Innovation and teacher change: an exploratory study of the impact upon TAFE panelbeating teachers of the introduction of student reference notes in plain English

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INNOVATION AND TEACHER CHANGE

An Exploratory Study of the Impact upon TAFE Panelbeating Teachers of the Introduction of Student Reference Notes in Plain English

Submitted in partial fulfillment of the requirement for the Master of Studies in Education from The University of Wollongong

by

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Centre for Studies in Literacy
November 1988
T 374.013
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ABSTRACT

This Study explores the impact on teachers of the introduction of Student Reference Notes in Plain English. The Notes were written for Stage One Panelbeating Students in N.S.W. TAFE Colleges. The study used Naturalistic Inquiry methods to undertake individual and comparative Case Studies of four Panelbeating teachers. The impact of the Student Reference Notes was found to be related in part to the degree to which the teacher's underlying beliefs about learning, corresponded with the 'Wholistic' theory underlying the Notes. The degree to which the teachers had changed their teaching practices was found to be dependent on the quality and degree of the teacher's 'Theorising' or thinking about their practices. The study concluded that teacher-theorising was the most important factor in the process of teacher change. A model of teacher development was proposed from the findings of the study and the implications of the model for teacher development discussed.
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INTRODUCTION

PROLOGUE

In 1986, the School of Vehicle Trades (N.S.W. Dept. of T.A.F.E) introduced a Plain English Policy into their School and to date, it is the only School in the N.S.W. TAFE system to do so. As a result of the T.A.F.E. publication 'Writing Trade Teaching Materials' (Beasley, B and McLeod, J. 1983) the School of Vehicle Trades embarked on a project to write student reference notes in Plain English for Panelbeating students. The writing team consisted of 2 Panelbeating teachers and 2 Language/Literacy teachers from the Dept. of Adult Basic Education. They worked on writing notes for Stage 1 for 6 hours per week, from Term Two 1986 to the end of 1987.

During 1987, draft copies of topic notes were issued to colleges throughout N.S.W. to be trialled with Stage 1 and Pre-Apprentice Panelbeating Students. Teachers were issued with assessment forms designed to give feedback to the writing team on each topic. However, feedback from teachers was not as forthcoming as hoped with only 5 responding in writing.

Teachers' responses appeared to be biased by their attitude to the concept of Plain English for Students' notes. Teachers who approved of the Plain English concept tended to say that the students responded very well to them and that the notes worked well in the classroom. Teachers who were not in favour of the concept of Plain English tended to feel that the notes used 'baby talk', were demeaning to the students and lowering the standard of the course.
The issue came to a head in July 1987 when three members of the writing team were asked to give a talk about the notes to a Mid-Year Conference of Vehicle Trades Teachers. Their talk was soon taken over by members of the audience who were quite hostile in their opposition to the notes. At the time, the researcher was temporarily engaged as a writer on the team and experienced bewilderment at this response from teachers towards efforts to supposedly provide the students with a much needed resource to help them through the theory component of their course. The 'tacit knowledge' (Guba and Lincoln 1982) of the researcher along with subsequent discussions with the writers and teachers, led to the decision to investigate the impact of the notes upon the students and their teachers.

In July 1987, the School of Vehicle Trades commissioned an evaluation of the notes in terms of the students' reactions to them. Forty-nine, first year students out of a state population of 516 (8%) were personally interviewed and the results clearly showed almost overwhelming support (96%) by these students for the Plain English Student Reference Notes (Salter, 1988). From a review of research undertaken within the T.A.F.E. Education System, (Initiatives in T.A.F.E. Index) this appears to have been the first time that students have taken an active part both in the trialling and evaluation of student materials or textbooks, before publication of the material.

This paper attempts to investigate and explore teachers' reactions and use of the Student Reference Notes.
AIM OF THE INVESTIGATION

The aim of this study is to investigate the impact of the new student course notes, written in Plain English, on four Panelbeating teachers. If impact is considered to be the effect and/or influence of the new Notes on teachers, then markers of impact will be changes noted in teachers' beliefs and practices.

OBJECTIVES OF THE INVESTIGATION

The objective of this investigation will be to look at teacher change through individual case studies and explore the following questions:-

1. Did the four teachers undergo any changes?
2. If so, how did their beliefs and/or practices change?
3. Why did these changes occur or not occur?

To further explore question 3 above, comparisons will be made between the teachers in terms of the following questions:-

4. How did the teachers differ in their beliefs and practices and to what extent have these differences influenced how they have or have not adapted to the new Student Reference Notes?
5. Are there factors other than the Notes that may have influenced the teachers to change (Change Agents)?
6. Can curriculum materials designed primarily for students, have an impact on teachers?
Plain English is a form of writing that is clear and easy to understand. While it retains the terminology used by the audience for whom the text is written, it avoids the use of unnecessary jargon and complex syntax or sentences. It is not oversimplified or childish language, but language that respects the needs of the intended reader (Eagleson, 1984b p.5). In Education, Plain English texts set out to communicate with students and respond to their learning needs. Plain English is not just the language used; how that language is sequenced or organised and how it is presented on a page, is just as important (Eagleson, 1984a, p.11). Plain English is also about using clear diagrams, illustrations and tables to help readers understand the text.
RATIONALE FOR STUDY

LINGUISTIC FEATURES AND SOCIOLINGUISTIC IMPLICATIONS OF THE PLAIN ENGLISH STUDENT REFERENCE NOTES

This section gives a brief analysis of some of the linguistic features of the Student Reference Notes and discusses some possible reasons why such material might pose a threat to teachers.

The writers of the Plain English Reference Notes in recognising the interests, needs and capacities of their student audience, have defied the conventions followed by most writers of technical texts. Kress (1985) says that technical language typically has features which not only make texts impersonal but "mystify all the processes (actions) and participants". In most technical language, "abstract entities seem to act independently of human causation" (Kress, 1985. pp.57-58). Many T.A.F.E. Trade students, particularly those of non-English speaking background, the hearing-impaired and those with limited experience of reading and writing, have difficulty comprehending texts because of such features. An analysis of one particular topic from the Plain English Reference Notes shows one-third of the participants in the text to be human, mostly 'you' (Salter, 1987). This frequent use of 'you' gives the text a very informal Tenor; more like oral conversation than the more formal, authoritarian Tenor generally found in technical writing. The use of 'you' also tends to result in the processes in a sentence being active rather than passive, which is perhaps the most dominant feature of Plain English texts.
The text, therefore, in its vocabulary and in its sentence structures, tries to present a written form of language that is closer to the oral form of the technical language used and heard daily by the students. Such a text, therefore, in being more predictable will be more comprehensible for the student-reader than the types of texts usually found in technical textbooks (Halliday and Hasan, 1985 p.161; Smith, 1987 p.81-88).

Technical Education seems to have come to a point where the language of the classroom is much less formal than it used to be and this is the result of social changes; a breakdown of formality between older and younger, teacher and student. Perhaps the problem is not so much that students are less literate now, but that the written language of textbooks has lagged behind the social changes that have led to changes in oral language. Students now seem to have less experience of highly formal or impersonal oral and written language forms and so there is a wider gap between how meanings are expressed orally in the classroom and how meanings are expressed in a textbook or teacher's notes. The reluctance of some teachers to accept student material written in Plain English indicates a desire on their part to resist the trends that our social system and therefore language is taking.
THEORIES AND ASSUMPTIONS UNDERLYING THE STUDENT REFERENCE NOTES AND THE PANELBEATING SYLLABUS

Every textbook is a reflection of a particular theory of learning.

"Textbooks are products of human culture, they cannot escape ideological bias." (Cherryholmes, 1988, p18).

Textbooks tend to reinforce the theories behind a system of education and its curriculums (Cherryholmes, 1988, p18). Is this true of the Panelbeating curriculum and its new student course notes? What are the theories and assumptions behind the Plain English notes and what theories and assumptions lie behind the Panelbeating syllabus?

BEHAVIORIST APPROACH

At the present time, most educational practices are reflections of either Behaviorist/Subskills theories of learning or Wholistic theory. The behaviorist approach realises itself in classrooms, through teaching practices which value subskills learning. Mastery of a skill is believed to be acquired through mastery of smaller units of that skill. These units are presented to the students in a particular order, with the requirement that one subskill be mastered before moving on to the next (Samuels, 1973). A feature of this approach is rote learning and repeated practise of a skill, until mastery or automaticity is reached. Another feature of this approach is that it is teacher-centred, i.e. the teacher takes control of what the students will learn and in what order (Postman and Weingartner 1972 Ch. 6).
WHOLISTIC APPROACH

In contrast, the Wholistic approach, sees learning as a 'whole to its parts' process (Goodman, 1986) i.e. if students are presented with a whole task to perform, all sorts of problems will ensue and in solving those problems the students will have to pay close attention to various parts of the problem. If students are motivated to complete the task then they will engage with whatever needs to be learned to complete that task. Wholistic theorists believe that this kind of learning is more enduring because it involves problem solving on the part of students, and allows them to take responsibility for their learning and direct the course that their learning will take. It is an approach that values what the students bring to their learning, the teacher playing the role of facilitator of the learning process by ensuring an optimum learning environment for the student (Cambourne 1985). This approach demands flexibility from the teacher and the curriculum to allow for student differences.

THEORY UNDERLYING THE PANELBEATING SYLLABUS

The syllabus for the Panelbeating Trade course reflects a behaviorist/subskills approach to teaching and learning. Teachers are bound to a very rigid curriculum to supposedly maintain a common 'standard' across the State. The theory syllabus breaks up learning into subskills or topics and decides the order in which the students will learn these topics and what will be learned within a topic. This seems to happen in practical classes as well - at least in first-year, when students complain that they cannot work on a whole car but spend the year doing practical exercises on samples of metal. The syllabus even sets out the number of hours to be spent on each topic. Externally set half-yearly and end-of-year exams are given to students in
each year of their course, which restricts the teacher's power to be flexible about the order in which topics are presented. Teachers are issued with Teachers' Notes that detail information to be taught in each topic of the syllabus. The above system gives the teacher very little flexibility to allow for students' needs and differing abilities. The manner in which the Panelbeating course is organised does not encourage student-centred learning to take place. It assumes that all students will learn certain tasks within an allotted time. Students who learn more slowly or quickly are not catered for. The course is 'pitched at the median' (Ashurst, 1987, p.33).

Nowhere is there any suggestion that before teaching a topic the teacher find out what theoretical understandings and practical skills a student might already have in that area and adapt the lesson accordingly or even go on to the next topic. This is not to suggest that teachers do not do this, but the system gives little scope for such procedures. It is a system which puts 'covering the topics' before the needs of the students and in this sense it is teacher-centred; the focus being on what the teacher will teach rather than on the needs of the learner. The fact that apprentices are working in trade workshops at least four days a week is disregarded. Apprentices come from a wide variety of workshops. Some learn a great deal at work, others get very little experience, yet the theory course is the same for everyone. This approach, and its underlying theory is not isolated to Panelbeating, but common in many Trade Schools in T.A.F.E. (Ashurst, 1987).
TRADITIONAL FORMAT OF TRADE THEORY LESSONS

Because of the theory underlying the Panelbeating syllabus and the constraints that the highly structured syllabus imposes on teachers, and perhaps even as a result of their teacher training, most teachers follow a similar format when giving theory lessons. Theory takes place in a classroom - not the workshop. The teacher covers the topic by lecturing to the students and by demonstration. The amount and type of questioning and discussion varies from teacher to teacher. Either during or at the end of the lesson the teacher writes notes, usually in summary form, on the board or on an overhead projector (OHP) which the students then copy.

This methodology is very teacher-directed. The notetaking usually takes up a considerable amount of time during the lesson and its value is questionable. Just copying notes from the board does not encourage students to think or become independent learners - nor does it help them learn how to express what they know in writing (Morris and Stewart-Dore, 1987, p. 114-115). Before the introduction of the Plain English notes however, the teacher’s notes were probably the only written resource that the students were given. It has been found, however, that many students (25%) cannot copy notes reliably from the board or cannot read their own writing, making it a purposeless task for them (Salter, 1988, p. 19). For most Trade students, the only time they get an opportunity to write down their knowledge in their own words, is during examinations.
THEORIES UNDERLYING THE STUDENT REFERENCE NOTES

Because the Plain English notes have been commissioned as course notes they reinforce in some respects the Behaviorist theory underlying the syllabus. Each chapter is a topic from the syllabus and the writers are required to cover the content of the syllabus.

