A study investigated the validity of a second-language student's actual speed of delivery of a passage read aloud as an indicator of second-language fluency. The study, conducted in Hong Kong with 83 secondary school students, used the oral dialogue test in a standardized secondary school-leaving examination. The dialogues were timed and the rate of speed of delivery correlated with the students' overall subject grades and scores from the written and oral language portions of the standardized test. Results indicate that time taken to read the dialogue correlated very positively with examiners' dialogue-reading scores, as was expected, but also correlated highly with all other grades and scores. It is concluded that speed of delivery has an important relationship to both oral language skills and general language ability, and that its use as a factor in language tests is justifiable. A sample dialogue is appended. (MSE)
READING ALOUD SPEED AS A FACTOR IN ORAL FLUENCY AND GENERAL LANGUAGE PROFICIENCY?

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Introduction

Tests of oral proficiency have developed a great deal since oral ability was rated purely on one's ability to control the linguistic elements of spoken communication - pronunciation, grammar and vocabulary. The notion of communicative competence has resulted in oral tests embracing a number of factors other than these:

* quality/quantity of information conveyed
* fluency
* paralinguistic features
to name but a few.

This paper explores the relation between reading aloud speed and fluency, and even general language proficiency, as these are assessed in oral testing. There is a commonsense notion that "the more fluent you are, the faster you speak, and the more proficient you are at the language". (There are limitations to this view of course: extreme speed results in a breakdown in intelligibility. This is not an aspect, however, that the paper addresses.) This notion is supported by the fact that a number of oral examinations include "fluency" and "speed of delivery" as part of the criteria on which to assess subjects' oral proficiency in a language:

(i) Jones (1979), in discussing the FSI Oral Interview, quotes 6 categories under fluency, viz:
1. Speech is so halting and fragmentary that conversation is virtually impossible.
2. Speech is very slow and uneven except for short or routine sentences.
3. Speech is frequently hesitant and jerky; sentences may be left uncompleted.
4. Speech is occasionally hesitant, with some unevenesses caused by rephrasing and groping for words.
5. Speech is effortless and smooth, but perceptibly non-native in speed and evenness.
6. Speech on all professional and general topics as effortless and smooth as a native speaker's.

(ii) Carroll (1980), in his Oral interaction assessment scale, makes the following references to speed:
Advanced Level: Copes with speech at normal speed, responds promptly, speaking neither too slowly nor hesitantly.
Intermediate Level: Will have breaks in comprehension in normal, rapid speech presentations and his own speech will be of less than native tempo for stretches.
Basic Level: Although not needing unnaturally slow enunciation, sometimes has to be addressed somewhat deliberately. Speaks with some unevenness of tempo.

(iii) Shohamy (1981), in the first 2 levels of the 5-level Hebrew Oral Proficiency Rating Grid, makes reference to fluency:
Level 1: So halting & fragmentary that conversation is impossible.
Level 2: Speech slow, exceedingly halting, strained & stumbling except for short or routine sentences and memorized expressions. Difficult to perceive continuity in utterances.
As can be seen from the three excerpts above, what exactly is understood by fluency and speed is not always clear. In general, speed would seem to be a subset of fluency; at times, however, the two terms seem to be close synonyms.

Other sources also take speed to be an important factor or even determinant of fluency. Munby (1978) in applying the Communicative Needs Processor to a foreign language participant, under Dimensions in the Target Level guide - where he is specifying the participant’s target level of command in the language - lists “Speed of Communication” as a factor to be borne in mind along with size and complexity of utterance when designing a language program for a specific target group.

Pendergast (1985), with regard to the Oral Language Analyser and Feedback System, OLA, cites fluency (as a function of time) as one of the criteria by which a subject’s oral ability would be computer-graded. The computer actually rates the subject on how many tone groups are uttered in a minute.

