

FUNCTIONS AND FORMS OF SCHOOL LANGUAGE

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ABSTRACT

This paper outlines an approach to curriculum evaluation and student development by sampling language in use in schools and analysing it for its functions and its forms across the curriculum and throughout the age levels. This approach is part of a paradigm shift in the study of language in education which attends to the circumstances in which language is used and the uses to which it is put as well as the forms it takes, thus placing the "basic skills" in psychological and social context. Such an approach leads to new types of observation and measurement. Principles are set out and examples of findings are given.

APPROACH

Functionalism

What might be termed a functionalist school of thought represented by Moffett (1968), Britton (1972) and Halliday (1973) has fostered a paradigm shift in the study of language and learning which has been more influential in curriculum and teaching than in measurement and evaluation. The present studies attempt to apply the new paradigm to the latter tasks.

Traditional approaches in terms of "basic skills" have focussed on isolated aspects of language use in a narrow range of situations, attending to selected "standards" with inadequate analysis of the total complex of competencies involved. As a consequence, grave doubts can be cast on the validity of such approaches. (Little and Ransley, 1978).

The paradigm shift referred to involves enlarging the field of vision to take account of language as a coherent functional system involving:

- . Situation: who is speaking or writing to whom, about what, and in what circumstances.
- . Function: the cognitive, affective and social bases of language use.
- . Form: the skills of managing the use of language according to situation and function.

On such a view, language competence is seen as ability to use the language in a variety of situations for a variety of purposes, rather than in one type of situation for one type of purpose, such as gaining marks on a test. The argument is not that test-type situations must be avoided (they are sometimes used in these studies) but that a much wider range of observations is called for. Such observations need to be comprehensively descriptive, rather than prematurely normative.

Sampling

Such an approach demands the comprehensive sampling of language behaviour, as far as possible making observations of the same person using language in a variety of situations so that the range of the person's adaptations may be discerned. The present studies are based on tape recordings of what students of various ages listen to and say, and photocopies of what they read and write in the normal course of studies in English and other subjects, and in other situations designed to trace language adaptations beyond the normal curriculum. So far over 4,000 examples of such language in use from pre-school, primary, secondary and adult education in five education systems have been processed. Some studies have been informal pilot studies sampling any data that happened to be ready to hand; others have been carefully designed in terms of sampling. Results of the two types of studies have usually been very similar, suggesting that the aspects of language behaviour under study are highly regular. While it would be false to claim that the studies represent a fully systematic set of investigations, enough has been discovered to make a report of work in progress worthwhile.

The present report concentrates upon the functions of school language in general; effects of the situational variables age, subject and mode (spoken and written); relations between function and form; and implications for curriculum evaluation and student assessment.

Grateful acknowledgment for various kinds of help is made to Canberra College of Advanced Education; to the education authorities of the A.C.T., N.S.W., Victoria and Tasmania; to the Centre for Instructional Design and Curriculum Evaluation, University of Illinois; to the English Department, Institute of Education, University of London; and to the many teachers and students and teachers involved.

FUNCTION

Outline

Function may be given a preliminary definition as what the language is used for in a given situation: the type of meaning it conveys in the circumstances in which it is used. Meaning is defined as the expression of thought and feeling. Thought is analysed in terms of content and level of abstraction. Feeling is analysed in terms of communicative purpose and sense of audience. The functional variables studied are thus content, purpose, abstraction and audience.

Function is analysed by consensus of panels of competent native speakers working on standard definitions illustrated by examples, as in the Language Analysis Handbook (Little, 1983 a). In most of the studies, the analysts have been the teachers from whose classrooms the examples of language in use have been sampled, working in groups under the leadership of trained consultants. The projects have thus mainly consisted of action research in which teachers have analysed and reflected upon proceedings in their classrooms, usually in workshops lasting one or two days. The data is treated as confidential to the participating teachers and schools, but is pooled anonymously to gain a general picture.

Functional analysis produces a set of percentage tables indicating the distributions of various kinds of content, abstraction, purposes and types of communication relationships across a variety of school situations for students of various ages. Such data gives a picture of the kinds of thought and feeling being fostered (or neglected) across the curriculum at various stages of formal education. Language is thus used as a window to view psychosocial processes which are not in themselves linguistic. In linguistic terms (e.g., Halliday, 1978) we gain a picture of the "register" of school language by reference to "field" (in this case school subject and content), "tenor" (relationships between speaker/writer and listener/reader) and "mode" (whether spoken or written, and with what types of communicative purpose and level of abstraction).