In other respects, however, the Plain English notes are at odds with the theory underlying the curriculum and reflect a Wholistic approach to education. Although the structure of the notes says to the student, "this is what you'll learn", the way the notes are written reflects a student-centred, non-authoritarian approach which tends to share knowledge with the student rather than impose it.

The notes are a conscious attempt to communicate with the student and the personal style of language may give the student a more equal status with the teacher-writer than they have with their class teacher. This approach conflicts with the Behaviorist approach in its informality. Some teachers have said that the notes seem to create a more informal atmosphere in the classroom where the students engage more easily in discussion. For an authoritarian teacher who likes a class who just listen and write, this could be very threatening.

As mentioned earlier, there is a great body of evidence to support the 'wholistic' notion that language and learning are inseparable. Central to this theory is that all four forms of our language; listening, talking, reading and writing are equally important in the learning process and that each form of the language helps the other forms to develop. In a wholistic classroom one
would see the students being encouraged to listen, discuss, read and write about what is being learned. However, in a behaviorist classroom students would listen, talk only to answer teacher's questions and write only when copying the teacher's notes or doing tests. The Plain English notes have the potential to provide a vehicle through which (if the teacher chooses) all 4 forms of language can interact. Firstly, teacher and students have something that can be read together and discussed. Secondly, at the end of each topic there are worksheets introduced by a statement which says,

"This is not a test. It is just to see how much you have learned from your class lesson and from reading these notes. You can do it with a partner. Later on you can talk about your answers with the teacher and the rest of the class."

This is an attempt to encourage the students:

a. to discuss the subject matter in class
b. to learn from one another
c. to go back through the text to find information
d. (for some worksheets), to write down what they know in their own words and
e. to use the teacher as a resource - to discuss their answers with
   - to help them clarify their thoughts
   - to help them understand the text.

The authors, by doing this, are showing that they believe that:

a. discussion and talking aids the writing process and the understanding of concepts,
b. peer- learning is an important part of learning,
c. students can be helped to develop strategies for learning and
d. students should be encouraged to write for themselves as learners rather than for the teacher as examiner.

By insisting that the worksheets not be used as a test, the learning process is extended into reading (when students are encouraged to look back through their notes), listening/talking (which helps students learn from one another and the teacher, then clarify their own thoughts) and writing (aided by talking, listening and reading). In contrast, the traditional subskills classroom gives little or no opportunity for students to put their knowledge into their own oral and written language.

In the wholistic classroom mentioned above the teacher is not the sole source of knowledge for the students, nor are they playing the examiner role. An authoritarian teacher who practises only these 2 roles would therefore be challenged, at least by the worksheets, to change his/her role in the classroom. The new notes may also demand new skills of some teachers, namely, helping students with their reading and writing and controlling class discussion. For many this may mean not only changing their methodologies but also their theories of learning. Some teachers may also feel their status being undermined by the fact that the new notes empower the students in the sense that they can now have access to the content of a theory topic before it is covered in class.

The Plain English notes should free the students from having to copy teachers' notes, giving more time for discussion and students' own writing. Some teachers however, may feel unsure about how to handle such extra time.
CONCLUSIONS

It is obvious that the introduction of the new Student Reference Notes for Panelbeating have provided quite a unique situation. The Administration did not set out to try and change the methodologies their teachers use (see Appendix A) rather it was a genuine attempt to produce a better resource for students. But this resource is quite innovative and from the above discussions it can be seen that, even though the notes are intended for student use, they have the potential to pose a threat to a teacher's theory of learning and challenge teachers to change their practices.

An earlier evaluation of the Student Reference Notes done by the researcher, at the request of the Department of TAFE, found that a significant number of students lacked confidence in their ability to read technical textbooks and avoided reading them (Salter, 1988). This must have serious consequences for the Trades in general as it closes an important avenue of learning for tradespersons and makes them dependent solely on 'word of mouth' to keep up with new trends and technologies.

These same students who expressed hostility toward textbooks, were found to have very favourable attitudes toward the Student Reference Notes and actually read them and studied from them. It is important, therefore, that teachers adapt to and support student material written in Plain English, as such material has the potential to help break down the barriers between students and textbooks. The apparent alienation that some teachers feel toward such material, is cause for concern and should be investigated. An understanding of the difficulties teachers may have adapting to new student course notes has important implications for teacher development.
REVIEW OF LITERATURE

INTRODUCTION

In this section, literature will be reviewed in areas relating to this study, namely:

• Literacy and the readability of textbooks
• Language learning in content courses
• Students' attitudes towards textbooks
• Teacher change

THE NEED FOR PLAIN ENGLISH IN TECHNICAL EDUCATION

LITERACY AND THE READABILITY OF TEXTBOOKS

Until recently, research into the reading abilities of Trade students focussed on comparing the students 'Reading Ages' with the readability levels of textbooks. These studies concluded that the reading levels of a significant number of Trade students were below the reading levels of the textbooks (Learmont, 1979). More recently the focus has changed and researchers such as Morris and Cope (1982) are finding that many apprentices who are reasonably competent in reading, still have difficulty with the texts that they are expected to read. They conclude that, "literacy problems in T.A.F.E. college courses are tremendously aggravated by the totally inadequate nature of the print resources provided for apprentices" (Morris and Cope, 1982).
McLeod (1984) also argues the case for improving the readability of textbooks for Trade students, rather than blaming the 'poor' literacy levels of students. McLeod successfully questions the validity of Readability Formulas used to assess the reading levels of Technical texts. Trade students, for example can be very familiar with expressions and long nominal groups that Readability Formulas and the layperson would determine quite complex, e.g. 'The distributor vacuum advance unit control spring is broken' (from the Automotive Engineering Trade). McLeod points out other factors that are more valid in determining the readability of technical texts, e.g. the reader's background knowledge, clarity of the style of writing, organisational features, graphics and typography. The appropriateness of the language for the intended audience is also an important factor, e.g:

"The language that is appropriate for a university science student may place unnecessary demands on the trade apprentice whose main concern is learning practical skills." (McLeod, 1984. p.39)

**LANGUAGE LEARNING IN CONTENT AREAS**

Cambourne (1978), in a study into the processing of textbook prose by a group of tertiary students, who had completed their Higher School Certificate, found that for these students, (whom one would assume to be highly literate), the understanding of technical prose had more to do with lack of exposure to the written and spoken language used in the specialist field they were reading, than some problem they had with spelling or decoding words.

"It seems to have more to do with the learning of both a specialist terminology and a set of special, narrow meanings that words aquire once they become part of a discipline........
Also (a) new learning of semantic and grammatical styles, which are characteristic of any discipline area, needs to be taking place as well." (Cambourne, 1978. p.11)

Cambourne concludes that, "Perhaps discipline specialists have to teach the language of their discipline and what this entails, as well as the content, if their students are to become able processors of the texts they prescribe." (Cambourne, 1978. p.11)

There is now a great body of opinion and research evidence to support the idea that language and learning are inseparable, e.g. in the fields of Wholistic Education, Systemic Linguistics, Language in Content Areas and E.S.L. Education.

"We can be easily led into believing that 'literacy' is one thing and knowledge of a subject is another. But whatever 'subject' we teach it is language that's at the heart of it". (Kemp. p.5)

Most Content teachers and Trade teachers do not see themselves as teachers of literacy in a specialised language (Mealyea 1986, Lutz, 1987). Yet Frances Christie says that if a student has not learned something it is because of a failure of language - a failure of 'talk' between teacher and student. (Christie, 1986. p.5)

Whilst Plain English texts may provide a resource through which students can become more competent language users, Plain English texts on their own are not sufficient. Trade teachers and Content teachers must take on the responsibility of playing a role in their students' language development.
Mealyea (1986) and Hughes (1987) have argued the need for the training of TAFE teachers in the teaching of the language of their trade. In the early 1980's, the Sydney Institute for Technical and Adult Teacher Education (ITATE) incorporated a language and literacy course into their Technical Teacher-training course. The results are slowly becoming evident in our colleges where Adult Basic Education (ABE) teachers are noticing a difference in the attitudes of the more recent recruits to the Trade Schools. Requests from trade teachers for team teaching with ABE teachers are increasing but many teachers still regard the student with a reading problem as the sole responsibility of ABE. Many more teachers don't even refer students to ABE teachers, having what Mealyea (1986) refers to as a 'threshold' view of reading, i.e. that if trade students can't read then they are 'backward'. It is a belief that when a person learns to read they can cope with any kind of text, so if you cannot read a text it's because you haven't learned to read properly. Such people do not see literacy development as a continuous learning process or reading as a process which involves the reader bringing meaning to print rather than getting meaning from print (Smith, 1982 Ch.4). No matter how 'good' a reader is, there will always be texts that they will not be able to comprehend because they have no background knowledge of the particular subject matter of the text.

**STUDENTS' ATTITUDES TOWARDS TEXTBOOKS**

One interesting, yet disturbing finding of Salter's interviews with Panelbeating students was their attitudes towards textbooks (Salter 1988 p.21). Forty percent of the high achievers and 38% of the average students, when commenting about textbooks in general, either felt alienated by textbooks or found them too difficult to read. Out of the 49 students
interviewed only 12 claimed to have the prescribed textbook (as distinct from the Reference Notes) and of these only one claimed to have used it. He was a self-stated, non-reader, who claimed that he liked the photographs in the textbook better than the line drawings in the Reference Notes. He could not read the text in either book.

TEACHER CHANGE

If the impact of the Student Reference Notes is seen as their effect or on teachers, then the markers of 'effect' will be teacher change. Research shows that resistance to change is common amongst teachers.

"No more difficult task besets a teacher than to be expected to change and develop............Teachers are too frequently viewed as nothing more than technicians who implement the objectives of schoolwide curriculum guides and textbooks written by experts." (Galloway, Cort-Seltzer and Whitfield, 1980 p.262)

Rutherford (1986), in analysing 15 years of research into teacher change concluded that teachers' resistance to innovations is largely the result of their being the recipients rather than the initiators of changes affecting their classroom practice. Teachers are viewed by 'reformers' as users or passive consumers "rather than creator(s) of curriculum ideas and materials for the classroom". (Common, 1983 p.203). Teachers who have developed stable ideas about what and how to teach, see reform as a direct challenge to that stability and what they know. Many react by defending the status quo (Katz, 1980 p.83) and regard those who would challenge them with suspicion and distrust.
In the Department of Panelbeating, the Administration assumed teachers would adjust readily to the 'noble cause' of Plain English. Policymakers cannot make these assumptions because not just teachers, but "most highly trained and motivated professionals can suffer some difficulty in modifying style and experience". (Galloway et.al. 1980 p.263)

**TEACHER TYPE AND CHANGE**

Galloway, Cort-Seltzer and Whitfield (1980 p.263) describe change in teachers in terms of 3 stages of growth.

*Accretive growth* is when teachers allow the dominant or administrative forces to control them. They conform unquestioningly to the demands of their superiors.

"The teacher grows within the province of the organisation. Under such conditions teachers withdraw from sharing their own ideas and values - growth takes place through conformity and sameness."

(Galloway et.al. 1980)

*Repetitive growth* is growth that takes the form of imitation and role copying.

"Such teachers change little as new information is made available, desiring to change others rather than exchange with them," or they are teachers who "look for others to imitate."

*Mutual growth* is where an individual teacher has the capacity to affect his or her environment as well as be affected by it:

"A willingness to influence as well as be influenced." (Galloway et.al. 1980 p.263)

This study gives little more than descriptions of observed behavior. There is no explanation of what it is that enables a teacher to move from one stage to
the next, yet the authors claim that the teacher goes through these stages. They do not have any explanation for teachers who resist 'growth' or change.

