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PINPOINTING AN ALL-TOO NEGLECTED ISSUE: AUTHORITY AND CERTAINTY,THE UNRECOGNISED FOE

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INTRODUCTION

Exactly 170 years ago, Keats wrote to his brothers, George and Tom, of a certain quality that "went to form a man of achievement, especially in literature ...". Shakespeare possessed it, he wrote, "enormously" and, presumably, it accounted in large measure for his greatness as a poet and dramatist. Keats termed it "negative capability", and defined it as "when a man is capable of being in uncertainties, mysteries, doubts, without any irritable reaching after fact and reason".

So Keats thought "negative capability" necessary in a poet; I believe it is equally necessary that a teacher, especially one concerned with language across the curriculum, should cultivate it. I believe, too, that in present-day South Africa, with its uncertainties and pressures, we should be especially on our guard against an "irritable reaching after fact and reason" (bear in mind the connotations of those words to the Romantics). What I hope to show in the remainder of this brief paper is the appropriacy of our being comfortable with uncertainties, mysteries and doubts, and the sad futility of what we might call the teaching of authority and certainty.

I shall look specifically at an example in Black education for that is where I have been

working, and though the problem there is particularly acute, it is by no means confined to Black education. We all know teachers who espouse a rote-learning/transmission teaching model, who exceed Flanders' classic "rule of two-thirds", who deny pupils opportunities for individualisation and group-work, who interpret questions as a slight on their ability and authority. So let's begin with the question, Do learners learn what their teachers teach?

AN EXPERIMENT IN STD 3 GENERAL SCIENCE

I shall briefly describe the relevant findings of an experiment I conducted in the Threshold Project in April and May this year. It was conducted in a Standard 3 General Science class in Bophutatswana and, broadly speaking, aimed to understand the relationship of teaching and learning in the second-language, subject classroom. The data I shall describe were collected during a lesson on leaves, one of a series in the section Plants and Man.

A crucial problem in classroom research is that no sensible relationship has yet been found between teaching and learning other than the uninformative one that instruction makes a difference, that instruction is better than no instruction. We are forced to the conclusion that access to this indirect relationship is difficult, and that findings cannot be empirically determined, but only inferred, and then only using ingenuity. More of this later.

As part of this process of inference, I aimed to distinguish between (a) what is planned to be taught, and (b) what actually gets taught (or "uptake"). To this end I drew up a Teacher"s Planning Form, which I asked the teacher to fill in before every lesson and (in the vernacular) a Pupil's Uptake form, which with the help of a seTswana speaker the pupils filled in at the end of a lesson.

PUPIL'S UPTAKE FORM, QUESTIONS 1 AND 2: LESSON CONCEPT

Question 1 of Pupil's Uptake Form 1 read, "Ideas: put a tick in the box next to the ideas that came up in today's lesson".

The items presented to the pupils in question 1 were (in the original English):

(a)	Stems grow upward towards the light	(D1)
(b)	Leaves produce food for the plant	(C1)
(c)	Roots anchor the plant in the soil	(EC)
(d)	Roots grow from the bottom end of the stem	(D2)
(e)	Plants that have no leaves do not produce food	(C2)

C1 is the core concept taught during the lesson. C2 is the same concept formulated from a negative point of view. EC is a concept taught during an earlier lesson, and therefore not handled during the lesson in question. D1 and D2 though quite sensible concepts, are distractors.

The responses were distributed as follows:

(a)	(D1)	44 responses	(d)	(D2)	53 responses
(b)	(C1)	38 responses	(c)	(EC)	47 responses
(c)	(EC)	47 responses	(a)	(D1)	44 responses
(d)	(D2)	53 responses	(e)	(C2)	39 responses
(e)	(C2)	39 responses	(b)	(C1)	38 responses

This means that a distractor, (d), scored most highly, followed by a concept not taught during the lesson, (c), followed by a second distractor, (a), followed by the core concept formulated negatively, (e), with the core concept, (b), scoring least of all.

Question 2 read, "Of all the ideas that you ticked in (question) 1, which idea do you think

the teacher most wanted you to learn? (underline it in 1)".

As far as salience is concerned, the results are marginally better:

(a)	(D1)	6 responses	|	(d)	(D2)	16 responses
(b)	(C1)	12 responses	|	(c)	(EC)	15 responses
(c)	(EC)	15 responses	|	(b)	(C1)	12 responses
(d)	(D2)	16 responses	|	(e)	(C2)	7 responses
(e)	(C2)	7 responses	|	(a)	(D1)	6 responses
Unclear		3 responses				
Not coded		1				

A distractor, (d), and the earlier concept, (c), came first and second respectively, repeating the pattern of responses to question 1. Then came the core concept, (b), and its negative formulation, (e). Last was the other distractor, (a). Three responses were unclear, and one pupil did not code question 2.

Chi-squared tests were done on the responses to question 2, and established significance at the 0,05 level. The responses to question 1, of course, are significant at the very highest level.

