

# INSTRUCTIONAL FLEXIBILITY IN RURAL AND SUBURBAN SECONDARY SCHOOLS IN NORTH AND NORTH WEST QUEENSLAND: A COMPARATIVE ANALYSIS.

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## ABSTRACT

The instructional flexibility of rural and suburban secondary teachers in two educational regions of Queensland was investigated. It was proposed that the qualitative and quantitative differences between rural and suburban secondary, and particularly the significant differences in class size, would see rural secondary teachers more instructionally flexible than suburban counterparts.

Using interpretative and positivist data gathering processes and analysis techniques, it was found however, that in all respects of instructional flexibility, there was no significant difference between rural and suburban secondary teachers.

Several reasons were advanced for the finding. First, it was found that the same teaching paradigm dominated teaching regardless of setting - that of teachers standing out the front of their classes and delivering the information to their students. Second, both teachers, and the Department of Education, have a simplistic notion of learning style which arguably impaired their ability to construe teaching and learning in other than traditional ways. Third, in what all teachers indicated they would prefer to do as teachers, and what they felt able to do in reality as teachers, there was considerable discord, attributed mainly to the perceived demands to 'get through the work program' regardless. This is construed to be an attitude which is essentially incompatible with catering to student learning style differences. Finally, it was suggested the significant factors affecting a teacher's instructional paradigm are the model of teaching demonstrated by the teacher training institution, the teachers own personal construct of teaching, and the role of the teaching practicum in perpetuating the traditional, teacher centred, dais based model of instruction.

## BACKGROUND AND PURPOSE OF STUDY

On the grounds that different settings (e.g. rural versus suburban secondary classrooms/schools) may effect different behaviours from participants, this study aimed to investigate if the characteristics of suburban and rural secondary classrooms have any significant effect on a teacher's instructional flexibility.

Instructional flexibility refers to a teacher's use of different instructional methods to cater to differences in student learning styles. It incorporates elements such as the teaching environment itself, evaluation methods, control techniques, instructional planning, actual teaching methods, level of student self management, and degree of individual student/teacher consultation. The notion of learning style adopted by this study is equally multi-faceted, embracing cognitive and psychological aspects. Thus, an instructionally flexible teacher is one who anticipates and caters to a wide gamut of inter-student differences.

To be instructionally flexible is the expectation that the Queensland Department of Education has of its teachers. In two key recent policy documents issued by the Department, it is stated that,

(learning) activities should incorporate variety in order to make allowance for the different learning styles of individuals ... exclusive reliance upon one type of activity, or one way of approaching the learning task, will exclude those with other preferred learning styles (P-10 Curriculum Framework, 1987,p.28).

Senior schools provide access to a diversity of learning environments, curriculum opportunities, and learning outcomes ... the senior curriculum allows learners to negotiate individual pathways of learning (Senior Schooling Curriculum Framework, Discussion Paper 1,1991,p.6-7).

It was proposed that rural secondary teachers would be found to be more instructionally flexible than their suburban colleagues on the following grounds:

1. the effect of setting and the widely referenced and significant qualitative and quantitative differences between rural and suburban schools (see Sher,1988; Darnell and Higgins, 1983; Pope,1986; Carlsen and Monk,1992; Nachtigal, 1992; Luhmanand Fundis, 1989);
2. that the quality of teaching in the smaller rural schools is considered to be better than that found in large suburban schools and classes (see Nachtigal, 1992; Barker,1986; Duck et al., 1988);
3. the bigger the class, the more difficult it is to cater to each student's learning needs (Dahllof,1981; Logan-Woods,1989; Campbell,1990; Mitchell et al., 1989), and that, for most schooling processes, smaller is preferable (Unks,1989; Berlin and Cienkus, 1989); and
4. in this study's geographic boundaries, secondary class sizes which are some 50-70% smaller than those in suburban schools, and which rarely exceed ten students.