Ceridwen-Davis (1987) has observed similar behaviors to Galloway, Cort-Seltzer and Whitfield (1980), but does not interpret them in terms of 'stages of growth', rather she sees the behaviors as indicators of the level and type of empowerment a teacher feels and the degree to which a teacher theorises.

Ceridwen-Davis (1987) states that many teachers react to the pressure to change by complying passively with the expectations of their administrators. Such teachers "feel anxious about their capacity to cope and, as if lacking any skill themselves, resort to asking others how to 'do it'. Such teachers feel powerless and inadequate (Ceridwen-Davis, 1987 p.12).

Another equally passive response is to rebel and resist changes "merely because they are new or coming from the 'system' or 'them.'" Such teachers are also powerless because they do not examine the significance of innovations. They react against the system rather than ideas. (Ceridwen Davis 1987 p.12)

Ceridwen-Davis (1987) believes that teachers who theorise, or 'think about their practices' become empowered because they are constantly growing and learning. She describes empowered teachers thus:

"They have an internal sense of their own professional worth and an awareness of what they are doing and why. They are their own authority. This enables them to respond actively to the numerous demands placed upon them, to assess these demands for their
Another factor, discussed earlier in this paper, which seems to influence teacher change, is the theory and methodologies practised by the teacher. The degree to which an innovation accords with a teacher's theory and practices may influence how they react to that innovation.

MARKERS OF CHANGE
Most studies look at teacher change from a behaviorist paradigm, attempting to break up the process into 'stages'. The most common markers of teacher change used by researchers, however, seem to be teachers' concerns and the level and type of use of an innovation. (Rutherford, 1977; Hall and George, 1979; Van den Akker, 1988)

TEXTBOOKS AND TEACHER CHANGE
There has been a great deal written and researched about teacher change, but nothing specifically on the impact of a new student textbook on teachers. Perhaps this is because new textbooks respond usually to changes in curriculum rather than precede such changes; so it is a teacher's reaction to curriculum changes that is investigated by researchers. The situation in the Department of Panelbeating is unusual in that only a new textbook has been imposed on teachers.
Only two studies were uncovered that deal with curriculum materials or textbooks as agents of change in teachers. One study by Van Den Akker (1988) looked at how changes in teaching practice can be implemented through teachers' use of new curriculum materials.

"Some authors seem sceptical about the potential of teaching materials in the implementation of primary science programmes. They have more confidence in the training of teachers in instructional skills and in personal help within the schools." (Van Den Akker, 1988 p.49)

Van Den Akker (1988) concluded that if teachers are given support in the initial stages of using new curriculum materials, this is more effective than Staff Development that attempts to change teaching practices.

A study by Reynolds, Haymore and others (1988) looked at how new teachers change through their use of textbooks. They carried out case studies of 3 English teachers and 3 Maths teachers during their final year of training and first year of teaching. They found that as these teachers grew in their understanding of students and pedagogy, changes occurred in how they used textbooks. One change noted was that initially, teachers evaluated textbooks as satisfactory, then later as needing modification. The second change involved using the textbooks 'as is' to modifying them in some way. They found that the changes new teachers made in their evaluations of textbooks, "were generally initiated by the teachers interactions with students......not by what the teachers learned in their teacher education courses." (Reynolds et.al. 1988 p.25)
In terms of the second change - modification of the text - Reynolds et al. make the point that, "no textbook is perfect for every class or for every teacher." (Reynolds et al. p25) They see a teacher's adaptations or modifications of a text as a measure of his/her growth as a teacher. They found that the pressure of time, constrains some teachers to modify or adapt material. They found that one teacher changed her orientation toward teaching her subject through her experiences using a particular text.

Neither of the two studies just mentioned investigated specifically the role of a textbook in changing teachers. Van Den Akker's study involved teachers in a situation where a new curriculum had been introduced, along with the new curricular materials, to change teachers' methodologies (to enquiry learning). The second study dealt with beginning teachers and looked at how their progress as teachers was reflected in their use of textbooks. Only with one teacher did the textbook appear to be an agent of change.

The context of this present study involves teachers, experienced in teaching and in using particular methodologies, having to adapt to using an innovative textbook that is designed to be part of their lessons (i.e. lesson notes). No research has been done in this area, but the studies by Van Den Akker (1988) and Reynolds et al. (1988) suggest that textbooks do have the potential to influence teachers to change.

What is evident from all the above literature is that teacher change is very complex and it is very difficult to separate factors - they all seem to interrelate. The most workable explanation seems to be that of Ceridwen-Davis, i.e. the notion that 'theorising' empowers teachers to cope with whatever is imposed on them.
CONCLUSIONS

Many arguments have been put forward in this paper supporting the need for Plain English in Trade courses. The success of Plain English, is largely dependent on how effectively teachers use such texts in the classroom. There has been a resistance, however, on the part of some Panelbeating teachers, to adopting this innovation and this is cause for concern and needs investigation. Various areas of research have been looked at in an attempt to understand teachers' reactions to an innovative textbook, but none look at the unique situation that N.S.W. Panelbeating teachers find themselves in, namely, having to use a book with an underlying theory at odds with that underlying their curriculum.

The uniqueness of this situation alone is worthy of investigation but it must also have important implications for Staff Development. The success of an innovation lies ultimately with the teachers using it. Teachers therefore need to be considered. In order to know whether it is possible to help teachers adapt to innovations and how to help them effectively, more needs to be known about teachers. For example:

- Do they have needs that must be catered for when changes are introduced?
- Is Staff Development the answer?
- Is there evidence to suggest that an innovative text on its own, can change teachers in a less threatening manner than Staff Development programs?

This study, in investigating the impact of the introduction of Plain English student notes on teachers, will attempt to explore these issues.
METHODOLOGY

RATIONALE FOR A NATURALISTIC PARADIGM FOR THE STUDY

The methodologies of Naturalistic inquiry were considered more appropriate for this study than Scientific or Rationalistic methodology.

Firstly, the Naturalistic paradigm is considered more appropriate for social/behavioral inquiries, as it assumes that reality is an interrelationship of parts in a whole context. Rationalistic inquiry sets out to observe reality by 'controlling' the environment, or setting up an artificial environment with controlled variables. The Naturalistic approach, however, maintains that human reality cannot be observed in this way, because human behavior "is intimately tied to its time and context. (Guba and Lincoln 1982a p.8)

Secondly, the researcher did not have an hypothesis to prove, but set out to explore possible explanations for observed behavior. When the outcome is unknown, a Naturalistic inquiry is more appropriate because it allows the researcher more flexibility in the gathering of data and allows a theory to develop out of the data collected.

"Within a naturalistic paradigm a design can be specified only incompletely in advance. To specify it in detail would be to place constraints on the inquiry that are opposite to the stance and purpose of the naturalist. The design emerges as the investigation proceeds, moreover, it is in constant flux so new information is gained and new insights are achieved." (Guba and Lincoln 1985 p.73)
Thirdly, Rationalistic inquiry, in its attempts to eliminate human bias, does not allow the researcher to interact with the respondents, but believes that the data should 'speak for itself'. This was considered inappropriate for this study, where the intention was for the researcher to gain a greater understanding of teacher behavior. By interviewing teachers and observing them in their natural settings, a Naturalistic researcher interacts more closely with the subjects and the context, thus gaining more insights into the situation. Interaction with the subjects helps the researcher interpret the data and search for new data. Hypotheses can be formulated and explored as the investigation proceeds. In a Rationalistic investigation however the data to be collected is predetermined and analysed after the experiment has been completed.

CASE STUDY

It was considered that, because this study was an exploratory investigation, detailed case studies of a small group of teachers would yield more qualitative data than more superficial data from a larger group of subjects. Case studies allow the researcher:

"To probe deeply and to analyse intensively, the multifarious phenomena that constitute the life cycle of a unit with a view to establishing generalisations about the wider population to which that unit belongs." (Cohen and Manion 1985 p.120)

Data for the case studies was collected by participant observation and unstructured interviews.
PARTICIPANT OBSERVATION

Collection of data by participant observation has the following advantages:

1. It allows data to be collected on non-verbal behavior.
2. It allows the researcher to gain more intimate knowledge of the environment in which the participants operate.
3. Observations are carried out under more natural conditions than those provided by 'experiments' and surveys. (Cohen and Manion 1985 p.125)

Participant observation data was obtained through field notes gathered during classroom observation and field notes compiled by the researcher on observations made during interviews.

THE INITIAL INTERVIEW

UNSTRUCTURED INTERVIEW

An unstructured interview was considered the most appropriate for this study as the outcomes were unknown and this method allowed the interviewer the flexibility to probe and explore unexpected responses. An unstructured interview is carefully planned but the sequence of questions does not have to be followed rigidly, nor does the wording of the questions. The questions were merely a guide that formed a basic structure for the interview, allowing more probing questions to be asked according to the initial response. Sometimes, when information was elicited from an earlier question, a particular question may not have been asked. Open-ended questions were used most of the time because,

"They allow the interviewer to probe ...... to clear up any misunderstanding. They allow the interviewer to test the limits of the
respondent's knowledge. They encourage cooperation and help establish rapport; and they allow the interviewer to make a truer assessment of what the respondent really believes. Open-ended situations can also result in unexpected or unanticipated answers which may suggest hitherto unthought-of relationships or hypotheses." (Cohen and Manion 1985 p.297)

Most of the questions were funnel-type questions, starting with a broad, open-ended question, then narrowing down to more specific questions. Specific, or probing questions were only asked if incomplete information was gained from the broader questions, or clarification was needed. (see Initial Interview Schedule in Appendix B)

Subjects were all given the same initial interview. Questions in follow-up interviews varied, as they were designed to clarify or probe responses teachers gave to the initial questions.

AIMS OF THE QUESTIONS
The broad aims of the initial interview questions were to answer the following:

1. What types of practices did the teacher engage in and what type of underlying theory did these practices reflect?
2. Was there evidence that the teacher had changed? If so, how?
3. What were the teacher's attitudes to the new student reference notes and having to adapt to them?
4. How student-centred was the teacher?
The interview was divided into four parts:

**PART A** was a briefing about the purpose of the interview and the teacher was asked a few questions about their teaching experience.

**PART B** consisted of questions designed to discover what practices the teacher used in the classroom, how they had adapted to the new student notes and their opinions about using them in the classroom.

**PART C** probed more deeply into the teacher's attitudes towards the notes and the concept of Plain English and the experience of having to adapt to new, innovative student material.

**PART D** asked teachers about Staff Development and their opinions about what might be the most effective Staff Development for the introduction of new student material.

**PART E** consisted of questions designed to discover how aware the teacher was of the students' perspective.

(See interview schedule, Appendix B)

**MAINTAINING CREDIBILITY**

One method of maintaining credibility in Naturalistic research is by using the technique of triangulation. In one sense, this means verifying data by obtaining it from different sources. (Lincoln and Guba 1985 p.305) It was proposed that data would be gathered from interviews with the teachers and from observations of teachers in the classroom. Unfortunately, only one teacher was observed, which has put constraints on the findings of the study.
A further measure undertaken to ensure credibility was Member Checking. This is a technique for checking the accuracy of the interview transcript, and the interviewer's interpretations of the respondent's meanings, by giving the transcript back to the respondent for checking, correcting and clarifying of responses. Three teachers changed and added to the transcripts, the fourth teacher claimed that no changes were needed for his transcript.

A 'peer debriefing' session (Lincoln and Guba 1985 pp.308-309) was undertaken, which required the researcher to present the research data and analytic procedures to a group of knowledgeable but uninvolved peers. Such a procedure ensures that the researcher maintains credibility by having to justify methods used, hypotheses formed and interpretations of results. Peer debriefing forces the researcher to make explicit his or her 'audit trail' (Guba and Lincoln, 1982) so that peers are able to trace back through the data to check the trustworthiness of the analysis.

