups in Groups II and III, the higher-level groups, showed fewer turns, greater words per minute, and fewer hesitations, while the pairwork groups in Groups IV, V, VI, and VII, the lower-level groups, show >10% increase in words per minute.

Comparing the fluency and pairwork group Test 3 results (Table 1, shaded block), almost all the fluency groups have fewer longer turns and greater words per minute, self-corrections, word repetitions, and hesitations. The exceptions include Group III (science), which has fewer hesitations, and Group VI (community), which shows fewer words per minute and hesitations.

In summary, the results show that as the semester progressed, all groups demonstrated longer turn taking and improved speaking speed, partly explained by increased number of self-corrections, word repetitions, or hesitations. However, the higher-level fluency groups improved their speaking speed more than the higher-level pairwork groups, while the lower-level pairwork groups improved their speaking speed more than the lower-level fluency groups.

Table 1. *Fluency Results*

	Group I	Group II		Group III		Group IV		Group V		Group VI		Group VII	
Fluency/Pairwork activities	Fluency	Fluency	Pairwork	Fluency	Pairwork	Fluency	Pairwork	Fluency	Pairwork	Fluency	Pairwork	Fluency	Pairwork
Class	Mon P3	Mon P2	Wed P1	Mon P1	Tue P1	Thu P2	Tue P2	Thu P3	Wed P2	Sat P1	Sat P2	Thu P1	Fri P1
Faculty	Intercultural	Arts	Law	Science	Arts	Law	Economics	Business	Arts	Community	Tourism	Science	Science
Average GTEC score	282	261	259	253	253	230	238	220	220	194	206	159	177
Test 3 (Average/student)													
Number of students	7	8	7	7	7	8	8	8	7	6	8	5	9
Average # turns	3.3	2.4	3.0	3.3	3.3	3.0	3.4	2.1	3.1	3.0	3.3	2.2	3.6
Average speaking time (s)/turn	55	80	66	53	51	62	52	66	55	61	61	74	43
Average # words/min/turn	102	90	68	69	66	86	67	86	66	68	76	60	46
Average # self-corrections/turn	3.1	2.3	2.1	3.3	2.5	2.7	2.6	2.3	2.3	2.4	1.7	2.0	1.3
Average % word reps/turn	7%	8%	5%	7%	7%	8%	8%	11%	7%	7%	7%	8%	8%
Average % hesitations/turn	7%	11%	10%	7%	10%	14%	6%	11%	10%	8%	11%	10%	8%
Test 1(Average/student)													
Number of students	7	8	7	7	7	8	8	8	7	6	8	5	9
Average # turns	3.9	3.4	3.6	5.0	4.4	3.9	4.9	3.3	3.7	4	4.5	2.8	3.8
Average speaking time (s)/turn	48	60	53	40	46	50	38	59	45	51	66	140	40
Average # words/min/turn	75	70	62	53	56	69	48	73	46	53	55	62	39
Average # self-corrections/turn	2.6	2.4	2.2	2.8	3.4	3.1	2.7	2.1	1.9	1.4	1.5	0.9	1.4
Average % word reps/turn	7%	6%	6%	7%	8%	9%	6%	10%	6%	8%	9%	7%	7%
Average % hesitations/turn	7%	14%	7%	10%	9%	12%	9%	12%	11%	6%	8%	19%	11%
Comparison T3:T1 (%diff)													
Average # turns	-14.8%	-29.6%	-16.0%	-34.3%	-25.8%	-22.6%	-30.8%	-34.6%	-15.4%	-25.0%	-27.8%	-21.4%	-5.9%
Average speaking time (s)/turn	16.1%	33.1%	23.9%	32.2%	10.4%	24.2%	36.8%	11.9%	23.9%	19.2%	-7.8%	-47.4%	8.0%
Average # words/min/turn	35.6%	29.4%	8.9%	29.5%	17.8%	24.8%	40.7%	18.0%	42.4%	28.0%	38.8%	-3.9%	19.5%
Average # self-corrections/turn	19.2%	-3.3%	-4.0%	20.4%	-26.7%	-14.2%	-0.8%	11.3%	24.5%	65.8%	19.0%	125.2%	-4.8%
Average % word reps/turn	-0.6%	21.1%	-3.3%	-2.9%	-11.7%	-2.1%	27.4%	18.9%	24.5%	-8.9%	-24.1%	16.4%	9.7%
Average % hesitations/turn	-1.5%	-27.1%	33.3%	-28.3%	5.9%	14.1%	-31.4%	-9.0%	-5.6%	30.9%	34.3%	-46.2%	-23.4%
Compare T3 Fl:Pw (%diff)													
Average # turns		-20.8%		0.0%		-11.1%		-32.4%		-7.7%		-38.1%	
Average speaking time (s)/turn		20.4%		5.5%		19.1%		20.6%		-0.5%		70.5%	
Average # words/min/turn		32.7%		4.3%		28.8%		31.1%		-10.6%		29.3%	
Average # self-corrections/turn		10.9%		34.3%		0.5%		0.5%		35.7%		53.6%	
Average % word reps/turn		39.6%		4.1%		9.3%		61.6%		9.7%		3.3%	
Average % hesitations/turn		7.9%		-30.5%		109.0%		9.3%		-28.5%		21.5%	