## **REVIEW OF THE LITERATURE**

To embed the investigation of possible instructional flexibility differences between two different schooling environments, the following fields of literature were reviewed:

- i. Instructional Flexibility Theory;
- ii. Rural and Suburban Schools Literature;
- iii. Class Size Literature; and
- iv. Learning Styles Theory.

## **INSTRUCTIONAL FLEXIBILITY THEORY**

The term 'instructional flexibility' is borrowed from Flanders (1987) writings. The term refers to "a pattern of instruction with more variety, variation, and teacher adaptation than is to be found in the average classroom" (Flanders,1987,p.466). As used in this study, the term has a similar meaning - viz., a preplanned pattern of instruction that exhibits variety and variation to deliberately take into account a variety of student learning styles.

Instructional flexibility theory assumes that different students will interact in different ways with different instructional methods. As Cronbach and Snow (1977,p.492) point out, 'to assert the opposite is to assert that whichever educational procedure is best for Johnny is best for everyone else in Johnny's school'. Instructional flexibility is underpinned by the concept of 'differentiation' (Butt and Scott,1994,p.9), that is, that it is not tenable to state that pupils are different, yet expect them all to learn the same things in the same order and at the same rate. Matching teaching strategies to some facet of a student's aptitude has consistently been found to have positive effects on student learning (see, for example, Corno and Snow, 1986; Cronbach

and Snow,1977; Murphy and Meisgeier,1987; Bennett,1976; and Owens and Barnes,1982; Dunn and Dunn,1990; Keefe and Monk,1990).

## **RURAL AND SUBURBAN SCHOOLS LITERATURE**

The smallness of rural schools has often been noted (see Sher,1988; Barker,1986; Nachtigal,1992; Lake et al.,1987), whilst the largeness of metropolitan schools tends to be characteristic (see Passow,1991; Fantini and Weinstein,1968; Unks,1989).

Rural and suburban schools both have strengths and weaknesses. Certainly, the larger suburban schools do offer a wider range of curriculum offerings, but it is not possible to claim that suburban schools are superior to rural because they all have a more relevant and wider curriculum (some do not), or their graduates achieve better at college (not necessarily), their retention rates are higher (not always), and so on. Suburban schools are generally considered unable to offer their students a familial environment, individual attention, or the opportunity for all students to participate in all extra curricula activities.

On the other hand, it is difficult to deny that rural students do miss out on some of the opportunities offered to their city cousins. As noted by a rural principal, being rural means "there can be no rush to see a museum display, or the latest arrival at the zoo (Pivot, 1983, p.40). Equally, the problems associated with multi-age teaching, lack of ready access support personnel, or being expected to teach in several content areas, are not attractive to many teachers.

Generally, the picture that emerges from the literature points to the view that both suburban and rural schools are right in what they affirm, and wrong in what they deny, while sharing some common problems. However, one characteristic of rural secondary schools classrooms which is rarely experienced by suburban secondary teachers is fewer students per square metre of classroom. This is a significant difference, given the widely held view that class size can impact on the teaching behaviour of teachers and learning outcomes of students in some way (see Commonwealth Schools Commission, 1988,p.93; Unks, 1989; Berlin and Cienkus, 1989; Logan-Woods, 1989; and Dahllof, 1981) who maintain that the bigger the class, the more difficult it is to cater to the instructional needs of students.

## **CLASS-SIZE LITERATURE**

Class size literature was reviewed because rural secondary schools are strongly characterised by small classes (i.e. on average, fewer than 15 students) and suburban secondary schools are invariably characterised by large classes (i.e., more than 25 students). As well, it is thought small classes facilitate a greater degree of individualised student-centred teaching (Dahllof,1981; Logan-Woods,1989). In the regions in which this study was conducted, rural classes were, on average, 50-70% smaller than suburban. In the context of this study, it was not necessary to pursue the issue of which is the more credible explanation of why variations in class size produce variations in student outcomes. When one is faced with class sizes which rarely rise above ten students, as was the case in the rural schools of this study, the issue becomes almost meaningless. It is enough to say that secondary teachers in rural schools, and their students, have at their disposal a "space" and "numbers" setting considered most enabling of instructionally flexibility, and which is generally considered to be a situation where learner centred quality teaching is more likely to be demonstrated (Barker,1986; Nachtigal,1992; Duck et al.,1988).