**PROCEDURE**

**SUBJECTS**

Four teachers were chosen for this study. Time and geographic locations prevented more teachers from being interviewed. The only requirement was that teachers had taught Stage 1 students during the current year (The notes were published in 1988). Most colleges with a Dept. of Panelbeating have only 1 or 2 Stage One classes and visiting one college for interviewing, would have involved a whole day including travel time. The researcher, being a full-time teacher, did not have such time available, so teachers in the two most geographically convenient colleges were asked to take part.
All four teachers willingly agreed to be interviewed, but classroom observations were only able to be done on one teacher. Teacher number 1 repeatedly refused to be observed, and teacher number 3's theory class clashed with the researcher's teaching program. Teacher number 4 was not able to be observed because he had stopped teaching his Stage 1 class before the study was carried out. Because this teacher was involved, however, in the writing of the new notes, it was felt that his responses would be of value to the study.

PRE-INTERVIEW BRIEFING
Before the initial interview, the focus of the study was explained to the teachers. It was pointed out that their identities and the colleges they worked in, would not be revealed in the report.

THE INTERVIEW
Teachers took part in the interviews in their own offices during non-teaching time. Responses were hand written and this method was found to be useful as it gave the interviewer opportunities to seek clarification and check the accuracy of interpretations. The interviews were then typed and given back to the teacher for member-checking. Sometimes further questions were put into the transcript for the teacher to answer. Three teachers were interviewed a second time and asked more probing questions and for a more detailed description of their classroom practices (these were the teachers whose classes were not observed).
The researcher made field notes as soon as possible after each interview. A journal was also kept where the researcher wrote down interpretations of the data gathered and progression of ideas and hypotheses (an audit trail). This was a necessary part of the naturalistic procedure, where hypotheses must be formed as the study proceeds so that new data can be gathered that may not have seemed relevant in the initial stages.

CLASSROOM OBSERVATION
The researcher sat at the side of the classroom and noted the teacher's practices and the students' reactions and behaviors during these procedures. The aim of the observation was to determine teacher type, through observing the teacher's practices. How, and to what extent the Student Reference Notes were used was noted. The students' reactions were observed in order to make some assessment of the effectiveness of what was going on in the classroom; in particular, the amount and type of student-teacher and student-student oral language interaction. The amount and type of reading, writing, listening and talking was noted, to determine the degree to which the classroom environment was 'Wholistic'.

ANALYSIS OF DATA
Due to the fact that data was gathered in an unstructured manner, complete familiarisation with the data was necessary before analysis could take place. Responses were analysed and placed into categories. Some categories into which responses were categorised were preplanned. Other categories were 'discovered' after repeated analyses of the responses. Responses were finally listed under the following categories:
• Types of classroom practices
• Level of use of the notes
• Opinions about notes and Plain English and any evidence suggesting that the teacher felt threatened
• Evidence of the notes being a change agent
• Evidence of other change agents
• General evidence of change - innovations developed by the teacher
  - adaptations
  - teacher’s perceptions of change or development
• Evidence that revealed teacher’s theory/beliefs
• ‘Board notes’ - practices and beliefs
• Teacher’s concerns: student-centred/teacher-centred
• Teacher’s opinions of and suggestions for Staff Development
• Evidence of teacher’s attitude to promoting language development

Each teacher was then analysed according to his responses to these categories. A detailed summary was written and conclusions formed. The categories above, were then refined into another group of categories for which there was enough evidence on each teacher, to make comparisons possible. The Staff Development category, e.g did not elicit enough data to be included. The ‘comparison’ categories were as follows:
• Teachers’ use of Student Reference Notes
• Teachers’ level of use of Student Reference Notes
• Language use in the classroom
• Degree of ‘Wholistic’ approach to learning
• ‘Board Notes’ - use of and beliefs about
• Degree of teacher change
• Teachers’ attitudes to change
• Degree of theorising by the teachers
• Agents of change other than the Student Reference Notes
• Teachers’ concerns about students

Charts were made of the above categories, comparing teacher’s responses. Generalisations were then able to be made and teachers were placed on directional lines in relation to one another. These ‘relational’ lines for certain categories were then compared and hypotheses formed to account for the similarities and differences between the teachers’ relative positions on different categories. An attempt was then made to draw all the data together and a model proposed, based on these final conclusions.
TEACHER No 1: STEWART

Stewart has been a teacher for three years and has taught Stage 1 once before (during his first year of teaching).
This summary has been compiled from interviews. He refused to allow the researcher to observe his theory class.

CLASSROOM PRACTICES
When preparing a theory lesson, Stewart looks through the particular topic in the Student Reference Notes and then makes reference in his lesson plan to any particular section or illustration that could be referred to during the lesson. "I just give them the lesson and use the notes where I think I need to" e.g. where some students need extra help. Sometimes he uses the worksheets, sometimes he gives the students his own worksheets. Some topics have good illustrations that he can use. Other topics have good explanations.
"Every lesson is different - it depends on the topic as to how I might use the notes."
Stewart's lessons exhibit the following format:
Firstly, he gives an introduction, which is a summary of the previous week's lesson e.g. "Last week we did..............." He refers to this as "Linking with the last lesson." When asked why he did this, he replied, "That's what you're supposed to do!"
Then he gives an overview of the lesson he is about to give, followed by a quiz on the previous week’s topic. About 50% of these quizzes are ones he has written himself. The rest are the worksheets at the end of each topic in the Student’s Notes. There is no discussion when they do the quiz - it is a test which he collects and marks after class. When he hands them back to the students a few weeks later, they “go through them and write down the correct answers so they’ve got the right answers to study for revision.”

The teacher then gives a lecture-type lesson with demonstrations and lots of teacher-directed questions. He starts off with simple questions then further into the lesson he gives “rapid fire questions”

“I think of questions that will nurture their thinking. I ask questions that direct them towards the response I want from them.”

He said that the students always ask questions but he asks most of them. In fact he says that he does most of the talking.

During the lesson, he uses the chalkboard to help illustrate his explanations and to write notes that he wants them to copy. He claims that his ‘Board Notes’ are not summaries but “answers to questions they might get asked.” He does not write down the questions, rather he states the question, then tells the students what the answer is and then writes it down. It is not a cooperative exercise, i.e. the students do not help construct the answers.

When asked how his students benefited from copying notes from the board, he replied,

“They learn it twice - they hear it and then they write it.”

Stewart does not like to read through the notes from beginning to end,
because he feels students lose their concentration if they're just reading.

"I cue the students to use the notes and then bring them back into the lesson flow without any adverse effects on concentration."

For Stewart, the 'flow of the lesson' is very important and he mentions it several times. One way he keeps the lesson 'flowing' is through questioning the students. He talked about firing questions very quickly to the students.

"It helps to wake them up and keep them going."

He claims that his lessons are very informal with lots of discussion, yet at another time he said that one thing he has learned is that students "quite often need a hell of a lot of motivation and/or prompting to get them involved in simple discussion."

**TEACHER'S OPINIONS AND CONCERNS ABOUT THE STUDENT NOTES AND PLAIN ENGLISH**

Stewart claims that he feels comfortable with the notes and not threatened by them, yet he feels that some teachers could feel threatened because the student might "lean towards the notes" rather than the teacher's lesson; that they may not listen to the teacher because they know they can get the same information from their notes at home. Some students may study the notes "cover to cover" in advance and this could create a "motivation or concentration problem." These comments suggest that he sees the above as a 'problem' for all teachers including himself. e.g.

"It is up to the teacher to keep their (the students') interest and not allow the notes to become a distractor."

When asked to explain how a teacher could do this he said that there were, "certain teaching strategies" that could be employed, but would not
elaborate.

The following were what he considered the advantages of the new notes for the students:

1. They are well laid out and printed.
2. They photocopy well and therefore make good aids for the teacher.
3. They are up to date with knowledge and illustrations.

He felt that the Plain English policy in his school "should not be a problem - you should consider who you are writing to." He believes that the style of writing changes according to whom the person writes. He does not think there is anything wrong with the language in the notes. He said that some teachers say that the notes are too simple and therefore not helping students read the more complicated language on tools or material in the workshop. His solution: the manufacturers of such things should change to Plain English.

STUDENT-CENTRED RESPONSES

Stewart did not express any concerns about the notes in terms of the students. He said that he relates very well to students. He described his lessons as very relaxed, "like in a lunchroom at work." He mentioned only one instance however, that revealed a concern on his part for the students as learners:

He gives marks to the students for their weekly revision tests and then examines the marks to see which students are "having problems." These marks are not official assessments, but just to see whether the students have learned the topic. Then "I help them with those areas." It was pointed out
that the student's mark would be for the whole topic, so how did he find out exactly where the students were having problems? His response was, "By observing all the time."

When asked how he felt about the notes when they were first introduced, he replied, "Great! Something new to help me." Then he paused, and as an afterthought said, "and them (the students), I suppose I should say them."

**TEACHER'S PERCEPTION OF CHANGE**

Stewart claimed that the new notes had not caused him to change his style of teaching - they were just a new component that he could add to his theory lesson. The question, therefore, of agents other than the new notes influencing Stewart to change was not relevant.

When asked what factors or people had had the greatest influence on how he teaches, he stated that he teaches according to what he learned from his teacher training course and from other people, especially his Special Methods Tutor, who gave him lots of encouragement.

**DISCUSSION**

It was very difficult to obtain data which revealed Stewart's beliefs about teaching and learning. He did not seem to like being asked to elaborate on his statements and was not explicit about his beliefs. His comments about how he teaches, however, indicate that he has the following beliefs:–

1. He believes students learn by paying attention to the teacher and staying 'on task.'
2. A good teacher does not allow something like the lesson notes to
become a distractor.

3. A good teacher is one who gives a good 'performance.'

4. When something new is introduced, "a good teacher adapts and changes things or uses what he needs for the topic."

5. A good teacher has total control over the direction that a lesson takes, by keeping the students interested and when they lose interest, by asking them questions.

Only once in the interview did Stewart make a statement that could be described as showing concern for the students as learners. He preferred to talk about the 'model' teacher. This is revealing in that it shows him to be very teacher-centred rather than student-centred. His comments about how he questions his students confirm this. He asks questions to direct the students to the response he wants from them. In other words, he upholds the behaviorist belief that students' brains have to be filled up with knowledge. He believes that a teacher can direct and control what students are thinking. In contrast, a 'wholistic' teacher believes that a student must take responsibility for learning and that a teacher cannot predict what a student will attend to or learn. The data suggests that Stewart's questions would be the, "Tell me what I'm thinking" type rather than the, "Tell me what you're thinking" type.

His use of the worksheets as tests is also a reflection of a subskills approach. He ignores the clearly-stated aims of the worksheets which are that they be used for discussion and student revision. He sees learning as what has been remembered of what was said in class or studied at home. He does not see learning as a process that students go through.
Teacher's feelings of power

Stewart has not allowed the new student notes to play a significant role in his lessons. He only uses the notes to fit his purposes. He is the centre of the lesson and the notes are more like a teacher's aid than students' notes. He prefers to be the one to relate the content and only uses the student notes if they happen to have good illustrations or a better explanation than he can give. None of his comments could be interpreted as 'theorising' i.e. thinking about his methodologies or practices.

'Board Notes'

Stewart believes that notes copied from the board are a method of reinforcement (another subskills approach).

"It makes them learn it twice; they hear it, then they write it."

His notes are not extra information or summaries, but answers they might get asked in the tests. At first it would seem that this would be an activity that would help students with their study, but the fact that only the answers are written down and not the questions, makes their value as study notes questionable. The notes serve an immediate purpose of reinforcing what has been said, rather than serve the students in the long term with their study.

CONCLUSIONS

Stewart's classroom practices do not encourage the students to use their reference notes for learning or study. He does not seem to see this as part of his role. He feels secure in being the primary source of knowledge for the students. He is not using the notes as student reference notes. Encouraging them to use the reference notes may well be a threat to his power and control. He retains his power and control by only using the notes when it
Stewart appears very secure and confident about his methods of teaching and therefore does not want to change. To accept the new notes and their underlying theory would mean undergoing a dramatic change in his teaching style and practices.