A Model

The model of functions of language presented in Figure 1 is based on the premise that we are dealing with a social situation in which a person ("I") is interacting with an environment which is both social ("you") and physical ("it"). These three items are basic reference-points in the analysis.

The basic function of language is taken to be the expression of meaning related to the situation, four aspects of meaning being analysed.

Content is what is talked about: not the words, but what they refer to in presumed reality. Content is analysed by classifying all or a random sample of content words (nouns, adjectives, verbs and adverbs), or as a convenient short cut, nouns only, according to categories corresponding to "I", "you" and "it" in Roget's Thesaurus of English Words and Phrases, with two additional categories: references to persons by name; and figurative language, in which phenomena from one content area referred to in terms from another, as in metaphor. The broad categories of Mind, Society and Matter may be used, or the finer categories into which Roget subdivides these may be used, down to the ultimate 1,000 kinds of things that Roget's system says we can talk about.

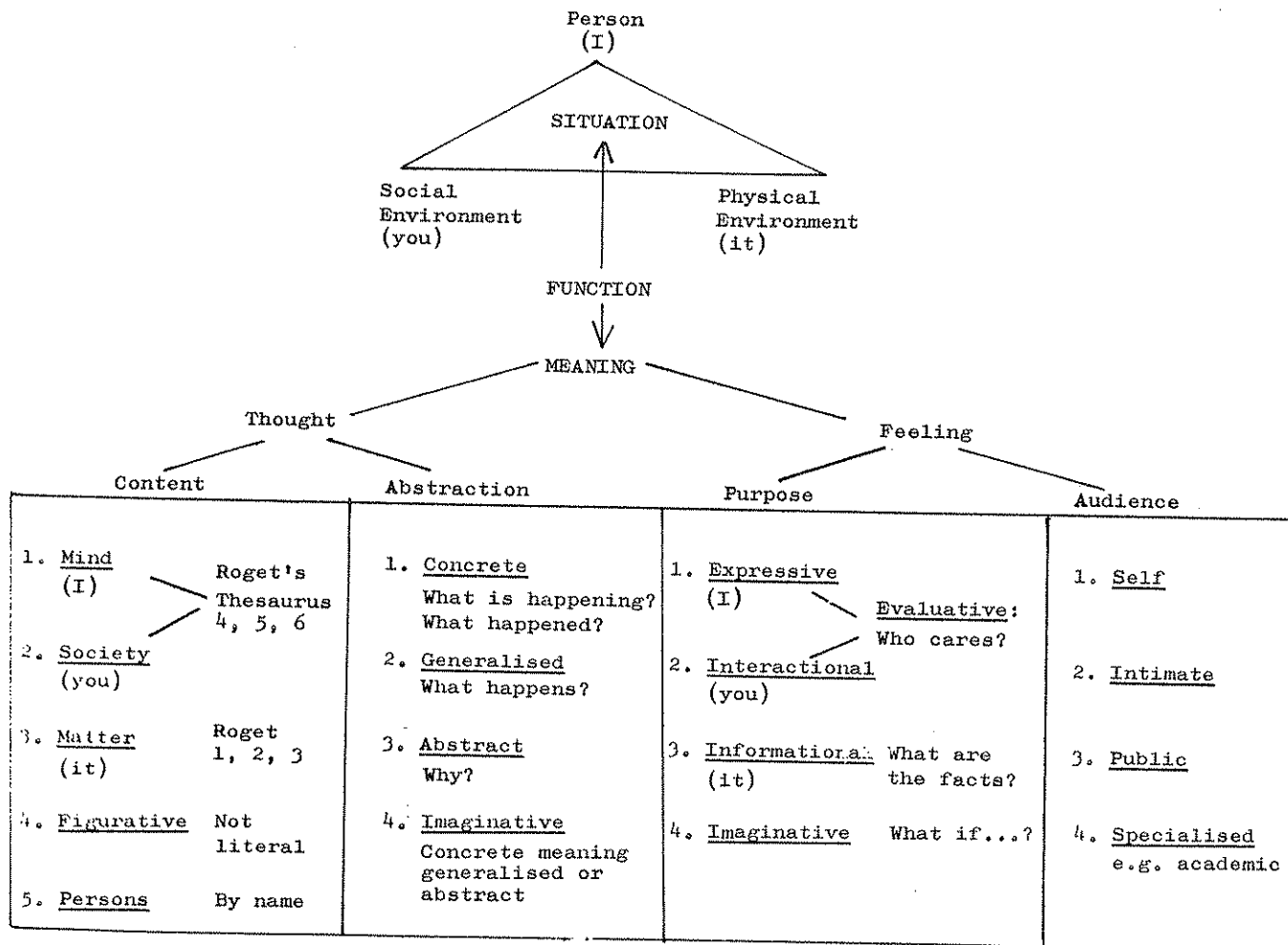
Purpose is the immediate communicative intention of the discourse. There are four basic categories which may be grouped into three. Expressive language relates particularly to the self, as in autobiography or confession. Interactional language has a major thrust towards the audience, as in persuasion or regulation. Because these two types of expression particularly emphasise personal and social values, they may be grouped together as Evaluative, and be described as dealing with the question, Who cares? Informational language is not particularly related to the self or the audience, but concentrates on some other subject, as in an encyclopedia entry. It deals with the question, What are the facts? Imaginative language, unlike the Evaluative and the Informational, is not meant to be taken literally. It may be said to deal with the question What if ...? as in a work of fiction which imagines what it would be like to live in another world, or a poem in which nature speaks to us. While content and purpose are related they are not identical, as a great deal of content in Expressive language may not be about the self, but what the self values.