## LEARNING STYLES THEORY

Learning style (L/S) literature was reviewed because knowledge of students learning style underpins a teacher's ability to be instructionally flexible.

The more recent definitions of learning style attempt to contribute to an understanding of individual differences amongst learners using more than just personality tests or intelligence tests. As such, learning style is construed as the end product of cognitive abilities (such as intelligence, prior knowledge) affective characteristics (motivation, personality, interest) and physiological factors (nutrition, health, sex) all coalescing into a preferred way a person has of absorbing, processing and retaining information (DeBello, 1990).

If one accepts that teachers should consider and include student learning needs in their pedagogy, then it would mean teachers actually identifying the learning styles of each of their students, and using instructional strategies to match. This, according to Darnell (1981, p.35) is the teacher's mandate: 'professional educators must be able to determine the cognitive, affective and motor needs of each student to such an extent that programmes of education ... are sufficient to meet such needs'.

Because of the small number of students that they routinely confront, secondary rural teachers are well placed, compared to their suburban colleagues, to more easily identify the L/S of each of their students, and to resultantly develop teaching programmes that are attuned to student learning style needs.

## RESEARCH METHODOLOGY

This study has drawn on both the positivist and interpretative research paradigms. Thus, this study accepts that there are phenomena in education which can be noted, counted and converted into generalisable ideas, as the positivist tradition allows (Gay, 1987). Equally, accepts that the classroom/school is also a socially and culturally organised environment which is open to interpretation and meaning, as the interpretative approach espouses (Gay, 1987; Adelman et al., 1983). Finally, this study accepts that interpretative insights may and can be usefully combined with positivist insights, as the multi-methods research paradigm espouses (Dick, 1990; Osborne, 1987; Patton, 1988; Sherman and Webb, 1988; Meyer, 1981).

## OUTCOME SOUGHT

The degree of match between a student's perceptual preferences (auditory, visual, emotive), sociological preferences (whole class, small groups, pairs, alone), and a teacher's instructional strategies, was sought for both rural and suburban secondary teachers. The Learning Style Profile developed by Keefe and Monk *et al.* (1989) was used to identify students learning style. Instructional strategies being used by teachers in rural and suburban secondary schools were recorded using a teacher self report questionnaire (the TSQ), and through actual classroom observations to verify the TSQ findings.

## DURATION

Data gathering took 17 weeks, over four stages, as follows: First, distribution/collection of the TSQ to/from 360 rural and suburban secondary teachers in North and North West Queensland; second, first-round Interpretative Interviews with 24 Critical Teachers; third, classroom observation of 8 Key Teachers and distribution to students in these classes of the Learning Styles Profile survey; and finally, a Second Round post-observation interview with each of the 8 Key teachers.

## SUBJECTS

### For Questionnaire:

A total of 14 school sites (2 suburban, 12 rural) were identified from the definitions of rural and suburban proposed earlier. All teachers in these schools were surveyed (a population of 360 secondary teachers -156 rural; 204 suburban). Only full-time teachers working in the secondary areas of schooling were involved.

### For first-round Interviews:

Twenty-four teachers who met the following criteria were short listed for possible interview and observation:

- a. taught in a rural or suburban school;
- b. taught Year 10 English or Mathematics students. These subjects were chosen on the basis that the knowledge, skills, and competencies allied with them underpin achievement in most, if not all other, secondary school subjects. As well, it was considered these two subjects best typify the two broad academic traditions of the Arts/Humanities and the Maths/Sciences. Year 10 was chosen on the grounds that it is the final year of compulsory schooling in Queensland, and as the mid-way point in secondary schooling, it represents a composite of the typical emotional, cognitive, and pedagogical demands placed on students by the schooling process; and
- c. have had at least one but less than three years of teaching experience. This study investigated experience as a variable possibly affecting instructional flexibility. "Inexperience" was defined as two or less years of teaching; "experience" was defined as four or more years of teaching. The 3rd year was seen as a transition year between these stages.