To what extent, though, is it really justifiable to classify a student as a “Minimum Communicator” partly on the grounds that his speech is “slow or halting”? Fulcher (1987) proposes that such judgements may not be well founded. He shows that certain English language tests (he cites the English Language Testing Service scale as an example) define three factors that are somehow involved in fluency - ‘repetition’, ‘hesitation’ and ‘stumbling’ - as being in inverse proportion to a speaker’s proficiency. This, he suggests, is not borne out by examining real data: even native speakers stumble, hesitate and repeat themselves. Fulcher’s concerns with these aspects of speech, however, arise mainly from a discourse viewpoint (e.g. with the role they may play in turn-taking) especially in native-speaker speech. In L2 learners, on the other hand, (lack of) knowledge of the L2 grammatical system may indeed be related to such factors as ‘stumbling’, as Fulcher (p.290) acknowledges.

Data from test subjects would seem to be essential here. An ERIC search, however, produced no references for studies which had looked at subjects’ actual speaking speeds.

Hinofotis et al’s (1981) research into their test of foreign Teaching Assistants’ levels of proficiency in English (1981: 113-114) is one of the few studies to have relevant data. Flow of Speech they elaborate as “Flow of Speech: smoothness of expression, including rate and ease of speech.” They comment that in their study of foreign Teaching Assistants’ English Language Proficiency levels, adding Flow of Speech as a criterion to be assessed increased the predictability of the overall Language Proficiency rating for the testing instrument they were developing.

The present study: aims and methods

Fluency embraces a number of different factors - speech flow, uncompleted sentences, hesitations etc. The present study examines one aspect of fluency - a student’s actual rate of delivery; in this case, the speed at which he reads aloud a prescribed reading passage.

The reading aloud passage was selected as the testing typology for the current study for a number of reasons:

(i) As far as the present study is concerned, the testing variable is tightly controlled, which makes for greater ease of comparability across testees. It also controls for the variable where speakers are thinking/struggling to generate their own meanings and are therefore not as smooth and effortless as they might otherwise be. (See comments above on stumbling; Fulcher (1987)). For reading aloud, it is conceivable that differences in speed are more likely to arise from differences in e.g. proficiency rather than in the actual communication being attempted.
It is however recognized that reading aloud has - understandably - much lower face validity as a testing typology nowadays (apart from the "Hey, listen to this piece from the newspaper" scenario, people generally do not read aloud unless directed to by a teacher).

(ii) Reading aloud forms part of the Hong Kong Certificate of Education Examination Oral Test (see below); there was therefore also an obvious practical advantage to using this test typology.

The aim of the study then was to see to what extent speed of delivery correlated with oral ability in a language. From impressions based on experience, a correlation in the region of .2 was anticipated since speed of delivery, while not being a direct linguistic skill, appeared to be a feature of proficient communicators.

Concerning its own examinations, the papers on the Form 5 HKCEE correlate with each other at between .7 and .8. The Form 7 Use of English examination, which has recently been extensively revised, now has inter-paper correlations of around .5 where previously they were more in the region of .3.

In the current study, then, a correlation of .5 will be viewed as moderately high, while a correlation of .7 or above will be seen as high.

The study was conducted on the oral test of the HKCEE Form 5 examination. This is the major public exam for most school candidates in Hong Kong, and is the equivalent of 'O' levels in the U.K.; it is taken at the end of Secondary form 5, when most candidates are about 17 years old. The candidature - the whole group - is in the region of 130,000. The oral test itself lasts 5 minutes, is scored independently by 2 examiners, and is in 2 parts: the candidate first reads a short dialogue with one of the examiners and then a picture is used to stimulate a short "conversation" between the candidate and the 2 examiners. Each day the pair of examiners test about 30 candidates, each day's group of candidates being a random sample of the whole group. The whole group correlation between the oral exam and the objective paper in 1989 was .68.

The examiners are provided each day with 3 different dialogues and pictures to use with candidates. A candidate receives a mark from 1 to 7 (1 being the weakest and 7 the strongest candidates) for both the dialogue and the conversation, using the following marking scheme:

**Assessment of the Dialogue**
Both examiners should give individual global assessments of the reading, taking into account accuracy, pronunciation, phrasing, intonation, fluency, etc.