Abstraction is the level of generality of thought. The main divisions are Concrete, Generalised and Abstract, though further levels may be distinguished within these, as in

Britton (1972) or Biggs and Colliss (1982, in a system for classifying the structure of responses, which is closely related to their function). Concrete discourse can be defined in terms of identifying phenomena in the environment, and recording what is happening; and sequencing events over time, reporting what happened. Generalised discourse can be defined as dealing with categories of events rather than specific instances, generalising about what usually or always happens. Abstract discourse puts up hypotheses about why things happen the way they do. These categories apply in a straightforward way to Informational and Evaluative discourse, but Imaginative discourse presents a different case. In this kind of discourse, what is presented as if concrete carries more abstract meaning as in pointing a moral or dramatising abstract ideas. The Imaginative is thus best treated for abstraction as a class of its own.

Sense of Audience involves the relationship of speaker/writer to listener/reader, and may be dealt with on a "social distance" type of scale recognising audiences as Self as in a diary, or interior monologue, Intimate as in a friendly conversation or letter, Public as in a newspaper or journal, or specialised as in the case of this paper. The main form of specialised audience found in school discourse is Academic, involving the social relationships evident in instruction and testing.

Figure 1. Functions of Language: A Model



Example

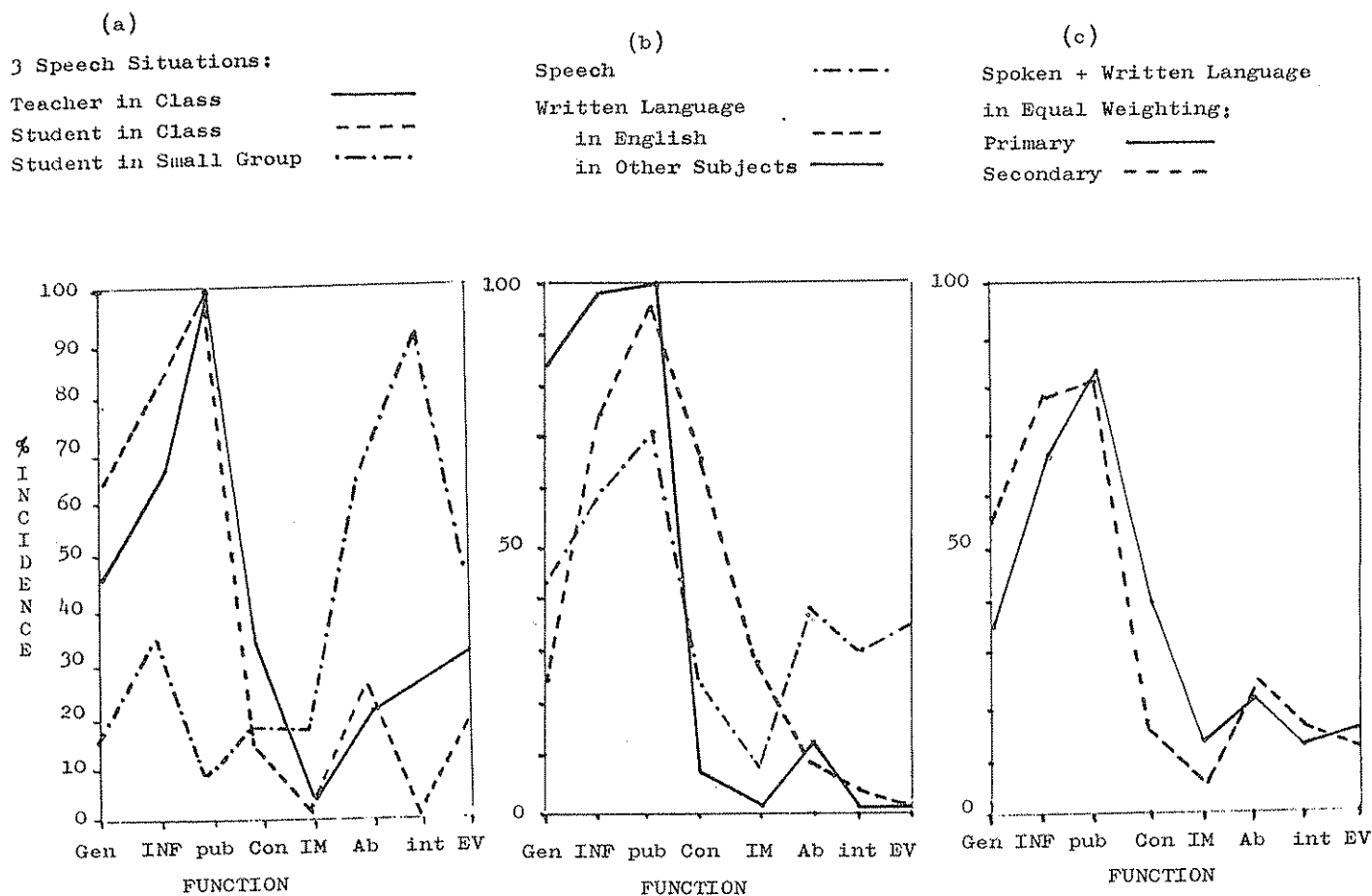
Figure 2 presents results from an unpublished study of the functions of language for 140 students in an Australian education system. Fourteen teachers sampled the language of ten students each; 1. listening to the teacher in class, 2. speaking in class, 3. speaking in small groups dealing with a task set by the teacher, 4. reading and 5. writing sustained, original material (not jottings or copied notes), all of these (a) in the subject English and (b) in other subjects. For primary schools, ages 7 and 10 years were concentrated upon; for secondary, ages 14 and 17.