From the returned TSQ's, 62 teachers met these various location, subject, year level, and experience criteria. From this pool, a sample of 24 "critical" teachers was drawn for the purposes of conducting first round convergent interviews. In the selection of these 24 teachers, and in cases where the number of teachers to be interviewed was less than the number available for interview, a random selection process was used. In cases where the number of teachers to be interviewed equalled the number available for interview, all teachers were invited to participate.

### For Classroom observations and Second Round Interviews:

For the classroom observations and second round interviews, 4 rural and 4 suburban teachers were drawn from the sample of 25 above. These eight participants were determined by reference to the selection criteria set out above (i.e. location, experience, year level, and subject), and, in the interests of these respondents being from a site that was as 'typical as possible of all other sites' (Eisner and Pushkin, 1990), by virtue of the characteristics of their school.

### For the Learning Style Profile:

The students (31 rural: 28.4%; 78 suburban: 71.5%; n=109) to whom was administered the Learning Styles Profile (LSP) were ex-officio respondents, by virtue of being in the classes of the 8 key teachers who were selected for classroom observation and second round interview purposes.

## RESPONSE RATE MEASURES

In this study, two methods were adopted to distribute and collect the questionnaires. For 12 of the 14 schools (2 suburban, 10 rural), this researcher delivered the Teaching Style Questionnaires to each school site, administered them to staff in school time, and then collected them immediately. In these 12 schools, this produced an 87.19% response rate. In the remaining two schools, sufficient multiple copies of the TSQ were mailed to the principals for distribution by the principal to each secondary teacher on staff. For each TSQ so sent, a stamped, pre-addressed envelope was attached, as well as a covering letter explaining the nature and purpose of the study. This produced a response rate of 27.45% in one school, and 61.9% in another. For the study overall, the mean response rate was 74.41%.

## DATA ANALYSIS

Data analysis procedures varied to reflect the nature of the data gathering techniques. Thus, the quantitative data from the Teaching Styles questionnaire lent themselves to a statistical analysis using ANOVA or correlation scores (with the significance level set at 0.05). Interview data were analysed using a dialectic analysis process. Classroom observation data were analysed by calculation of the (Pearson r) correlation between students learning style preferences and teachers' use of instructional strategies matched to these preferences, and by a visual inspection of percentage data.

## INSTRUMENTS USED IN DATA GATHERING

### i. The Teaching Styles Questionnaire (TSQ)

The TSQ has a two column format, wherein on a 5 point Likert Scale teachers were asked to indicate for each item what they ACTUALLY do as teachers, and then what they would PREFER to do as teachers. The TSQ also had an Open Response question, where teachers were invited to comment on any aspect of the issues raised by the TSQ itself.

An item and factor analysis was carried out with the TSQ, at both the pilot and final study stage. Analysis of variance indicated that the items did discriminate amongst respondents, and all F-ratios were found to be significant.

### ii. The Instructional Strategies Observation Form (ISO)

Classroom observations of eight teachers involved in the second round interviews were made of the teacher's instructional strategies. The low inference Instructional Strategies Observation Form (ISO) was developed by this writer to assist in the standardisation of these observations. The ISO was designed to record two categories of data - the perceptual mode in which information is presented to students (whether visual, auditory, in written form, via activity, or some combination thereof), and the sociological format instituted by the teacher (whether students work in small groups, alone, in pairs, or as a whole class).