Notes
1. P1, P2, and P3 are the class times, i.e., Period 1 (9:00-10:30), Period 2 (10:45-12:15), and Period 3 (13:15-14:45), respectively.
2. Number of students excludes students absent >2 times from the fluency or pairwork activities (one in total) and those not attending both Test 1 and Test 3 (ten in total, but no more than two per class).
3. Turn time is the total speaking time of the speaker during the turn.
4. Speaking time includes all words, self-corrections, word repetitions, and hesitations of the speaker during the speaker's turn.
5. T3 and T1 are abbreviations for Test 3 and Test 1, respectively.

Interaction: Comparing the interaction results between Test 3 and Test 1 of the fluency and pairwork groups (Table 2), there are some differences that may be attributable to the specific characteristics of some classes or majors. For Why?/For example? questions, two fluency (Group III, science; Group VI, community) and two pairwork (Group II, law; Group VI, tourism) groups show increases. For new follow-up questions, all pairwork but only three fluency groups (Group III, science; Group V, business; Group VII, science) show increases. Comparing the fluency and pairwork group Test 3 results, the fluency groups show lower numbers except for Why?/For example? questions for Group III (science) and both types of questions for Group V (business). For new questions in Test 1, only one fluency (Group VI, community) and one pairwork (Group IV, economics) group show averages of >1 per student. However, in Test 3, two fluency and five pairwork groups show averages of >1 new questions per student. This indicates a tendency for the pairwork groups to make more follow-up questions, especially new follow-up questions.

Regarding comments for Test 3 compared with Test 1, no fluency and only two pairwork (Group II, law; Group VII, science) groups show increases in agree/disagree comments. Only one fluency (Group V, business) and two pairwork (Group II, law; Group V, arts) groups show increases in new comments. Comparing the fluency and pairwork group Test 3 results, the fluency groups have lower numbers except for Group III (science) and Group IV (law) for both types of comment and Group V (business) for new comments. For new comments in Test 1, three fluency (Group III, science; Group IV, law; Group VII, science) and one pairwork (Group VII, science) group show averages of >1 new comments per student. In Test 3, three fluency (Group III, science; Group IV, law, Group V, business) and the same pairwork group show averages of >1 new comments per student. This indicates the fluency groups tend to have more comments but the pairwork groups have greater increase in comments between Test 3 and Test 1.

Regarding number of seconds of silence, there was a general trend of the fluency groups having less silence and reducing the amount of silence between Test 3 and Test 1 compared with the pairwork groups except for the Group VI fluency group (community). One reason could be that fluency group students may be better at filling silence than their pairwork counterparts because of needing to fill in the speaking time in the fluency activities.