Figures 2(a) gives the percentages distributions of functions for the three speech situations. Figure 2(b) compares the average for these with written language (reading and writing) in English, and written language in other subjects. This grouping is made in the light of findings that in each subject area, what students read and what they write are functionally very similar. Figure 2(c) combines spoken and written language in equal weighting to compare the functions of language at the primary and secondary stages of schooling.

The aspects of function analysed are grouped with data particularly associated with Information on the left (Gen, generalised level of abstraction; INF, informational purpose; and Pub, public - including academic - sense of audience). Data particularly associated with Imagination is in the middle (Con, concrete or apparently concrete level of abstraction; and IM, Imaginative purpose). Data particularly associated with the Evaluative is on the right (Ab, abstract level of thought; int, intimate sense of audience; and EV, evaluative purpose).

As N = 1400 communications, a 7% difference would be statistically significant at the 5% level for the smaller-number comparisons made, and a 4% difference for the larger-number comparisons (Oppenheim, 1966).

Figure 2. Functions of School Language by Situation



Interpretation

Content analysis was not part of this study, but it is relevant to report from other studies that references to Matter tend to predominate from 60% to 90% - least in speech and most in written language in subjects other than English. Most of the remaining content is reference to Persons by name, and Figurative language tends to figure at only about 1%. Content is thus consistently highly materialistic, and there does not appear to be any consistent difference between primary and secondary schooling in this respect.