Upon completion of each video-taped lesson, the tape was scanned by this researcher using the ISO. A second, independent viewing of the video recordings using the ISO was completed by a research assistant. The research assistant was one of the trialists who assisted in the development of the ISO, and as such was skilled in its use. Inter-rater reliability of the ISO form was found to vary from 75% to 90%, depending on the degree of flexibility demonstrated by the teacher (the less flexibility, the higher was inter-rater reliability).

iii. The Learning Style Profile (LSP):

For all classes, the Learning Style Profile developed by Keefe and Monk et al. (1989) was administered by this researcher, and at all times the same administrative procedures were followed. It was made clear to students that the exercise was voluntary, and that they would receive a copy of the results via their teacher.

### INTERPRETATIVE DATA GATHERING INTERVIEWS

In an attempt to study an identifiable problem 'as it happens' (Ball,1990, p.157), a process of "convergent interviewing" (Dick,1990) was undertaken.

The collective data which emerged from the First Round was able to be tabled in the Second Round interviews for further clarification and verification with each of the eight respondents. Within four weeks after each and all interviews, the summary and interpretation ascribed by this researcher to each body of interview data were submitted to each respondent. Any changes submitted were duly entered into the data.

For both the First and Second Round interviews, teachers were interviewed face to face, and in their own environment. For Round 1 interviews, suburban teachers were interviewed first, followed by the rural teachers. For Round 2, rural and suburban interviews were interwoven with each other. Interview venues varied, from classrooms, school staffrooms, school grounds, and private residences. All interviews were audio-taped using a small, hand-sized recorder.

### RESULTS

Despite significantly smaller classes, acknowledgement in interviews that it would be easier in a rural secondary school to be flexible, and beliefs (from TSQ, Section B) from all teachers that it is desirable to be instructionally flexible, all F-ratios indicated no significance difference between the ACTUAL instructional flexibility of all surveyed rural and suburban secondary teachers ( $F=1.819$ ,  $df=259$ ,  $p=.179$ ). As well, no significant difference in instructional flexibility was found between experienced rural and experienced suburban teachers ( $F=1.565$ ,  $df=160$ ,  $p=.213$ ), between inexperienced rural and inexperienced suburban teachers ( $F=1.074$ ,  $df=59$ ,  $p=.304$ ), between rural English and suburban English teachers ( $F=.052$ ,  $df=33$ ,  $p=.354$ ), and between rural Mathematics and suburban Mathematics teachers ( $F=3.690$ ,  $df=35$ ,  $p=.063$ ).

On these findings, both the interpretative and the positivist data were consistent, and this study's proposition that rural teachers would be more instructionally flexible than suburban was not confirmed.

Only on the instructional flexibility sub-scale of Individual Student Advisement was any significant difference in actual instructional flexibility noted - between rural and suburban teachers generally ( $F=.6.286$ ,  $df=259$ ,  $p=.013$ ), and between rural Mathematics and suburban Mathematics teachers ( $F=10.01$ ,  $df=35$ ,  $p=.03$ ).

On the question of what teachers indicated they would PREFER viz-z-viz instructional flexibility, a significant difference was noted between rural and suburban Mathematics teachers ( $F=5.616$ ,  $df=35$ ,  $p=.023$ ). As well, on several of the sub-scales of instructional flexibility, significant differences were noted: for rural and suburban teachers generally, on the subscales of Instructional Planning ( $F=4.241$ ,  $df=259$ ,  $p=.040$ ), Teaching Methods and Materials ( $F=4.192$ ,  $df=259$ ,  $p=.042$ ), and Individual Student Advisement ( $F=7.517$ ,  $df=259$ ,  $p=.007$ ); for experienced rural and experienced suburban teachers, on the sub-scale of Individual Student Advisement ( $F=5.777$ ,  $df=160$ ,  $p=.017$ ); and for inexperienced rural and inexperienced suburban teachers, on the sub-scale of Traditional Evaluation ( $F=7.819$ ,  $df=59$ ,  $p=.007$ ).