**Assessment of the Conversation**
Both examiners should give individual global assessments of the conversation based on how well the candidate can communicate his ideas.

The total mark is then arrived at by taking the mean of both examiners' marks. The attempt is made during moderating the dialogues to have all dialogues of approximately equal length, and as far as possible, of comparative difficulty. (See Appendix 1 for sample dialogue).

For this study, one examiner was asked to time - using a stopwatch - candidates' starting and finishing times for reading the dialogues. As the examiners' reading parts are quite short and of approximately the same length on each dialogue, for the purposes of this study the amount of time the examiner 'interfered' on the candidate's time was ignored.
The examiner who was actually timing the dialogues was informed of the purpose of the study; the second examiner was only informed that the readings were being timed, and not of the purpose of the study.

The study ran over 3 days and looked at 83 candidates.

Results

Candidates' results for the HKCEE are expressed in three ways:
* an overall subject mark/grade
* a profile grade for the Reading/Writing (R/W) papers of the exam
* a profile grade for the Listening/Speaking (L/S) papers of the exam

Each day's set of candidates can be taken to be a random sample. This is confirmed by the fact that the means and standard deviations (SDs) of the whole sample - as well as of each individual day's set of testees - are very comparable with those of the whole group for the test, as shown in Table 1.

| Table 1: Sample and Whole Group Comparison (means and standard deviations) |
|-----------------------------|----------------|----------------|
|                             | Whole Subj Mark (%) | R/W Skills Mark (%) | L/S Skills Mark (%) |
| Whole Group mean            | 50              | 50              | 53              |
| Whole Group SD              | 19.4            | 18.8            | 20.6            |
| Sample mean                 | 52              | 51              | 56              |
| Sample SD                   | 15.7            | 15.7            | 17.8            |

A number of sets of correlations have been run. Analyses of the whole sample (n = 83) have been carried out as well as analyses for each of the 3 days' sets of testees. Time taken to read the dialogue (TTRD) has been examined not only in terms of its correlations with scores on the oral part of the exam (Table 2), but also against the whole subject grade and the R/W profile grade (Table 3).

As can be seen from Table 2 (next page), the two examiners' marks correlate highly: the correlations for the reading aloud section, the conversation and the total oral score being .70, .74 and .77 respectively. These figures are in line with whole group figures; the inter-marker correlations in the 1989 oral exam ranged from .68 to .95, the whole group inter-marker correlation being .83.

The two examiners' individual correlations against time taken to read the dialogue (TTRD) and their scores on this section are quite high, being .66 and .68 for Examiners 1 and 2 respectively. This might to a certain extent be attributable to the fact that - if speed of delivery is an important factor - this is partly what examiners are awarding their marks to.
One notable feature is the fact that TTRD correlates with the marks on the conversation part of the oral test (both parts of the test are assessed individually and separately) almost as highly as TTRD correlates with the examiners' scores on the dialogue reading - at .59 and .60 for the two examiners.

Table 2: Correlations between Time Taken Reading Aloud (TTRD) and Oral Scores

<table>
<thead>
<tr>
<th>Score: Dialogue</th>
<th>TTRD</th>
<th>Score: Conv</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score: Dialogue</td>
<td>.66</td>
<td>.59</td>
</tr>
<tr>
<td>Score: Conv</td>
<td>.78</td>
<td>.78</td>
</tr>
<tr>
<td>Total Oral</td>
<td>.66</td>
<td>.94</td>
</tr>
<tr>
<td>Score: Dialg</td>
<td>.68</td>
<td>.70</td>
</tr>
<tr>
<td>Score: Conv</td>
<td>.60</td>
<td>.59</td>
</tr>
<tr>
<td>Total Oral</td>
<td>.67</td>
<td>.68</td>
</tr>
</tbody>
</table>

There is such a high correlation (.94 and .95) between the examiners' scores on the dialogue and conversation with their total oral scores as each are worth 50% of the total oral score.