For Purpose, Abstraction and Audience in the present study, results may be interpreted as follows. The general trend of the graphs is towards high percentages on the left (Information), low percentages on the right (Evaluation) and even lower percentages in the middle (Imagination). Broadly speaking, there is an 80% leaning towards concrete and generalised information. School discourse thus concentrates on the questions, What is happening? What happened? and What happens?, with a public academic sense of audience.

The trend may be summed up as a strong tendency towards positivism, defined as concentration on public information about concrete and generalised matters of material fact, allied with a tendency to avoid human content, the imaginative, the evaluative, the abstract and an intimate sense of audience. Such a finding is in accord with the dominant curriculum ideology as analysed by Apple (1979), and with prevailing perceptions by students and others of what schools are generally like (Collins 1980).

Positivism does not stand at 100%, however, and there are some notable variations of function with situation.

The written language in subjects other than English is most positivistic. It is almost exclusively informational in purpose, generalised in level of abstraction, and public and academic in sense of audience. Most school time is evidently spent on propositions of the type "6 x 8 = 48", "Water is H₂O", "Wheat, wool and minerals are major products of Australia".

Written language in the subject English is less positivistic. It is still addressed to a public audience (less academic than other subjects, as closer study reveals), but the level of generalisation is distinctly more concrete. This proves to be a matter of concentration on narrative: both literal narrative ("Our Visit to the Zoo") and fiction ("An Adventure in Outer Space"). In the upper secondary school, narrative decreases and generalised information about literature tends to replace it.

Spoken language is the least positivistic. Figure 2(b) presents the average profile for the three speech situations, showing a least a 20% incidence of the abstract, evaluative and intimate - far higher than in the written language. But as Figure 2(a) shows, there are also marked variations in speech situations. Teacher and pupil speech in class are fairly positivistic - though with the pupils engaging in less intimate and discourse than the teachers. What is outstanding is the uniquely abstract, evaluative and intimate nature of small group discussions, which present the only non-positivistic profile of all the language situations studied. It is a common finding in these studies that small group discussions, which are deliberately fostered by their design, present this unique functional profile - in this case with an outstanding 60% of abstract thinking - associated with the evaluative purpose and intimate sense of audience. If it were not for the inclusion of small group discussions in the sampling, the curriculum would emerge as even more than 80% positivistic as a whole. The language of small group discussions is the language of reasoning about subject matter from value positions, and might be represented by the following quotation:

- And the officers in the Corps were angry at Bligh and they arrested him.
- And they hated Bligh because they could see an end to all the easy money they were making, so they arrested Bligh.
- What for? You can't arrest him for nothing, can you?
- They made up the charges.

There are also differences by age. Figure 2(c) summarises functional differences between language in the primary and secondary school samples. As is the case in other studies in the series, age differences are minor compared to differences between situations. The main age difference is the 15% increase in informational language at the expense of the imaginative and evaluative, and the rise in the level of abstraction of information, consisting in this case of

a 20% increase in generalisation and a somewhat lower than usual increase of 3% in higher abstraction.

In summary, functional analysis tends to reveal:

1. A general emphasis on positivism.
2. Variations by situation in which there are three fairly distinct sub-registers of language:
 - (a) Written language in subjects other than English: relatively public, generalised, informational.
 - (b) Written language in the subject English: public, concrete, imaginative.
 - (c) Spoken language, especially in small groups: intimate, abstract, evaluative.
3. Variations by age by way of an increase in the informational and the level of abstraction at which it is handled.

The functions of language which are least represented are as follows:

1. Reference to human content generally, and figurative language especially.
2. The intimate, abstract and evaluative in the written language.

While these trends are general in studies so far completed, there are exceptions.

Individual classrooms have been observed in which language is less positivistic, and one of the survey studies (Little, 1983b) shows that a group of schools deliberately setting out to diversify the functions of language virtually halved the incidence of positivistic language.

Evaluation

As noted, most of the studies have consisted of action research in which teachers have gathered and analysed data in order to obtain a description of language as used in their own classrooms. The description is in itself only minimally evaluative, in the sense that certain items are considered to be worth looking at, and communications are judged to be making one kind of sense rather than another. It has been observed, however that teachers are very ready to bring further evaluative criteria to the data, in view of aims which they and their schools and systems avowedly hold for education.