The experience of living in a rural community prior to a teaching appointment in a rural school was not found to be a significant variable in a teacher's instructional flexibility ( $F=.741$ ,  $df=110$ ,  $p=.391$ ), or on any of the sub-scales of instructional flexibility. Whilst it may be important in ensuring a newly appointed teacher adapts to the cultural and sociological challenge of a rural posting, it appears to have little bearing on a teacher's instructional flexibility.

For all teachers, a significant negative correlation between actual instructional flexibility and the Number of Schools in Which one has Taught ( $r = -0.3602$ ), and actual instructional flexibility and the Number of Years in a School ( $r = -0.2384$ ), were found. Significant negative correlations, though weaker, were also found for teacher's preferred instructional flexibility. As well, for both variables, significant negative correlations were found for several of the actual and preferred instructional flexibility scales.

Whilst no significant differences between rural and suburban were found in their ACTUAL instructional flexibility, at all times the means for both cohorts indicate a trend for rural teachers, regardless of subject or experience level, to be more flexible than their suburban colleagues. To some extent, this supports the more frequent significant differences that were noted in teachers PREFERRED instructional flexibility, and suggests some weak setting effect on the teaching behaviour of rural teachers.

Both the classroom observation data and the interview data indicated quite clearly that both rural and suburban secondary teachers share a common but limited understanding of the concept of learning style, and that, for both cohorts, the same teaching traditional paradigm governed how teachers teach. Thus, between rural and suburban teachers, no significant difference was noted in the use of a learning styles approach to teaching.

Expressed as a Pearson  $r \pm$  correlation, the degree of match between instructional strategies and students L/S preferences was found to be not significant for both rural teachers ( $r=.598$ ,  $a=.05$ ,  $df=2$ ,  $p=.9500$ ) and suburban teachers ( $r= -.416$ ,  $a=.05$ ,  $df=2$ ,  $p=.9500$ ). This is consistent with the self-report data of the TSQ, wherein teachers themselves no significance difference in the ACTUAL Teaching Methods and Materials scale ( $F=1.036$ ,  $df=259$ ,  $p=.310$ ). It was observed that neither rural or suburban secondary teachers provided their students with a variety of learning environments.

## DISCUSSION AND CONCLUSIONS

The finding that the instructional model of both suburban and rural secondary teachers is whole-of-class, teacher centred, and didactic continues the observations of Goodlad (1984), Krumboltz (1987), NASSP (1989), Tobin and Fraser (1988) and Stanton (1986), that classrooms generally are characterised by a model of teaching which has the teachers at the front of the room teacher instructing, with all students working on the same material at the same time and in the same way.

This approach persists despite an expressed preference, common to all teachers but stronger for those in rural schools, to be more instructionally flexible. Thus, it would appear teachers do not feel able to teach as they would prefer. The reported reasons for this is said by teachers to be the demands of the work program and the assessment driven nature of secondary schools, such that what is being learned is more important than the learner. Essentially, both rural and suburban teachers are compelled by what they perceive to be very limited 'curriculum decision making space' (Smith and Lovatt, 1991, p.117) to plan for and instruct in the same ways.

This study found secondary teachers in both rural and suburban schools were not using appropriate instructional strategies for all of their students. 'Appropriate' was defined as matching teaching strategies to students learning style needs. Whilst some of the instructional strategies employed did most likely 'make contact with individual students' (Joyce and Weil, 1972), such contact was not pre-planned - it was random, essentially wishful, and based on



the guess and probability that some students in the class are auditory learners, or visual learners, or prefer to work alone, and so on. Practically, teachers exhibited surprisingly little interest and/or knowledge of their students - such as their abilities, interests, capacities, or favourite activities, and so on. Alternatively, if this knowledge was in hand, it did not present itself in their planning and teaching, despite its considered importance (Smith and Lovatt, 1991, p.123). Certainly, no 'genuine differentiation' (Butt and Scott, 1994, p.9) or variety was noted in instructional strategies within a lesson (all students were expected to be in the same learning environment at the same time) or between lessons (from one lesson to the next, the same "traditional" environment was instituted).