Although Stewart feels very powerful over his students, he has little sense of 'empowerment' as a teacher. He could not be explicit about many things, which indicates that he has not theorised about his teaching practices and therefore cannot justify them. He is a very dependant teacher. He follows the curriculum rigidly and he teaches the way he has been 'taught' to teach. There is no evidence that he questions the 'system' or his teaching practices. Nor does he seem to have made any reflections on himself as a learner and applied this knowledge to his teaching.

TEACHER No 2: JOHN

John has been a Trade teacher for 7 years and has taught Stage 1 for 6 of those years. The data below was gathered from an interview and an observation of one theory lesson.

CLASSROOM PRACTICES

John's normal lesson procedure is to introduce the topic by asking the students questions that elicit definitions of the technical words in the topic. Then he gives a lecture on the topic combined with demonstrations and
when he finishes a particular section he puts some notes about what has been said on a screen, using an overhead projector (OHP). His notes are typed onto OHP sheets. The students copy these notes into a book or into a folder. During the observed lesson it was noted that the students interrupted the teacher constantly during his talk. The teacher was not threatened by this. After his introduction he made no efforts to engage the students in discussion, by questioning them - there was no need to as the students continually asked questions. They asked information-seeking questions, e.g. "Do they both have the same effect?" and questions to clarify their thoughts and interpretations, e.g. "So you just put a thin film over it?". The students presented other possibilities that the teacher had not mentioned, e.g. "What if you put it on thick?" and a few times the teacher was challenged, but not in an aggressive manner, e.g. while the teacher was describing a certain procedure, a student said, "They do it with brass now." to which the teacher replied, "Yes, that’s the latest technology" and proceeded to describe that particular process.

The students were very attentive during the lesson and although constantly commenting and asking questions, were not disruptive. There were 3 students in fact, who kept anticipating what he was going to say next and would say it before him. Overall, there was a very comfortable and constant interaction between the teacher and most of the students during the lesson.

John only uses the Student Reference Notes and worksheets for revision, either at the end of the lesson or at the beginning of the lesson the following week. The teacher has an OHP copy of each page of the notes which they go through. Normally John does not read the notes word for word as "it takes
too long." He picks out the important parts of the notes and uses them as discussion points. Sometimes a section is read, but if he does not read a section or a page, he will give them an overview of what is there e.g. "This page is about the safety side of it." They discuss most of the illustrations - "They're excellent - save handouts." During the observed lesson the students showed little interest in this 'revision' part of the lesson. There was considerably less input from them compared to their input in the 'lecture part of the lesson. When the students did the worksheets, some worked in pairs but most worked on their own, then their answers were discussed. There was no attempt to help students who needed it, write down a correct answer - the answers were just discussed orally. The teacher did not check their answers, but earlier in the lesson he walked around and checked that they were copying his 'board notes' correctly.

In the observed lesson, the students spent between 20 and 30 minutes of the 2 hour session, copying teacher's notes ('board notes'). These notes were poorly set out, assuming the students were capable of filling in many gaps in meaning, e.g.

"**Fluxes** Bakers soldering fluid is a manufactured flux, commonly used. Prepared tinning paste, e.g Kemtex. Killed spirits which is prepared by dissolving zinc in hydrochloric acid until it ceases to bubble."

About 10 to 15 minutes was spent going through the Student Reference Notes and doing the worksheets. The teacher claimed however that he normally spent more time on the notes than this.

One night a week, John has a class of students repeating Stage 1 Theory. He team-teaches this group with an Adult Basic Education teacher and the
format of this lesson is quite different.

"I use the Reference Notes all the time. I give them the lesson objectives (main headings from the syllabus) and get them to answer them from the notes ....... At first they couldn’t do it on their own, but now they can. They know it all, but didn’t know how to get it all out of their notes."

ADVANTAGES OF NOTES FOR THE STUDENTS

- John felt that student performance had improved with the introduction of the new notes. "They seem to handle writing things out better through doing the (worksheets)." They now do a worksheet every week, where they didn’t before.
- They are very good for non-English speaking background students.

ADVANTAGES OF NOTES FOR THE TEACHER

- They are good for revision.
- He finds them helpful when preparing lessons.
- The illustrations are excellent and save making handouts.
- The notes have some value for initiating discussion.

CONCERNS ABOUT THE NOTES

- Sometimes the notes are too simple - they go overboard.
- They may "make it harder for students to read textbooks."

PERSONAL REACTIONS TO THE NOTES

"I don’t feel threatened by them, but at first I didn’t know how or when to use them. It’s all very well to talk about them."
He stated that the way he used them could be better and when asked to elaborate said, "It's just a feeling." Later he said, "I could use them a bit more or a bit better, it takes time........... I'll get a bit more involved when I feel more confident with them."

Even though he and his colleague (an author of the notes) share similar views about how topics should be taught, and he agrees with the way they have been written and sequenced he regards them as "someone else's lesson notes."

**PLAIN ENGLISH**

John had some background knowledge of the Plain English movement. He expressed an awareness of the use of language to establish power over others, and he expressed the view that communication is more important than using 'correct' or complicated language.

**TEACHER DEVELOPMENT**

John was not specific about how to help new teachers use the Student Reference Notes. He thought they would need,

"A lot of guidance. Coming in cold to teaching you have enough trouble with your own notes, let alone somebody else's."

**TEACHER'S BELIEFS**

- John believes that students learn from copying down notes. He said that he would not like to use the Reference Notes as lesson notes because he believes that the students get more out of notes if they have to write them down, than notes just given to them.
- John does not make any reflective comments about his teaching practices,
but he does not feel comfortable about the lesson notes he gives the students to copy - he feels that they need updating and modifying. He believes that he could use the notes "a bit better and a bit more" and is confident that this will happen over time, as he becomes more familiar with them.

TEACHER'S PERCEPTION OF CHANGE

• John has not changed the main part of his lesson. The new notes and their worksheets are like an appendage to what he has always done.
• John considers that what happens in his 'repeat' class, is for him quite new and innovative.
• He has changed in that he now notices language more and stated that a Staff Development he attended 3 years previously influenced him in this regard.
• He believes that he will change how he uses the new notes in time.

AGENTS OF CHANGE OTHER THAN THE STUDENT REFERENCE NOTES

• The fact that John works with one of the authors of the Student Reference Notes could possibly influence him to change or make him feel that he should change.

"(Bill) and I tend to think along similar lines, so the notes are close to the way I do things - they fit into my way of teaching e.g. how they're laid out etc. (But) I wouldn't like to use them as lesson notes".

• An experience that he feels influenced him a great deal, was a Staff Development he attended on Plain English.

"They gave us lots of practical examples - things from textbooks to rewrite. This was good. It made me aware of it …..It's made me more conscious of language. Any teachers who write exam papers should do
this course.

DISCUSSION

'Board Notes'

John claimed (during the observed lesson) that he now only gives notes about content not found in the Reference Notes, but a comparison of the notes given in the observed lesson with those in the Reference Notes, found that most were a repetition of information found in the Reference Notes.

John believes that students appreciate notes more if they have to write them down, but this conflicts with what Panelbeating students say (Salter, 1988 p.19) and with what he does with his students in the 'repeat' class. If copying notes is a worthwhile activity, then why doesn’t he make the repeating students do it? Why doesn’t he make them use his lesson notes as well as the Reference Notes if, as he claims, not everything is in the Student Reference Notes?

John’s third justification for giving the students 'Board Notes' is that it gives him a break in the lesson; time to think about what he will say next. There is probably a need for this in a 2 hour lesson but John needs to reflect on the educational value of students spending such a large proportion of the lesson time copying written text.

Teacher change

John has undergone few changes in his daytime theory class, but seems to be going through some 'intellectual unrest' about his teaching practices. The notes do not appear to be a threat to his underlying theory and he does not
express any hostility towards them, but he nevertheless feels uncomfortable about the way he uses them. At the moment he is playing safe by using them and the accompanying worksheets as a revision activity at the end of the lesson. He has a 'gut feeling' that this is not working and classroom observation revealed that the students were not as involved in this part of the lesson. He seems reluctant to change and is avoiding it by 'stalling for time', even though he sees the need for change.

This reluctance is understandable when John's lessons work well for him and his students, but there is more to it than this. He related how the Plain English Staff Development had had an impact on him, changed the way he viewed language and even made him rewrite a test paper. This knowledge has made him realise that his 'Board Notes' need improvement, yet in the 3 years since he has gained this knowledge, he has not changed them.

John will probably not change any further until his 'unrest' about how he uses the new notes becomes unsettling to the point where trying something new takes priority over whatever it is at the moment that is preventing him from changing. It is interesting to note that in the class where he team teaches with an ABE teacher he has undergone considerable changes in practice and role. Perhaps he is a teacher who needs the support of his peers to help him change.

He sees his role in the repeat class as one of helping the students develop literacy skills. The activities these students engage in involve reading for information and putting their thoughts into writing. Why doesn't he do similar activities with his daytime class? He does not seem to feel that these
students need such help.

John is a teacher who operates on 'gut feelings'. He did not express any explicit beliefs about why he engages in certain teaching practices. There was no evidence of him 'theorising'. He said at one point that he could not explain why he was not happy about the way he used the notes - "It's just a feeling". The fact that he does not feel threatened by the notes, however, suggests that his underlying beliefs are somewhat in tune with the theory underlying the notes.

**TEACHER No 3: RICHARD**

Richard has been teaching for ten years and has taught Stage 1 Panelbeating for about eight of those years. The data below was taken from teacher interviews. Classroom observation was not possible as the time of Richard's theory class clashed with the researcher's teaching program. He was however, quite happy to allow the researcher into his classroom.

**CLASSROOM PRACTICES**

Before each lesson Richard cross-checks his lesson notes with what is in the new Student Reference Notes. If he feels that the student's notes cover all the syllabus objectives for that topic then he only uses them in the lesson. If anything is missing, (and sometimes he thinks there is some content missing) he gives the students extra notes that they write down either into a 'theory book' or onto a sheet of paper.

In the theory lesson, Richard and the students read through the notes and he
explains things as they go. The students copy notes from the board, usually extra content not found in the notes.

"I feel stupid if I write something on the board and it's already in the book."

Sometimes, however, he will give them a summary of the whole lesson, which they copy into their note books.

The students then do the worksheets at the end of the topic notes. When they have finished they discuss the answers and the teacher ensures that they all have correct answers to the questions. The teacher sees this as a revision activity.

TEACHER'S OPINIONS OF THE STUDENT NOTES AND PLAIN ENGLISH

Richard feels that the Student notes would be better if they covered everything because then the students could study from one source. He is concerned that students when studying, might not link the notes he has given them on a topic, with their student reference notes on the same topic.

He said that his students seem to like the way he goes through the notes with them and they like doing the worksheets.

"They can see how much they’ve done, they feel they’ve achieved something."

He sees two advantages of the notes for the students. Firstly, "the more advanced student has the whole year's work there and can study in advance." Secondly, the language and illustrations "must help some students," (i.e those who are inexperienced readers)
Richard does not feel threatened by the fact that students have access to information through the notes and therefore might 'know it all' before a lesson. He in fact encourages them to read the notes before a lesson but comments that very few do so.

Richard feels that there is not enough writing in the worksheets. He said that the students "have a lot of trouble writing down what they know" and now that they don't write as many lesson notes, they don't do enough writing and this is not preparing them for the final exam. "There should be more in the worksheets."

He sees the notes as an attempt to solve the problem of explaining the terminology of the trade to the students,

"Most teachers realised there were problems (in understanding terminology) before the Plain English notes and could explain things. The Plain English notes are sometimes too simple and a bit embarrassing. I don't think the journeymen would use them."

(journeymen are experienced tradespersons who are attempting to gain formal qualifications in their trade by attending night classes ). He later commented that, "With terminology used in the trade; I think that most teachers would detect material that required highlighting or constant reinforcement to assist students."

Richard does not think that the new notes have made any difference to student performance, "If students want to learn, they'll learn."

He criticised the worksheets that are Cloze-type exercises with a list of suggested answers. He thinks that these particular worksheets are too easy
and that students should be encouraged to look back through the notes.