While teachers tend to agree that the general predominance of positivism can be interpreted to mean that an important function of schools is in imparting information about the material world is being carried out, they also tend to the view that other kinds of mental processes also need to be fostered, in the interests of sound learning of content and of comprehensive language experience and competence. The view tends to be taken that there should be more human content, and that without neglect of the questions, What is happening?, What happened? and What happens?, there should be more emphasis on the questions, Why?, What if...? and Who cares?: across the curriculum and at all age levels. The issues tend to be seen in terms of what is a desirable scope and balance.

A major concern appears to be the dearth of abstract thought modelled in reading material or attempted in student writing, although students show themselves capable of a considerable amount of abstract thought per medium of speech.

Participating teachers have viewed this approach to evaluation very favourably. They find an obvious relevance in data from their own classrooms which they themselves have analysed. They testify that the process of analysis gives valuable insights, and an array of data to which they may apply the criteria appropriate to their own curriculum aims in the context of the situation in which they teach. They find that the data is of diagnostic value in suggesting areas of the curriculum in which desired changes might be sought, and ways of seeking them. They see the same techniques as capable of monitoring progress in this direction. (Little, 1983b).

Functional analysis thus appears to be of value as a method of evaluation of the curriculum through language, using language as a source of evidence about the content and mental/social processes in which students are engaged. It also provides a basis for evaluating skills in the use of language, by analysis of the forms of language used in their relationships to the functions served.

FORM

Form Follows Function

Language competence has been defined as ability to use its forms to serve a variety of functions. This implies changing forms with changing functions, and learning to use a comprehensive range of forms by experiencing a comprehensive range of functions. The principle is not that form follows function does not mean "One form, one function and one function one form".

There are alternatives; if there were not, language could not have evolved and could not be used for learning. Nevertheless, certain forms are more likely than others in carrying out certain functions.

As used here, the term "form" covers both wording and word processing. These will be outlined in turn.

Wording

Wording has been defined as the selection and arrangement of words to serve meaning. Wording includes both semantics and syntax. The following is a model developed during the course of these studies of the more probable forms of wording for certain functions as carried out by competent native speakers.

Model: Function and Wording

| Aspect of Function | Aspect of Wording | | | |
|--------------------|---|---|------------------------|--------------------------------------|
| | Content Words | Other Words | Syntax | Sentence Sequencing |
| Content | Select content words. | | | |
| Purpose | Refine content words for feeling (+, O, -) | Select pronoun for 1st, 2nd, 3rd Person. | | |
| Abstraction | Refine noun and verb phrases for generality of meaning. | Select noun and verb adjuncts. Select connectives. | Select sentence types. | Select types of sentence sequencing. |
| Audience | Refine for formal or informal versions of the above. | | | |

While this is far from a complete model, it at least regards the use of language as a coherent, functional system. Although a full exposition of the model is not possible here, attention can be drawn to some methodological principles and illustrative findings.

Methodology: Wording

Relationships between form, function and situation have been explored in survey studies such as the one reported above (see also Little, 1983b). There are limitations to this approach, however, because some functions do not occur in sufficient quantity to yield reliable data. Therefore complementary studies have been made in which language of a greater variety of functions is deliberately elicited (e.g., Little, 1975).

The following principles underlie the techniques of analysis.

1. The analysis is equally applicable to student listening, speaking, reading and writing, as it is essential that they be compared and contrasted on the same basis if language competence as a whole is to be studied.
2. The first priority is to gain positive information about the actual use of language: what the person does with it in various circumstances, rather than hastening to make judgments on the basis of small samples of a person's language about whether it is up to some average standard (norm reference) or some arbitrary standard (criterion reference). This is largely a matter of purpose: whether the aim is to find out how far the person has come since being born without language (a growth model) or how far the person has to go to get a good place in some competition or attain some ideal (a deficiency model). A functional, growth model is put forward as among other things, more scientific than the alternatives. Such a model can be pursued by the following methods.
 - (a) Measurement of various aspects of language form by simple categories and counting, such as number of words or clauses per utterance.
 - (b) The combination of such figures (i) into ratios such as number of words per clause and (ii) higher-order indices such as changes of clause length in changing circumstances.

Such indices register adaptation of form to function and situation, in accord with the definition of language competence as ability to use the language differently according to different circumstances.