The lack of difference in strategies between rural and suburban teachers was surprising. Despite having class sizes which rarely went above 10 students, rural secondary teachers used the same strategies as suburban teachers, whose classes averaged 25-28 students. As found by Cahen et al. (1983), smaller classes do not necessarily lead to changes in instructional strategies. Cahen et al. investigated changes in primary class sizes from 20 to 13 (a 35% reduction), and from 35 to 22 (37% reduction). This study went into secondary classrooms, where sizes changed from 25-28 students down to 7-10 students, a reduction on average of some 62%, and it was expected that in the face of such a significant reduction, differences in instructional strategies would result.

The broad findings of this study may be understood in light of the following points. First, there appears to be a conflict of educational paradigms, both within the Department of Education itself, and within individual teachers. On the one hand, there is the actual practice of teachers, and the expectation of the Queensland Department of Education as manifested in assessment policy documents, which ties the schooling process strongly to the, instrumentalist, cultural transmission paradigm - the passing on of the rules, values and skills of the past. On the other hand, there is the expressed preference of teachers, and the expressed recommendations of the Department of Education in its P-10 and Senior Schooling documents, that teachers differentiate amongst students and cater to the individual learning style and needs of their students so as to develop their respective potentials - what could be labelled the 'transformative' (Jackson, 1986) paradigm of schooling.

Wiltshire *et al.* (1994) refer to this conflict as the 'dual purpose of schooling'. For secondary teacher, it presents as a genuine professional conundrum, as addressing student learning styles is essentially incompatible with an instrumentalist, assessment driven approach to schooling. Within this conflict, the traditional, cultural transmission paradigm is dominant. The reasons for this, according to Splitter (1988, p.43) are to be found in teachers themselves, and teacher training, which represents teachers 'as experts in their field of specialised knowledge, whose task it is to transmit that knowledge to ignorant children'. Certainly in the secondary schooling, with its epistemological emphasis on subject specialisation, its general avoidance of the differentiation concept, and of breaking the curriculum down into component subject parts (Doll, 1986), this 'representation' of teachers is built into the timetable itself, and as long as it continues, it is difficult to imagine secondary schooling being student centred. Generally, an unintended outcome of teacher training is the standardisation of teachers to conform to one dominant paradigm and set of teacher curriculum beliefs, with an end result being conformity of practice.

Second, teachers, and the Department of Education itself, have a relatively simplistic notion of learning style - one that is locked into the perceptual theory of Reinert (1976). However, learning style theory has progressed considerably since 1976. Multidimensional models which look at an individual's perceptual, cognitive, sociological, environmental and psychological strengths and preferences are now standard. With their concept of learning style, it is not surprising that teachers were unable to imagine a sociological arrangement other than the traditional columns and rows, and appeared unaware that catering to an individual's profile involves knowledge of their cognitive processes, social learning preferences and the like.

Third, what was observed of teachers, and which is arguably related to the dominance of the traditional teaching paradigm and the simplistic notion of learning style noted above, is that any attempt to cater to learning styles in the classroom meant presenting the same information in a number of ways to the whole class. The notion of presenting the same information concurrently in a number of ways did not appear to be countenanced at all by any of the teachers.

This relates also to what this research observed - that the idea of catering to individual differences means spending more time with each student. It does not equate to teaching or presenting information in ways that are suited to a student's learning style profile, as suggested, for example, by the Queensland Department of Education's P-10 and Senior Schooling Teaching Frameworks.

It is felt this is an important distinction, and may explain why rural schools are seen as offering a better quality teaching (Duck *et al.*,1988) or of being able to offer individualised instruction (Nachtigal,1992) or are more likely to demonstrate learner centred instruction (Barker,1986). In terms of smaller classes and being able to offer more time per student, rural schools are advantaged. But in terms of this study's proposition, it is what is being done in that extra time-per-student that is significant, and what this study has found is that rural secondary teachers, whilst being able to offer individualised instruction, and whilst in a position to demonstrate learner centred instruction, are in fact not doing so.