Reference Group: Comparing Test 3 with Test 1 in terms of fluency (Table 1), Group I shows fewer turns but increased speaking time per turn, words per minute, and self-corrections, but little difference in the number of word repetitions or hesitations, suggesting the increased speaking time is partially explained by the increased number of self-corrections. This may be a consequence of the fluency activities allowing students the chance to rephrase the same content in subsequent speaking turns.

Regarding the interaction results (Table 2), both number of questions and comments decreased in Test 3 compared with Test 1. However, it may not be correct to infer from this that fluency activities hinder interaction skills. Rather, the lower figures may be a consequence of the longer turn taking giving less opportunity for making comments or need for asking many questions.

Summary: Regarding fluency, the higher-level fluency groups showed greater improvement than the higher-level pairwork groups, while the lower-level pairwork groups showed greater improvement than the lower-level fluency groups. Regarding interactions skills, there was a tendency for the pairwork groups to make more follow-up questions and comments than the fluency groups. This was true even for Group VII, comprising fluency and pairwork groups of science major students. More research may need to be done on comparing fluency and pairwork activities with students of the same majors to establish whether these results are reproducible and whether a clearer pattern emerges.

Table 2. *Interaction Results*

Fluency/Pairwork activities	Group I	Group II		Group III		Group IV		Group V		Group VI		Group VII	
	Fluency	Fluency	Pairwork	Fluency	Pairwork	Fluency	Pairwork	Fluency	Pairwork	Fluency	Pairwork	Fluency	Pairwork
Class	Mon P3	Mon P2	Wed P1	Mon P1	Tue P1	Thu P2	Tue P2	Thu P3	Wed P2	Sat P1	Sat P2	Thu P1	Fri P1
Faculty	Intercultural	Arts	Law	Science	Arts	Law	Economics	Business	Arts	Community	Tourism	Science	Science
Average GTEC score	282	261	259	253	253	230	238	220	220	194	206	159	177
Test 3 (Average/student)													
Number of students	7	8	7	9	8	8	8	8	7	6	8	7	9
#Why?/For example?	1.0	0.4	1.3	1.6	0.6	0.4	1.5	2.0	0.4	0.3	1.5	0.7	1.0
#New follow-up questions	1.1	0.1	1.0	0.4	1.3	0.4	1.3	2.6	0.4	0.7	1.1	1.6	2.0
#Comments - agree/disagree	0.6	1.0	1.0	1.3	0.5	0.9	0.4	0.6	0.9	0.5	0.9	0.3	0.3
#Comments - new information	0.3	0.3	0.4	1.3	0.3	1.4	0.4	1.4	0.9	0.0	0.1	0.4	1.3
Silence (s)	3.6	11.1	12.9	3.8	11.8	0.5	15.9	3.1	7.7	11.7	4.1	13.6	24.0
Test 1 (Average/student)													
Number of students	8	8	8	8	7	8	8	8	8	7	8	7	9
#Why?/For example?	1.5	0.4	0.5	0.5	1.6	0.8	1.8	2.1	1.6	0.1	0.6	1.6	1.9
#New follow-up questions	1.9	0.4	0.5	0.4	0.6	0.4	1.0	0.4	0.1	1.1	0.8	0.1	0.4
#Comments - agree/disagree	1.3	1.9	0.9	3.1	1.9	1.3	2.0	2.4	1.0	2.7	2.4	0.6	0.2
#Comments - new information	0.9	0.4	0.3	2.1	0.4	1.8	0.8	0.5	0.8	0.0	0.0	1.4	2.3
Silence (s)	10.0	6.3	7.1	4.6	7.1	1.3	12.1	2.6	20.5	13.0	2.1	4.7	18.8
Comparison T3:T1 (%diff)													
#Why?/For example?	-33.3%	0.0%	157.1%	211.1%	-60.2%	-50.0%	-14.3%	-5.9%	-73.6%	133.3%	140.0%	-54.5%	-47.1%
#New follow-up questions	-39.0%	-66.7%	100.0%	18.5%	118.8%	0.0%	25.0%	600.0%	242.9%	-41.7%	50.0%	1000.0%	350.0%
#Comments - agree/disagree	-54.3%	-46.7%	14.3%	-57.3%	-73.1%	-30.0%	-81.3%	-73.7%	-14.3%	-81.6%	-63.2%	-50.0%	50.0%
#Comments - new information	-67.3%	-33.3%	71.4%	-37.3%	-41.7%	-21.4%	-50.0%	175.0%	14.3%	-	-	-70.0%	-42.9%
Silence (s)	-64.3%	78.0%	80.5%	-18.3%	64.5%	-60.0%	30.9%	19.0%	-62.4%	-10.3%	94.1%	187.9%	27.8%
Comparison T3 Fl:Pw (%diff)													
#Why?/For example?			-70.8%		148.9%		-75.0%		366.7%		-77.8%		-28.6%
#New follow-up questions			-87.5%		-64.4%		-70.0%		512.5%		-40.7%		-21.4%
#Comments - agree/disagree			0.0%		166.7%		133.3%		-27.1%		-42.9%		-14.3%
#Comments - new information			-41.7%		433.3%		266.7%		60.4%		-100.0%		-67.9%
Silence (s)			-13.5%		-67.8%		-96.9%		-59.5%		182.8%		-43.5%