3. If comparisons are desired, they can be made in terms of comparisons of the person's adaptations with those of others deemed to be of interest: for instance age peers or

older people, whether members of the same subculture or some other group. In making such comparisons it is not necessary to assume that everyone should be the same at the same age or that some subculture is in every way superior to another.

Trends in findings

It is not possible to present detailed findings in a paper of this kind, but what appear to be reliable trends can be reported and pursued in the references given, together with unpublished studies to be reported in due course.

1. Form follows function

Even the youngest children surveyed (usually seven year olds) can be observed making multiple changes in the forms of language as they move from one function of language to another. They use different types of pronouns and of noun and verb phrases, by using inflexions and different types of noun and verb adjuncts. They construct different types of sentences by using different types of word order and connectives, and link the sentences together in different ways. They discriminate between situations in which formal or informal language, or emotive or non-emotive language used. These changes indicate that the children are indeed using the language as an adaptive, functional system. What they do with language is remarkable when looked at positively, in contrast to a negative approach which focuses upon what they do not do.

2. Form varies with mode

Even the younger children, like older children and adults, use the spoken and the written language differently, though with some commonality in adaptations of wording to function. Because of the greater contextualisation of meaning, pronouns and demonstratives are used more in speech, as in "This goes round like that". Because of the relative absence of context, the written language has to be more explicit, as in "The big wheel turns anti-clockwise". Thus complex multiple discriminations are made of semantics and syntax in the spoken and the written language, as well as discriminations related to function.

3. Changes of form with changes of function and mode increase with age

With younger children, the forms of spoken and written language and the forms of language of different functions are more alike than for older people. With age, the differentiation of forms in different situations becomes measurably more pronounced. For example, young writers - and competent writers for the young - differentiate between narrative and expository forms, but keep variations of vocabulary and syntax within bounds, as indicated by "Readability" indices (see Gilliland, 1972). Older writers - and the writers they read - differentiate much more between a relatively simple syntax in narrative and a highly complex syntax in exposition. The readability indices reveal a general increase in average complexity of form with age, but as they do not differentiate between language with different functions, they do not adequately register that what is happening is a widening of the range: simple language is still used for some functions, but more and more complex language comes to be used for others. What is significant is not so much the rising average as the greater differentiation.

Such adaptations of language to situation and their increasing differentiation with age towards the adult model are measurable and non-random, and open up new possibilities in the study of language development, pupil assessment, and curriculum evaluation. It is evident that through the years of schooling, young people make remarkable progress in the management of wording according to function and situation, but it needs to be kept in mind that this is within the boundaries of the functions of language which are emphasised in the curriculum: not particularly in the written language of higher abstraction and evaluation.

Word Processing

This term denotes the specifics of listening, speaking, reading and writing as distinct from the general qualities of function and wording. In the present studies, the analysis of word processing has been limited to the written language.

The approach developed to reading is to analyse what students are reading for function and wording, the latter as by "readability" indices to give some indication of level of difficulty as an age or grade norm. Whatever students happen to be reading can then be made the subject of a "Cloze" exercise, in which students supply missing words. Thus the degree of difficulty of normal reading material, and the success with which students are reading it can be assessed on

the basis of the normal work of schools rather than by means of external tests with all the problems of validity and credibility to which they give rise. In pilot studies so far, it appears that much difficulty with reading can be attributed to over-difficult reading matter rather than incompetence of students with reading matter suited to their age according to readability indices.

The approach to writing skills is to focus on the skills as percentages of legible words, words correctly spelt and correct full stops. In the normal writing done in schools, taking note of the situation, function and wording. Illegible writing appears to be extremely rare. The median incidence of correct full stops appears to rise in a growth curve from about 50% at age 7 to virtually 100% at about age 16. From about age 10 onwards, median correct spelling seems to settle at about 98% of words used, noting that this is with an ever-increasing vocabulary as indicated by the number of syllables per word, and that this vocabulary leans more towards terms for the material than the human world ("diameter" rather than "dilemma").

Such an approach places "the basic skills" in the context of situation and function, and reveals very positive development through the school years, though with some limitations which take us back to the content, purpose, abstraction and sense of audience which are characteristic of school language.

CONCLUSIONS

The paradigm shift from traditional analyses of language skills to a functional, growth model draws attention to neglected aspects of language competency, and leads to new techniques in analysis of language use, with implications for curriculum evaluation and student assessment. Much more needs to be done to develop such an approach, but enough has been done to indicate its potential.

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