**TEACHER'S BELIEFS AND 'THEORISING'**

Richard theorises in the sense that he assesses the effectiveness of what he does in class, on his students.

"When I first started using the Plain English notes, I read through them during class. Then one day I took them up to see if they'd done the worksheets."

He found that most had attempted some of the worksheets, but many were left blank and some had the wrong answers. So now he makes sure that they discuss them and have the right answers.

He sees one of his roles as helping develop his students' language and literacy. He not only has an awareness that as a teacher he has to help students understand the terminology, but,

"Our trade is more practical. Students don't like theory. But I think they should learn to read better." In their trade they need to read trade journals, "workshop manuals, insurance company correspondence and forms, data sheets with alignment information and general correspondence..............I am more concerned with their total self development, than turning them into 'lowly' tradesmen."

He is concerned about his students' literacy e.g. "They have a lot of trouble writing down what they know." When asked what he did with the students that he thought was innovative, he replied, "Helping them with their worksheets."

Before the introduction of the Plain English notes Richard said his lessons
were "Talk, Show and Write." His manner of saying this suggested that he was not happy teaching this way and found it monotonous. Although he has changed the format of his lessons he does not perceive that his role in the classroom has changed or that he has had to undergo any changes in his 'theories'. Perhaps this is because the new format he uses is more compatible with his underlying beliefs.

There was no evidence from the interviews that any agents, other than the new student notes, had influenced the changes that Richard had made to the format of his lessons.

DISCUSSION
The format of Richard's theory lesson has undergone a significant change, with the introduction of the new student notes. Rather than incorporate the notes into his 'talk, show and write' procedure, he has instead made the notes the core of the lesson and adapted his practices accordingly. In this new format, his students would read more and possibly discuss more. There is less copying of 'board notes' and more writing-to-learn activities than previously. He has changed the lesson notes he gives the students to copy out - generally only giving content that is not in the Reference notes, or a summary. That Richard has done this shows that he is a teacher who 'theorises' or thinks about the teaching practices he uses and has attempted to solve the problem of incorporating the new notes into his lessons.

Like many Trade teachers, Richard believes that students learn from the act of copying written notes.

"It helps them learn - they might not 'take in' all that's said"
He does, however, have conflicting thoughts about the usefulness of his notes as study aids for the students. e.g. He is concerned that when they are studying, they might not know where his notes fit into the Plain English notes. He said that they should write lesson notes, but also said that the Reference Notes were what the students would read at home. He sees his lesson notes, therefore, not so much as a study aid but as an activity that helps the student understand what has been said in class and as an activity that helps to improve their literacy. When talking about 'Board Notes' versus worksheets, he does not distinguish between the two types of writing that students engage in, namely; copying and writing down their own thoughts e.g. he says that now that the students do less copying from the board, there should be more in the worksheets to compensate for this. But having to put thoughts into writing is quite a different process to copying a written text, the latter being a very questionable learning activity (Morris and Stewart-Dore 1987.p.114-115).

Richard's criticisms of Cloze-type exercises, with a list of suggested answers, conflicts with his ideas about the value of copying 'Board Notes'. In this instance, he believes that if students just copy answers from a list, they are not learning as much as when they have to think of the answers themselves or look back through the notes. More information about how students can read and write to learn may help this teacher, firstly, to be aware that his ideas conflict, and secondly, to find ways of resolving the problem.

Richard does not just see himself as a teacher of content. He sees himself as a teacher of the language of his trade and also as a facilitator of the students' literacy. His ideas about writing, however, show a lack of up to date
knowledge of how written language is learned and of the relationship between language and learning. Because this teacher has 'theorised' about such matters, more information may well cause him to 'rethink'.

This teacher sees his responsibilities going beyond the rigid confines of the syllabus. He does not passively follow the curriculum. Neither has he accepted the Student Reference Notes without question even though he is generally in favour of them. To some extent, therefore, he is empowered as a teacher.

If Richard believes that the Student Reference Notes have made no difference to student performance - then how useful are they? He seems to think that the notes are a good idea, yet firmly believes that students who want to learn, will learn regardless of the resources they have and regardless of how literate they are. He acknowledges that many trade students have problems with literacy, yet does not seem to be aware that for some students, inexperience with the written or oral forms of the language does restrict their opportunities to learn and express what they know. He does not see the potential of the Reference Notes to help such students.

There is evidence to suggest that Richard has a tendency toward a 'wholistic' approach to teaching rather than a 'subskills' approach:

- Firstly, Richard's responses revealed a very student-centred teacher who expressed many student-centred concerns. The new notes do not seem to be at odds with his teaching practices, yet he does seem to see the introduction of the notes as a reflection of a lack of confidence by the administration in his, and other teachers' ability to explain the language of the trade
effectively. He does not seem to object to the idea of course notes for students, but has reservations about the extent to which the notes have been 'simplified'.

- Secondly, the fact that he encourages the students to read the notes before class, shows that he does not see himself as 'the source of all knowledge' for his students.
- Thirdly, the fact that Richard believes that helping students with their worksheets is an innovative practice, is interesting. It implies a change in his thinking; a change from using this kind of activity for testing (a subskills approach), to using the activity for the purpose of helping students with the process of learning (a 'wholistic' approach).

**TEACHER No 4: BILL**

Bill has been teaching Stage 1 for most of his 8 years as a Trade teacher. For the last 2 years, he has been one of the authors of the Student Reference Notes. The data below is taken from interviews. As he stopped teaching a Stage 1 class before the study was undertaken, it was not possible to observe how he used the notes in the classroom.

**CLASSROOM PRACTICES**

Bill begins his theory lesson by writing headings from the syllabus on the board and then asking questions "to get all the information from (the students)." He tries to help them construct points which are as short as possible, which they then write down. "They write as we go along." He finds that they usually know quite a lot about the topic already, which makes it easier for them to construct a summary together. He attempts to present
Plain English to the students in the 'Board Notes' e.g. instead of writing the syllabus heading 'Process' he changed it to 'How the Cutter Works'. He tries to make these summaries as short and to the point as possible because "A lot of the time they don't know what they're writing, so I try to give them short, sharp and sweet notes."

After completing the summary or overview, the students open up their Reference Notes. The teacher puts up OHP sheets of the pages from the book and they read through them. As they do so they underline and add to the notes and Bill says this takes quite some time because he continually relates back to his own experiences.

They then do the worksheets. He says that because most of the students are of non-english speaking background, they have a problem writing down what they know, so he makes them struggle with writing down answers by themselves first. "It really gets the old grey matter working!" Then they discuss the questions and he writes down answers on the board. As in the summaries, he tries to keep the answers short and simple because he has found that they remember such answers more easily and quote some of them word-for-word in the tests.

TEACHER'S PERCEPTION OF CHANGE
Bill admitted that the new notes had brought about considerable changes in his teaching style and practices. Before his involvement in authoring the notes he claimed that he thought that his lesson notes and 'Board Notes' were "pretty good." Now he thinks they were dreadful. "They were long-winded and had a lot of unnecessary stuff............I used to give them pages and pages
of writing - not enough discussion." Before the Reference Notes, "All I worried about was getting everything on the board." Now this writing time has been replaced with more discussion. He finds that "spontaneous discussion just comes out of using the notes."

He claimed that because of the new notes, he now enjoys teaching more, "It's not so hum drum, there's more variety." He has found that spending more time in discussion has helped him get closer to the students. He claimed that before the Student Reference Notes, "We (the teachers) were all following like lambs to the slaughter. We didn't question any of the old stuff."

**ADVANTAGES OF THE REFERENCE NOTES FOR THE STUDENTS**

- Bill stated that the students are learning more, now that they have the Reference Notes. He had a double class earlier in the year and their marks were much higher than for previous classes. He feels that the reason they are learning more is that it is a lot easier for them, with the plain language, and therefore they can enjoy it more. He found that the students he had this year were more interested than groups he has had previously. "They're not just dummies or robots writing things down." He also believes that this improvement in student performance and interest, has a lot to do with the changes in his teaching methods as well.

- Bill thinks that the worksheets are excellent because they make the students write down what they know in their own words and this helps their writing to develop.

- He feels that the new notes give all students "an even chance" or equal opportunity to learn, because the information is presented in a manner that is easier for them to understand.
ADVANTAGES OF THE NOTES FOR THE TEACHER

Bill has found that the Reference Notes have given him more time to discuss things with the students and "you get closer to the students this way; having more discussion." Discussion just seems to happen spontaneously with the notes.

PERSONAL REACTIONS TO THE NOTES

Bill claimed that he had never felt threatened by the notes, but at first, he was apprehensive about how to use them and also apprehensive because of the negative feedback he was getting from other teachers.

WIDER CONCERNS

- Bill approves of the Plain English Policy within the School of Vehicle Trades, but is concerned about the fact that it is being implemented in different ways in different departments.
- He is also concerned that new teachers are learning things in their teacher training course that conflict with the philosophies of Plain English e.g. he claimed that they are expected to use complex language and 'jargon' in their lesson plans.

TEACHER'S CHANGE PROCESS

Bill, when he started using the notes was getting "a lot of flack" about them from other teachers and unsure how to use them himself. He felt he needed his colleagues to help him so he invited some of them to watch him give a lesson. Later, when they discussed the lesson, he told them that he was not happy with it and his colleagues told him that there was too much talking.
So "the next week, I gave abbreviated notes - short points- and it worked much better. The difference was amazing!" Having this experience helped him sort out the difficulties he was having.

**AGENTS OF CHANGE OTHER THAN NOTES**

The incident mentioned above, indicates that Bill's relationships with his colleagues has helped him to change. It is the researcher's opinion that Bill's weekly contact with ABE teachers has also influenced him to change. Whilst the notes were being trialled, Bill and his colleague would discuss, every week what they were doing in the classroom and the problems and successes they were having. The two ABE teachers responded by analysing what they were doing and 'theorising' about why things were working or not. They in fact did a lot of 'indoctrinating' but more importantly probably helped Bill to clarify his own theories, and theorise about his practices.

Bill's experiences as a writer must also have influenced him to change. This experience also gave him a commitment to making the notes work in the classroom.

**DISCUSSION**

**Teacher's beliefs**

- Bill believes in the value of discussion for learning and does not feel threatened by spontaneous discussion.
- He believes that he must play a role in helping the students with their literacy and studying at home.
- He feels more comfortable with the way he teaches now and uses more student-centred, 'wholistic' methodologies.
• The data shows that he is prepared to take risks, experiment, invite criticism and share what he does with others.

• Bill's practice of jointly constructing a summary with the students at the beginning of the lesson reflects a 'wholistic' rather than 'subskills' approach to teaching. Theorists would claim that this practice not only tunes the teacher into what the students already know, or how they are thinking, but helps students engage with whatever is being discussed. Underlying this method is a respect for the student and his/her knowledge.

  "I never start with input - how better to communicate that the learners do not know much of significance? Input happens when people have got their own thinking mobilised and there is purpose in them listening; that way their questions may be addressed and their current thinking challenged............How better to maximise the possibility of engagement with new ideas, than by clarification of old ones." (Ceridwen-Davis 1987 p.23)

• As well as the strategy above, he also has a strategy for helping the students engage with writing, namely, making them attempt to put their thoughts into writing by themselves before he helps them with the task. He calls it "getting the old grey matter working." This activity like the one above gives the student a chance to show or clarify what they know and respects their knowledge.

• Bill believes in relating theory to the practical world of the workshop as much as possible - another strategy that shows a concern to help the students understand.

• He believes that if students are given information that is easy to understand, then they have "an even chance" to learn. He also believes that learning is more enjoyable and more interesting if the language used is clear
and easy to understand. He uses Plain English in every part of his lesson.