Notes
1. P1, P2, and P3 are the class times, i.e., Period 1 (9:00-10:30), Period 2 (10:45-12:15), and Period 3 (13:15-14:45), respectively.
2. Number of students includes all students who participated in each test group.
3. T3 and T1 are abbreviations for Test 3 and Test 1, respectively.

DISCUSSION

I had proposed that fluency activities may hinder students' development of interaction skills and that pairwork activities may equally efficiently improve the fluency level of students. The findings support this for lower-level but not higher-level students.

Much fluency activity research has focused on higher-level students, showing fluency activities improve students' fluency (Nation, 1989; De Jong & Perfetti, 2011). It is not clear why there is little research on lower-level students. In this study, pairwork activities improved lower-level students' fluency better than fluency activities. One reason may be that lower-level students need more time to produce speech, which is facilitated by interaction with another speaker, as suggested by the findings of Bygate (2001). Therefore, doing pairwork activities on similar topics may assist students' fluency in later discussions, partially explaining their improved fluency in Test 3.

While the results of this study suggest that fluency activities are useful for improving the fluency of higher-level students, this was not necessarily so for interaction skills. This may be because higher-level students have already naturally acquired interactions skills of a sufficient level, making further improvement elusive.

As in the pilot study (Bertorelli, 2012), the results may be affected by a number of other factors such as gender differences, relationships between students, whether the students were taking other English classes at the same time, interest in the discussion topics, whether students had prepared for the tests, and number of students in a discussion test group.

As discussed above, there may be some bias in the results according to the characteristics of a specific class or major. It would be worthwhile to carry out further research on similar level classes of the same faculty. This may provide more concrete data on the impact of fluency activities on fluency and interaction skills.

Further studies may also review the fluency and interaction skill measures used. Inclusion of other fluency measures such as pauses and other interaction measures such as reactions or negotiation of meaning may provide additional insight into the impact of fluency activities on fluency and interaction skills in the English Discussion Class.

CONCLUSION

The findings indicate that fluency activities have a different impact according to the students' English levels. Fluency activities improved the fluency of higher-level students but did not appear to hinder their interactions skills. However, pairwork activities improved both fluency and interaction skills of lower-level students. The implications are that fluency activities may benefit higher-level students but lower-level students may benefit more by rather doing pairwork activities through which they can develop their fluency via bidirectional rather than unidirectional communication.

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