It was concluded by this study that the qualitative and quantitative differences which are said to characterise rural and suburban schools do not have an effect on the instructional flexibility of rural secondary teachers. The notions underpinning instructional flexibility - that students are different in a number of educationally significant ways, that no one instructional approach is best for all students (Nielsen and Moos,1978; Corno and Snow, in Eggins, 1980), and that learners 'working on tasks appropriate to their attainments and abilities' (Desforges, 1985,p.92) is preferable to students working on ill matched tasks, do not significantly intrude into the teaching model/s of secondary teachers, regardless of location.

In that this study proposed that rural secondary teachers would be found to be more instructionally flexible than suburban secondary teachers, it can be construed from the data that, by this study's notion of quality teaching, all students are receiving the same standard of teaching.

However, given the apparent poor match between strategies and learning styles, and the dominance of the traditional paradigm of teaching, the findings could also be construed as indicating that, by this study's definition of teaching - that of helping every child discover and develop his/her potentialities - rural teachers are not able to utilise the class size and space resource at their disposal. The findings support Sher's (1991,p.1) contention that 'conventional educational policies, materials, and practices weren't designed with any specific group or any particular individual in mind. Rather, they appear to have been derived from a misplaced faith in some mythical 'average' school, student, or teacher'.

In an endeavour to move away from this concept of 'the average student' and towards the principles that students are different in a number of educationally significant ways and that no one instructional approach is best for all students, the following recommendations are submitted. They are separated into those with policy implications, and those with future research implications.

#### Policy implications:

1. It is recommended that pre-service secondary teacher training programmes embrace a training paradigm that values the differentiation of students concept. Part of this

programme could examine how a learning style, student centred model of secondary schooling could be operationalised in both rural and secondary schools.

2. Rural schools are different to suburban, and it is seen to be disappointing and a waste of an invaluable resource that secondary teachers in rural areas were unable to capitalise on their smaller classes. To some extent, this could be overcome with a pre-service course which aimed to educate teachers about rural and suburban schools, and how best to take advantage of their respective settings.
3. The notion of individualising instruction held by many teachers at present, is, it is felt, 'missing the point'. Merely to spend more time with a student is not differentiating. Thus, it is recommended that teachers be skilled, either at the pre-service or inservice stage, in the identification of student learning style, and methods to incorporate such information into instruction.
4. Teachers appear to be genuinely confused as to what is expected of them by the Department of Education - that is, to be assessment/instrumentalist driven, or student-centred. For teachers, whether there is ground for this confusion is academic. It is thus recommended that the Department of Education clarify its expectations regarding this dilemma.
5. The Department of Education, and teachers, hold a relatively simplistic notion of learning style. In view of the central role of this knowledge in instructional planning and actual teaching, it is recommended teachers be introduced, at both the pre-service and in-service stage, to more complete and multi-dimensional constructs of learning style.

#### Research implications

1. Based on a small sample, this study identified a significant difference in learning style between rural and suburban students. It is thus recommended that further, large scale research, involving several hundred students across rural and suburban primary and secondary schools, clarify this issue. If the difference is confirmed, it is seen to have considerable implications for teacher training programmes.
2. There could be some worth in comparative studies of instructional flexibility between rural and suburban primary schools, and between rural and suburban primary and secondary schools. Recent moves in some rural secondary schools to combine all secondary students into a single multi-age class suggests some interesting insights could be generated regarding primary and secondary pedagogy.
3. It is recommended that a research study be undertaken which aims to identify which, if any, of the various conceptualisations of learning style hold the most pedagogical value for teachers and students vis-a-vis learning outcomes.

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## **PRELIMINARY NOTICE**

### **1995 CONFERENCE**

#### **Lifelong Learning in Rural Areas: Between a Rock and Hard Place**

**VENUE:** Ballarat University, Ballarat, Victoria

**DATES:** July 5-8, 1995

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