**Teacher Change**

- When Bill began to write the Student Reference Notes, he knew nothing about Plain English. He was engaged as one of the content 'experts'. His experiences on the writing team have very likely played a major role in influencing the changes he has undergone.
- His openness and willingness to share with his colleagues and ask their advice has, in his opinion helped him find ways of changing.
- His ability to theorise has also contributed to the changes he has undergone. Because Bill is conscious of having changed, he is able to be explicit about the process he has been through. The other teachers in this study were not able to be explicit about such things.
ANALYSIS OF RESULTS

TEACHER'S PRACTICES

How did the teachers in this study change their practices with the introduction of the Student Reference Notes?

<table>
<thead>
<tr>
<th>STEWART</th>
<th>JOHN</th>
<th>RICHARD</th>
<th>BILL</th>
</tr>
</thead>
<tbody>
<tr>
<td>- As needed during lectures - uses them intermittently as a teacher's aide</td>
<td>- Uses notes at the end of lesson as revision - not part of the presentation of content.</td>
<td>- Notes used as basis for lesson read through, discussed and added to.</td>
<td>- Not used in introduction.</td>
</tr>
<tr>
<td>- Uses about 50% of the worksheets as tests. Marked then discussed.</td>
<td>- Worksheets done as revision then discussed - not used as tests.</td>
<td>- Worksheets done as revision then discussed - not used as tests.</td>
<td>- Notes used as basis for body of lesson.</td>
</tr>
</tbody>
</table>

The level of use of the Student Reference Notes in the classroom was seen as a marker of the degree of change in a teacher's practices. Table 1 shows that Richard and Bill's level of use of the Notes is about the same in that for both, the notes are at the core of their lessons. For John, the notes are only used for revision and for Stewart, the notes are used in a fragmented way throughout the lesson. In relation to one another, they could be placed as in Figure 1.
Whilst this study has not suggested how the Student Reference Notes should be used in the classroom, or to what extent, it is interesting to note that the degree to which the teachers use the Notes in their theory lessons is related to other factors and markers discussed later in this chapter.
<table>
<thead>
<tr>
<th></th>
<th>STEWART</th>
<th>JOHN</th>
<th>RICHARD</th>
<th>BILL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>READING</strong></td>
<td>- Very little of lesson notes read in class.</td>
<td>- Read some of the notes - skim through, read sections</td>
<td>- All notes are read during class</td>
<td>- All notes are read during class (+ writing and discussion)</td>
</tr>
<tr>
<td></td>
<td>- Worksheets (no talking)</td>
<td>- Worksheets (some discussion while writing)</td>
<td>- Teacher's notes (no discussion)</td>
<td>- Teacher's notes copied down (+ reading)</td>
</tr>
<tr>
<td></td>
<td>- Teacher's notes</td>
<td></td>
<td></td>
<td>- Add to student notes (+ discussion and reading)</td>
</tr>
<tr>
<td><strong>WRITING</strong></td>
<td>- Small amount of teacher's notes copied down</td>
<td>- Teacher's notes copied down (+ reading)</td>
<td>- Teacher's notes copied down (+ reading)</td>
<td>- Topic summaries jointly constructed by class (+ discussion and reading)</td>
</tr>
<tr>
<td></td>
<td>- Answers to revision tests (no talking)</td>
<td>- Worksheets (discuss with peers while writing and reading)</td>
<td>- Worksheets (+ reading and student—student discussion)</td>
<td></td>
</tr>
<tr>
<td><strong>LISTENING</strong></td>
<td>- More listening than talking</td>
<td>- Listening very much linked with student—teacher discussions</td>
<td>- More listening than talking</td>
<td>?</td>
</tr>
<tr>
<td><strong>TALKING</strong></td>
<td>- Lots of teacher talk and teacher—initiated questions</td>
<td>- More questioning by students than teacher.</td>
<td>- Discuss worksheets (+ reading and writing)</td>
<td>- Lots of spontaneous discussion whilst reading, writing and listening</td>
</tr>
<tr>
<td></td>
<td>- Less student questioning</td>
<td>- Lots of student—teacher interaction</td>
<td>- A few students occasionally ask questions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Discuss revision tests (+ writing)</td>
<td>- Some student—student discussion when doing worksheets</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2 shows that in Bill's classroom the four forms of language interact more closely than in any of the other classrooms. This is a major feature of the 'Wholistic' approach, where students are given opportunities to use all four forms of language simultaneously, each helping the others to develop.

In contrast, Stewart's classroom provides few opportunities for the students to engage in meaningful discussion - most of their talk being in response to the teacher's questions. Very little writing-to-learn takes place and very little opportunity to read, compared to the other classroom environments.

John's class engages in more oral language interaction than Richard's. Students in both classes engage in similar writing activity, however, in Richard's classroom there are more opportunities for the students to read.

Figure 2 shows how the teachers relate to each other in terms of language use in the classroom.

<table>
<thead>
<tr>
<th>Fragmented / Unequal Use of Language Forms</th>
<th>Some Whole Language Activity</th>
<th>WHOLISTIC Language Forms Used Simultaneously</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEWART</td>
<td>RICHARD</td>
<td>BILL</td>
</tr>
<tr>
<td>( more reading )</td>
<td>( more oral language )</td>
<td></td>
</tr>
</tbody>
</table>

Figure 2
Degree of Wholistic Approach to Learning
IMPACT OF THE REFERENCE NOTES ON 'BOARD NOTES':

This section looks at a particular practice which all four teachers used before the introduction of the Student Reference Notes; namely giving the students notes commonly called 'Board Notes', to copy down. It is a very traditional practice used across the Trades and many teachers are judged according to the 'quality' of their 'Board Notes'. The Student Reference Notes seem to have challenged this particular practice more than any other used in the Trade classroom.

This study anticipated that the level of use of the Notes in the classroom would be the most significant marker of change and that the teachers' practices might help to explain this level of use. The significance of 'Board Notes' was not anticipated, yet how the teachers adapted to the challenge that the new notes made to 'Board Notes', was found to be very enlightening. It was an observable factor which related closely with what appeared to be happening in terms of the teacher's theories and beliefs.
Table 3 shows that Stewart, Richard and John all share the belief that copying notes from the board is a valuable learning exercise. Bill claims that before the introduction of the Reference Notes his main concern was "getting it all down." Until this time, he did not question what was expected of him. The Reference Notes, and his involvement in their production challenged him to evaluate his practices and use of 'Board Notes.' He felt a responsibility towards making something he had helped produce, work in the classroom.
John's case is interesting in that he expressed the fact that his 'Board Notes' needed updating. He no longer had justifiable reasons for using them in the traditional manner, yet persists, because he is not sure what to do as an alternative and lacks information that might help him find an alternative. Richard is more flexible than John and has adapted his 'Board Notes'. John, however uses the same 'Board Notes' and is reluctant to change them. This may have something to do with the fact that they are permanently enshrined on OHP sheets.

Richard is able to justify everything he gives the students to copy down. This is a dominant feature of Richard's behavior. He 'theorises' and has a justification for everything he does in the classroom. The problem is that he bases some of his ideas on outmoded theories and lacks up to date knowledge of how people learn.

For Stewart, the Reference Notes have not challenged his use of 'Board Notes' mainly because he uses them very little. This is an example of Stewart's coping with the 'threat' of the notes by largely rejecting them. By not placing much value on the notes and using them as little as possible, he can safely carry on as always.

Only Bill seems to have solved the problem of 'Board Notes' in a manner that is educationally sound, fits in with 'Wholistic' theory and most importantly, that he feels comfortable with. He has been able to do this because of his need to talk about his practices with others. Listening to how they theorised about what he did in the classroom, no doubt, encouraged him in turn to theorise. The summary below attempts to show how the teacher's use of
'Board' Notes correlates with other factors investigated in this study. Some of these factors will be discussed in more detail later, but it is interesting to see the connections at this stage.

Bill
- **Has totally changed** and adapted his 'Board Notes'
- **Has undergone more changes** in beliefs and practices than the other teachers.
- Theorises about his practices - **open to change**
- Contact with others has helped him develop and change.
- Student - centred.

Richard
- **Has adapted his 'Board Notes'** to the new notes - but it is still his language that the students copy down.
- **Has adapted his teaching practices** to the new notes.
- Theorises about his practices - **open to change**, but lacks knowledge and contact with others.
- Very student - centred.

John
- **Board notes unchanged**, but not happy with them. Reluctant to change.
- **Reluctant to adapt** to the new notes. They are an appendage to what he has always done, yet he feels he should use them more.
- Operates on 'gut feelings'.
- Student-centred.
Stewart: **Board notes unchanged.** Happy with this practice.

- **Teaching practices unchanged** - fragments of new notes incorporated into lesson.
- No gut feelings expressed. No evidence of theorising.
- Teacher-centred.
TEACHERS' BELIEFS AND THEORIES

Stewart operates from an underlying behaviorist theory so for him, using the notes in accordance with their underlying wholistic theory, would involve a much greater change in teaching practices than the changes that the other three teachers would have to undergo.

There is evidence to suggest that Richard and Bill were not happy being subskills-type teachers and therefore the transition has been easier for them. Stewart and John, although different types of teachers are quite happy about the way they teach. For Stewart, there is an unwillingness to change. For John, his more student-centred ideologies are putting pressure on him to change, but he is reluctant to face the challenge. He feels insecure about changing something that works for him, whereas Stewart just doesn't want to change.

Figure 3
Comparisons of Teacher Change and Attitude to Change
DEGREE OF THEORISING AND TEACHER CHANGE

It has been easy to see the differences between Stewart and Bill, however John and Richard seem to fit vaguely in between. There is one piece of data from each of them, however, which gives a clue to the major difference between them. For John, it is a statement he made when justifying still using his 'Board Notes', even though he felt he should change them. For Richard, it was a statement justifying why he uses the new notes the way he does.

John stated that he had heard of a student who said to his teacher, "How come we have to write all these notes when it's already in the book?" He then said, "My students have never questioned my notes", implying that his notes therefore must be OK. He has no explanation for why they haven't complained and has therefore not theorised about it. Ceridwen-Davis (1987) says that, "just because (students) like doing something doesn't mean they're learning - you must be sure about what they're learning from the activity before you consider whether they 'will do it' or 'will like it' The criteria used to decide upon the worth of an activity, worksheet or whatever, must be "tough and explicit" to the teacher. (Ceridwen-Davis 1987 p.22)

Richard, when justifying why he used the notes in a particular way made a statement that in some ways is similar to John's. He said that the students liked doing the worksheets and reading through the notes because they could actually see that they had achieved something. Whilst Richard has not theorised about this to the extent that Ceridwen-Davis would approve, he nevertheless didn't stop at saying, "they like doing it this way". He had theorised, or found an explanation as to why it might be so. He needs to go
further however, and theorise about why students might learn more from this procedure than from some other procedure. Figure 4 shows how the teachers relate to one another in terms of theorising or ‘thinking about practice’ and parallels this with the degree to which the teachers have changed.

Figure 4
The Relationship between Teacher Theorising and Teacher Change

If wholistic practices are considered to be more educationally sound than subskills practices, then Figure 4 supports Ceridwen-Davis’ belief that, "the better the thinking about practice, the better the practice." Unless teachers think about practice they "won’t learn from experience" (Ceridwen-Davis 1987 pp17-18) The degree to which the teachers in this study have changed is closely related to the degree to which they theorise.
Up to this point the four teachers in this study have remained in the same relative positions in relation to one another. But there are two criteria under which their relative positions change. These are:- student-centred concerns and agents of change other than the new student notes.

**STUDENT-CENTRED CONCERNS**

It is considered that the subskills approach to education is teacher-centred, whereas the wholistic approach is student-centred. (Postman and Weingartner 1972 pp86-99). The degree, therefore, to which a teacher expresses student-centred concerns can be considered a marker of his/her underlying ideology. Figure 5 shows how the teachers relate in terms of student-centred concerns.

![Diagram of teacher concerns](image)

**Figure 5**
Comparison of Teacher's Concerns about Students

Richard's comments during the interviews were almost all student-centred. He expressed far more student-centred concerns than Bill. This would suggest that his underlying theory is closer to that underlying the Student
Reference Notes than for any of the other teachers. Why is it then, that Richard has undergone less change than Bill? Perhaps the answer lies in each teacher’s exposure to agents of change other than the Student Reference Notes. Table 4 summarises these influences.