This, then, can be said to show that the teacher in this lesson failed to establish the concept that the syllabus, the textbook, and his own planning required him to. This pedagogically unhappy result should be read together with the conclusions reached on questions 3 and 4, to which I shall now turn.

PUPIL'S UPTAKE FORM, QUESTIONS 3 AND 4: LANGUAGE

Question 4 of Pupil's Uptake Form 1 read, "Of all the things that you wrote in (question) 3, which thing do you think the teacher most wanted you to learn? (circle it in 3)". Question

3 in turn read, "English: What new English did you learn today? You can write down any new words you learned today. You can also write down new ways of using English".

There were 60 responses to question 3, which were listed in decreasing order of frequency.

COMPARISON OF TEACHER'S PLANNING FORM AND PUPIL'S UPTAKE FORM

Under point 5 (Language) of the Teacher's Planning Form, the teacher wrote that the new language that he intended to teach was:

> Smooth edges, Oval, dorsal and ventral edges.
> Serrated edges.

The teacher can thus be said to have had six target types:

1 smooth
2 serrated
3 dorsal
4 ventral
5 edges
6 oval

Of the six, only five occurred -- in the form of a total of 22 tokens. "Oval" does not occur at all in what will hereafter be called the pupil "corpus", i.e. the 109 lexical words in the 60 responses, derived from questions 3 and 4 of the Pupil's Uptake Form. The tokens were distributed as follows:

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ventral    - 7 mentions
dorsal     - 6 mentions
serrated   - 6 mentions
edges      - 2 mentions
smooth     - 1 mention
oval       - 0 mentions

Total:     22
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The pupils' corpus consisted of 109 words. There were 22 exemplars (hereafter "hits") of the teacher's six target types. That is, 20,18% of the entire corpus.

As low as this percentage is -- given that the teacher specified the six target types as the linguistic aim of his lesson -- it is lower still when one takes into account that more than one hit was made by certain individual pupils. Two pupils account for three hits each; and three pupils for two hits each. A total, then, of 15 pupils account for the 22 hits. This gives a mean of 1,47 hits per scoring pupil. Seen in percentage terms, 15 out of a total of 60 pupils represents 25%. Put another way, only one quarter of the class learned something that the teacher intended them to, and then only an average of about one-and-a-half of the six words. The mean number of hits per pupil, both scoring and non-scoring, is 0,37.

Assuming the ideal situation of every pupil perceiving as salient each of the six target types, we have a potential number of 360 hits. This would be the number of hits in a theoretical "100% successfully taught" lesson. Expressed as a percentage, the 22 hits actually achieved represent 6,11% of this potential. 6,11% then, could be seen as a quantification of the success of the linguistic aim of the lesson.

Further, the top-scoring token, ventral (7), and the token which jointly came second, dorsal (6), constituted what the teacher specified as the subsidiary focus of the lesson, being introduced by the formula, "(Optional) I also hope to handle ...".

In sum, it can be said that what the pupils learned did not remotely approximate what the teacher planned to teach.

Yet the teacher was not a particularly poor teacher; in fact, in some respects he was well above average. But, as interviews with him both before and after the period of teaching made clear, he believes in "teacher-dominated teaching". And that, says Professor Doug Young, head of the Language Education Unit at UCT, is an obstacle to LAC:

> "LAC can hardly begin to work in a teacher-dominated classroom, with no opportunity for individualisation and groupwork, the object of which is to explore and negotiate meanings in the language. (Young, 1986).

EXPERIMENTAL RESEARCH INTO LEARNING AND TEACHING

But research itself, as I said near the start, is not unproblematic:

Stephens (1969) surveyed the history of experimentation on teaching methods in general and found that out of 780 experiments 580 had inconclusive outcomes, and the other 200 had mutually contradictory ones. Dubin and Tarregia (1968), reviewing forty years of research on college teaching methods, were forced to a similar conclusion, even after they had gone to the trouble of going right back to the raw data in each of the experiments reviewed in order to provide comparative statistical treatments. J. B. Carroll, addressing the first meeting of the German Applied Linguistics Association, was reduced to the view that language learning varies in direct proportion to the amount of time devoted to it, and that this is the only reliable relationship that can be inferred from more than twenty years of research experience.(For this summary I am indebted to Dick Allwright of Lancaster University.)

CONCLUSION

Had time permitted, I would have sketched the retreat that has occurred in research into language teaching, from the positivist Colorado, Pennsylvania and Gothenburg Projects of the early and mid- 60s, through descriptive, ethnomethodological research, to non-quantitative, mentalistic research, SLA research, research into the "procedural" alternative, and finally to the interactive perspective.

What I hope is clear is that in both teaching and research there is not place for simplistic, inappropriate and undemocratic approaches. We would do well to avoid scientism, authoritarianism, the doctrinaire; we would do well to cultivate what Paolo Freire calls "a humble conviction".