Half of the total oral score is made up of the reading aloud score. As TTRD and the examiners' reading scores have already been seen to have correlated quite highly, it would seem reasonable to expect that TTRD would also have a correspondingly high correlation with the examiners' total scores. This is in fact the case as TTRD correlates with the total oral score at .66 and .67.

Table 3. Correlations between time taken reading aloud (TTRD) and proficiency test scores

<table>
<thead>
<tr>
<th>Ex.1 oral score</th>
<th>Ex.2 oral score</th>
<th>Whole Subj mark</th>
<th>R/W prof. mark</th>
<th>L/S prof. mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>TTRD</td>
<td>.66</td>
<td>.67</td>
<td>.59</td>
<td>.55</td>
</tr>
</tbody>
</table>
As can be seen from Table 3, TTRD correlates with the Listening/Speaking profile at .60 and with the whole exam at .59; this may again be partly influenced by the fact that the score on the dialogue itself forms part of this score.

Discussion

The argument for speed of delivery being a factor in oral fluency is well supported by the fact that not only does TTRD correlate highly (.66 and .68) with the examiners' dialogue reading scores - in which TTRD itself can understandably be seen to be a direct factor - but that TTRD should correlate almost as highly (.59 and .60) with the examiners' scores on the conversation - in which TTRD is not a factor.

TTRD, however, has no bearing whatsoever on the Reading/Writing profile mark. It is somewhat surprising therefore that TTRD - by no means purely a linguistic skill - should also correlate so highly with the non-oral skills of reading and writing. The correlation here of .55 does indeed suggest that speed of delivery is related to, and is possibly even a factor in, general language ability. This is further supported by the correlation between TTRD and the whole subject mark: as the reading aloud section accounts for just 5% of the subject mark, the figure of .59 is therefore quite significant. This contrasts with the correlation, of around .2, which it had been anticipated the results of the study might produce.

Speed of delivery (or a similar notion), then, stands in an important relationship to oral and also to general language ability, and is probably a factor in these abilities. The fact that a number of public exams include it as a facet of oral ability to be tested under fluency would seem to be justified. Test designers are justified in setting up criteria for fluency on the grounds that a subject who speaks slowly and haltingly will tend to be rated towards the weaker end of the spectrum.

Implications for teachers

As far as classroom practice is concerned, fluency in reading aloud may well be improved by focusing on a level of meaning above that of single words. If, when practising reading aloud, the teacher concentrates only on how well the students manage the citation forms of words, this may well perpetuate a slow and deliberate reading style. It may be more effective to get students to think about - and read in - sense groups such as the tone group. Being able to read in sense chunks will mean that students read with greater fluency - and probably with a slightly increased speed as well.

One area where reading aloud speed might be of direct use to teachers is as a diagnostic tool for assessing students' oral ability, for example when they enter a certain class at the start of a year.

NOTES

1 The day-by-day analyses are very much in line with the whole sample analysis, the range of correlations being a low of .48 (TTRD with Ex.2 score on Day 3 conversation) to a high of .76 (TTRD with Ex.1 score on Day 2 Dialogue Reading).

2 The level of significance for a two-tail test at the .01 level with 80 subjects is .283.
APPENDIX 1: Sample Dialogue

(From 1989 HKCE Oral English Examination. Reproduced with permission).

(Read the candidate’s words ONLY)

Examiner: What’s that you’ve got?

Candidate: It’s my new portable telephone. Just think! From now on I won’t have to queue up whenever I need to make a phone call. I can just pull the machine out of my pocket and dial instantly.

Examiner: Was it expensive?

Candidate: I suppose it was really quite dear. Almost twenty thousand. Lots of my friends have criticised me. They say I’ll never make that many calls. But they don’t understand. It’s so convenient. I can be available to my business customers twenty-four hours a day. And I can contact them, even if I’m on a yacht in the middle of the harbour.

Examiner: What do your friends think?

Candidate: They think it’s wonderful. Whenever we’re in a crowd and the telephone rings, they think that I’m like a film star. All my friends envy me. Particularly when the telephone rings in a restaurant and all the pretty girls look at me.

REFERENCES