**TABLE 4.**

**AGENTS OF CHANGE OTHER THAN STUDENT REFERENCE NOTES**

<table>
<thead>
<tr>
<th>STEWART</th>
<th>RICHARD</th>
<th>JOHN</th>
<th>BILL</th>
</tr>
</thead>
<tbody>
<tr>
<td>- None</td>
<td>- None</td>
<td>- Staff development</td>
<td>- Member of team of authors of student notes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Staff development</td>
<td>- Weekly contact with ABE teachers with whom he discusses practices</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Colleagues in his department share resources but otherwise 'keep to themselves'</td>
<td>- Weekly contact with ABE teachers with whom he discusses practices</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Team teaching with adult basic education teacher (ABE)</td>
<td>- Discussion and sharing with colleagues</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Contact and sharing with an author of the student notes</td>
<td></td>
</tr>
</tbody>
</table>

Table 4 provides an explanation as to why Richard has not changed or developed as much as Bill. If Richard had been exposed to the same influences as Bill, then perhaps he would have undergone more change. Why is it though, that John has not changed more than Richard? The results suggest that exposure to agents of change is not enough. John does not theorise as much as Richard, nor is he as student-centred in his concerns. These results confirm that a teacher needs to theorise in order to learn from experiences and new information.
RECAPITULATION AND DISCUSSION

BILL What he does in the classroom is more educationally sound in terms of the wholistic approach to education. The most likely cause of this was his involvement with the Plain English writing project and contact with ABE teachers which gave him new knowledge and awareness. He values discussion with his students, but does not seem to have theorised about the links between the four forms of language, nor does he seem to realise how 'wholistic' his classroom is.

RICHARD Richard theorises about his practices more than Bill and is more student-centred than any of the other teachers. Yet he lacks knowledge that would help him teach in a more wholistic manner. Richard is a teacher already using information and experience to help him change and develop, but he is probably stifled by the environment that he works in.

JOHN John does not appear to theorise but operates on 'gut feelings'. Some of his practices are more wholistic than Richard's, but he has not theorised about them. During the lesson observation, in fact, he apologised about the students' talkative behavior, not realising how much learning was being expressed through such behavior. John needs to experience an environment that will help
him engage with theorising. Until he begins to do this, new information and experiences will have little effect on him.

Stewart has an underlying theory opposed to that underlying the Student Reference Notes and therefore is naturally resisting the challenges they present. In order for Stewart to develop as a teacher he needs to concern himself less with 'being a good teacher' and more with helping his students be 'good learners'. He therefore needs to undergo a shift in ideology.

These case studies show that every teacher is a complex individual. Their needs in terms of development are quite different. Bill, John and Richard seem to have had a predisposition towards the wholistic approach to teaching and its underlying ideologies. To change teachers like Stewart would mean attempting to change their ideologies - a very tall order and one which it is doubtful traditional staff development could fill.
LIMITATIONS OF THE STUDY

• The lack of classroom observations for three out of the four teachers studied, restricted the conclusions that could be made about teacher's actions and intentions. Teacher's intentions can be teased out of interviews, but observed actions of teachers are necessary to reveal the relationship between what they espouse and what they practise. More data on this should give support to the model proposed in this study. (See Figures 5a & 5b)

• Not enough data was gained in this study, to explore the sociolinguistic impact of the Student Reference Notes. This was most likely due to the fact that no teachers were included in the study who were overtly opposed to the notes.

• The results of this study show clearly that changes in teachers' theories and practices occur over time. This study is limited in that it analysed teachers on the basis of data gained at one particular point in time. Longitudinal studies are perhaps more appropriate when looking at a process of change. The process of carrying out a Longitudinal study, however, would most likely encourage a teacher to theorise and thus be, in itself, an agent of change.
CONCLUSIONS

This study has highlighted the varying needs of the developing teacher. Teacher's actions and their intentions (what they espouse) are in a perpetual state of dialogue and tension. If teachers are not aware of this and explicit about it, then they act on 'gut' feelings. If teachers cannot articulate a theory that led to a 'gut' feeling e.g. "That was a good/bad lesson" then they will not learn from their experiences. (Ceridwen-Davis 1987 pp.18-19) For teachers to bring their intentions and practices closer together and to develop more explicit theories, or change to a more wholistic approach to teaching, they need experiences that will help them theorise. If teachers do not theorise, the influences of their environment are not directed toward pushing their intentions closer to their practices, nor towards a more explicit theory (see Figures 5a & 5b).
Case A – The Teacher Who Theorises

Teacher's Intentions

Explicit Theory (Wholistic?)

Teacher's Practices

Overlap of circles
Varies from teacher to teacher
Moving Circle = Teacher Change

Teacher intentions moving toward a more explicit theory.

Practices moving toward intentions

INNOVATION (New Textbook)

TEACHER'S ENVIRONMENT

Figure 5a
The Influence of the Environment and 'Theorising' on Teacher Change
Case B – The Teacher Who Does Not Theorise

![Diagram showing the influence of the environment on teacher change.]

**Figure 5b**
The Influence of the Environment and 'Theorising' on Teacher Change
Figures 5a and 5b encapsulate the findings of this study and give a model of teacher change quite different to that found in other research on teacher development. It is a model that is closely aligned to the ideas of Ceridwen-Davis (1987) and Cambourne (1979). The textbook is seen in the model, as a vehicle for change and environmental influences as catalysts of change, in the presence of 'theorising' and a new innovation.

The following section will attempt to propose possible environments that might fit into the model (Figures 5a & 5b) and encourage teachers to theorise and improve the quality of their theorising. In other words, what types of activities or teacher environments might best promote teachers to make explicit their theories and bring their intentions and their practices into closer harmony?
IMPLICATIONS OF STUDY

The model proposed in this paper presents a challenge to those sections of Educational Institutions responsible for teacher development.

Teacher Number 3 in this study (Richard) is an example of a teacher who, if more informed, would most likely resolve the problems and challenges he faces in the classroom more effectively. Teacher Number 2 (John) however, is an example of a teacher who has been exposed to a more 'informed' environment than Teacher Number 3 yet has not developed his practices to the same extent. This study suggests that traditional Staff Development, involving sessions of lectures that serve merely to inform teachers, will not necessarily cause teachers to develop.

The study clearly shows that no matter what the resources or curriculums a teacher is required to use, they are ultimately in control and take responsibility for the changes they resist or undergo. Educational institutions therefore need to give the responsibility for teacher development back to the teachers; not teachers in isolation, but groups of teachers. Ceridwen-Davis claims that teachers must become 'empowered' in order to develop and Staff Development should take place amongst equals.

"Teachers who talk together about their practice find that the exchange of ideas and information can be mutually empowering when they share equal and important insights into student learning."

(Ceridwen-Davis, 1987, pp. 15-16)
Recent research into teacher development favours co-operative learning environments. Galloway, Cort-Seltzer and Whitfield (1980) state that the optimum climate for growth and development is one where there is "trust, respect and communicative access" amongst teachers within a school or Department.

"In order to enhance teacher development we must focus on teacher to teacher relationships and exchange. When teachers learn to value and trust each other in their day-to-day working relationships, the stage is set for other aspects of staff development." (Galloway, Cort-Seltzer and Whitfield, 1980)

Such an environment empowers teachers and provides a setting where they will be open to challenges from agents of change.

What are the possibilities for those who would seek to change teachers' underlying ideologies? If it is accepted that teachers as individuals and groups must take responsibility for change and growth, this can only happen in a non-threatening, supportive environment. Changes in ideologies cannot be imposed. The environment being proposed here for effective teacher development is in most respects similar to the optimum learning environment proposed in the Wholistic approach to Education, but one important factor is missing.
In the co-operative learning environment mentioned above it can be seen that teachers would have ready access to learning through talking, listening and reading. It is proposed that, in order to encourage teachers to engage in quality theorising they need to do more than listen, read, talk and even think about their practices. If language and learning are inseparable, then writing must also take place. Howard (1987) places great importance on the power of writing to help a 'gut feelings' teacher become a teacher who theorises. He believes that writing about teaching experiences, forces a teacher to reflect on their theories and practices and also encourages them to seek out new information from students, peers and authors of Educational literature. He also believes that collaborative writing amongst teachers is a valuable vehicle for exploring and discovering new ideas.

Smith (1982) states that "writing changes our thinking in far more endurable ways than just reading/ listening/ talking/ thinking," and this belief is being realised in more recent teacher development courses that set out to change classroom practices, through engaging teachers in activities which challenge their beliefs and encourage them to reflect on these challenges through Journal writing. (e.g. the Centre for Studies in Literacy, University of Wollongong and the South Australian College of Advanced Education [Comber, 1988 ] )
In conclusion, for teachers to develop in effective ways they must firstly engage in quality theorising. In order to do this they need to be well informed or have information that will challenge them to theorise. They also need an environment that encourages risk taking and innovation without fear of 'failure'; where they can share their failures, problems and successes with others and get constructive, informed and supportive feedback. Lastly, they need to be encouraged to write about their practices and discover the power of writing to 'empower' them as teachers. In such an environment, a new challenge such as an innovative textbook, will cause teachers to engage in quality theorising and thus develop as teachers regardless of whether they accept or reject the challenge placed before them.
REFERENCES


APPENDIX A

LETTER TO TEACHERS RE TRIALLLING OF NEW

STUDENT REFERENCE NOTES
DEPARTMENT OF TECHNICAL AND FURTHER EDUCATION

Head of School's Unit

COLLEGE: ........................................
DISTRICT: ......................................
H.O.: ...........................................

Telephone: 217 3400
Ext. 3301

As you are aware 1987 is the year Plain English will be introduced to the Stage I Panelbeating Course.

This year a team of four, comprising two panelbeating teachers and two trade education teachers have been working on student notes and worksheets in Plain English.

You will notice a number of important changes:

* The suggested order of lessons has been changed.
* The student notes cover the lesson objectives.
* No attempt has been made to tell you how you should teach your lesson. You may wish to add more information to the notes,
* The notes are easy to read and there is a worksheet for each lesson.
* The worksheets all start with the message, "this is not a test ...........", because they have been designed to stimulate discussion between teachers and students. The correct answers will greatly assist the students in their exam preparation and broaden their trade knowledge.

There is an evaluation sheet for each lesson, your comments will greatly assist us in our final editing before going to print. As you can see these are only draft copies. The final copies will be professionally typed and set out.

Please fill the evaluation sheet in as you complete each lesson and send them to:

If you have any questions don’t hesitate to ring us.

We would like to thank all of you for your support in developing this new concept. Without this support the project could not be completed. This is an ongoing project and the Plain English concept will be carried through into Stage II and III.

Head of School,
School of Vehicle Trades.
13th November, 1986.

To all teachers of Panelbeating.
APPENDIX B

INITIAL INTERVIEW SCHEDULE
INITIAL INTERVIEW

SECTION A

A1 How many years have you been teaching Panelbeating?
A2 How many years have you taught Stage?

SECTION B

B1 How are you using the Plain English Notes in the classroom?
B2 Do you use them in practical sessions? (deleted after 1st session)
B3 Have you been conscious of having to adapt to the notes? Have they caused you to change how you teach?
B4 Do you feel comfortable using the notes?
B5 Are there any problems with the notes?
B6 Are you doing anything in your classroom with the Notes that you think is unique to you, or innovative?
B7 Do you use any strategies to help students read the notes or help them use them for study?
SECTION C

C2 Have the Notes affected or challenged your attitudes to students and how they learn?

C3 How did you feel about the Notes when they were first introduced?

C3a Do you see any advantages of the Notes for the students? If so what are they?

C4 How do you feel about having a Plain English Policy in your School?

SECTION D

D1 Did you have any Staff Development on using the Notes?

D2 Do you think Staff Development is needed to help Teachers use the notes effectively?

D4 What do you think new teachers would need, to help them use these notes effectively?

SECTION E

E1 What do your students think of the Notes?

E2 What do your students think about how you use the notes?

E3 Do you think the students are learning better now, then before the Notes were introduced?